

TIPS VENDOR AGREEMENT

Between Seamless Systems and
(Company Name)

THE INTERLOCAL PURCHASING SYSTEM (TIPS),
a Department of Texas Education Service Center Region 8
for
RCSP 180702 ROOFING (JOC)

General Information

The Vendor Agreement ("Agreement") made and entered into by and between The Interlocal Purchasing System (hereinafter referred to as "TIPS" respectfully) a government cooperative purchasing program authorized by the Region 8 Education Service Center, having its principal place of business at 4845 US Hwy 271 North, Pittsburg, Texas 75686. This Agreement consists of the provisions set forth below, including provisions of all Attachments referenced herein. In the event of a conflict between the provisions set forth below and those contained in any Attachment, the provisions set forth shall control.

The vendor Agreement shall include and incorporate by reference this Agreement, the terms and conditions, special terms and conditions, any agreed upon amendments, as well as all of the sections of the solicitation as posted, including any addenda and the awarded vendor's proposal. Once signed, if an awarded vendor's proposal varies or is unclear in any way from the TIPS Agreement, TIPS, at its sole discretion, will decide which provision will prevail. Other documents to be included are the awarded vendor's proposals, task orders, purchase orders and any adjustments which have been issued. If deviations are submitted to TIPS by the proposing vendor as provided by and within the solicitation process, this Agreement may be amended to incorporate any agreed deviations.

The following pages will constitute the Agreement between the successful vendors(s) and TIPS. Bidders shall state, in a separate writing, and include with their proposal response, any required exceptions or deviations from these terms, conditions, and specifications. If agreed to by TIPS, they will be incorporated into the final Agreement.

A Purchase Order, Agreement or Contract is the TIPS Member's approval providing the authority to proceed with the negotiated delivery order under the Agreement. Special terms and conditions as agreed to between the vendor and TIPS Member should be added as addenda to the Purchase Order, Agreement or Contract. Items such as certificate of insurance, bonding requirements, small or disadvantaged business goals are some of the addenda possible.

Terms and Conditions

Conflicts with RS Means Unit Price Book

If the terms of the solicitation referenced RS Means Unit Price Book occur, the RS Means Book shall control if it determines legality of the solicitation award as it relates to the requisite Means Unit Price Book.

Freight

All quotes to members shall provide a line item for cost for freight or shipping regardless if there is a charge or not. If no charge for freight or shipping, indicate by stating "No Charge" or "\$0" or other similar indication.

Warranty Conditions

All new supplies equipment and services shall include manufacturer's minimum standard warranty unless otherwise agreed to in writing. Vendor shall be legally permitted to sell, or an authorized dealer, distributor or manufacturer for all products offered for sale to TIPS Members. All equipment proposed shall be new unless clearly stated in writing.

Customer Support

The Vendor shall provide timely and accurate customer support to TIPS Members. Vendors shall respond to such requests within one (1) working day after receipt of the request. Vendor shall provide training regarding products and services supplied by the Vendor unless otherwise clearly stated in writing at the time of purchase. (Unless training is a line item sold or packaged and must be purchased with product.)

Agreements

Agreements for purchase will normally be put into effect by means of a contract, agreement or purchase order(s) executed by authorized agents of the participating government entities.

Davis Bacon Act requirements will be met when Federal Funds are used for construction and/or repair of buildings or as otherwise required by applicable statute or regulation.

Other Wage Rates may be required by some TIPS Members and acceptance of a project by the Vendor may require the Vendor to comply with the TIPS Member's required wage rate.

Tax exempt status

A taxable item sold, leased, rented to, stored, used, or consumed by any of the following governmental entities is exempted from the taxes imposed by this chapter: (1) the United States; (2) an unincorporated instrumentality of the United States; (3) a corporation that is an agency or instrumentality of the United States and is wholly owned by the United States or by another corporation wholly owned by the United States; (4) the State of Texas; (5) a Texas

exempts or does not impose a tax on similar sales of items to this state or a political subdivision county, city, special district, or other political subdivision; or (6) a state, or a governmental unit of a state that borders Texas, but only to the extent that the other state or governmental unit of this state. Texas Tax Code § 151.309. Most TIPS Members are tax exempt and the related laws of the jurisdiction of the TIPS Member shall apply.

Assignments of Agreements

No assignment of Agreement may be made without the prior written approval of TIPS. Payment can only be made to the awarded Vendor or authorized Assignee.

Disclosures

1. Vendor affirms that he/she has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor or service to a public servant in connection with this Agreement.
2. Vendor shall attach, in writing, a complete description of any and all relationships that might be considered a conflict of interest in doing business with Members in the TIPS program.
3. The vendor affirms that, to the best of his/her knowledge, the offer has been arrived at independently, and is submitted without collusion with anyone to obtain information or gain any favoritism that would in any way limit competition or give an unfair advantage over other vendors in the award of this Agreement.

Renewal of Agreements

The Agreement with TIPS is **for two (2) years with an option for renewal for additional two (2) consecutive one year terms years. Total term of Agreement can be up to the number of years provided in the solicitation or as limited by statute.** The option renewal year one shall be automatically renewed unless either party objects or terminates the agreement as provided herein at "**Termination for Convenience**". The Second one-year renewal term is only if both Parties agree.

No Agreement for goods or services with a TIPS Member by the awarded vendor named in this Agreement that results from the solicitation award named in this Agreement may incorporate an automatic renewal clause with which the TIPS Member must comply. All renewal terms incorporated in an Agreement by the vendor with the TIPS Member shall only be valid and enforceable when the vendor receives written confirmation by purchase order or executed Agreement issued by the TIPS Member for any renewal period. The purpose of this clause is to avoid a TIPS Member inadvertently renewing an Agreement during a period in which the governing body of the TIPS Member has not properly appropriated and budgeted the funds to satisfy the Agreement renewal. This term is not negotiable and any Agreement between a TIPS Member and a TIPS awarded vendor with an automatic renewal clause that conflicts with these terms are rendered void and unenforceable.

Invoices

The awarded vendor shall submit invoices or payment requests to the TIPS Member participating entity clearly stating "Per TIPS Agreement # xxxxxxxx. Each invoice or pay request shall include the TIPS Member's purchase order number or other identifying designation as provided in the order or contract by the TIPS Member. If applicable, the shipment tracking number or pertinent information for verification of TIPS Member receipt shall be made available upon request.

Pricing

Price increases will be honored according to the terms of the solicitation. However, the Vendor shall honor previous prices for thirty (30) days after written notification to TIPS of an increase, except any price changes related to the, then current, RS Means Unit Price Book is valid. Price of a specific Job Order Contract proposal to a TIPS Member shall not change within 60 days of date of proposal as a result of an updated RS Means Unit Price Book unless agreed by the TIPS Member.

All pricing submitted to TIPS shall include the participation fee, as provided in the solicitation, to be remitted to TIPS by the Vendor. Vendor will not show adding the fee to the invoice presented to customer. Failure to render the participation fee to TIPS shall constitute a breach of this agreement and shall be grounds for termination of this agreement and any other agreement held with TIPS.

Participation Fees

Vendor or vendor assigned dealer Agreements to pay the participation fee for all Agreement sales to TIPS on a monthly scheduled report. Vendor must login to the TIPS database and use the "Submission Report" section to report sales. The Vendor or vendor assigned dealers are responsible for keeping record of all sales that go through the TIPS Agreement. Failure to pay the participation fee will result in termination of Agreement. Please contact TIPS at tips@tips-usa.com or call (866) 839-8477 if you have questions about paying fees.

Indemnity

The Vendor agrees to indemnify and hold harmless and defend TIPS, TIPS Member(s), officers and employees from and against all claims and suits by third parties for damages, injuries to persons (including death), property damages, losses, and expenses including court costs and reasonable attorney's fees, arising out of, or resulting from, Vendor's work under this Agreement, including all such causes of action based upon common, constitutional, or statutory law, or based in whole or in part, upon allegations of negligent or intentional acts on the part of the Vendor, its officers, employees, agents, subcontractors, licensees, or invitees. Parties found liable shall pay their proportionate share of damages as agreed by the parties or as ordered by a court of competent jurisdiction over the case. Per Texas Education Code §44.032(f), reasonable Attorney's fees are recoverable by the prevailing party in any dispute resulting in litigation.

State of Texas Franchise Tax

By signature hereon, the bidder hereby certifies that he/she is not currently delinquent in the payment of any franchise taxes owed the State of Texas under Chapter 171, Tax Code.

Miscellaneous

The Vendor acknowledges and agrees that continued participation in TIPS is subject to TIPS sole discretion and that any Vendor may be removed from the participation in the Program at any time with or without cause. Nothing in the Agreement or in any other communication between TIPS and the Vendor may be construed as a guarantee that TIPS or TIPS Members will submit any orders at any time. TIPS reserves the right to request additional proposals for items or services already on Agreement at any time.

Purchase Order Pricing/Product Deviation

If a deviation of pricing/product on a purchase order or contract modification occurs, TIPS is to be notified within 48 hours of receipt of order.

Termination for Convenience

TIPS reserves the right to terminate this agreement for cause or no cause for convenience with a thirty-day written notice. Termination for convenience is required under Federal Regulations 2 CFR part 200. All purchase orders presented to the Vendor by a TIPS Member prior to the actual termination of this agreement shall be honored at the option of the TIPS Member. The awarded vendor may terminate the agreement with ninety (90) days written notice to TIPS 4845 US Hwy North, Pittsburg, Texas 75686. The vendor will be paid for goods and services delivered prior to the termination for convenience provided that the goods and services were delivered in accordance with the terms and conditions of the terminated agreement.

TIPS Member Purchasing Procedures

Purchase orders or their equal are issued by participating TIPS Member to the awarded vendor indicating on the PO "Agreement Number". Order is emailed to TIPS at tipspo@tips-usa.com.

- Awarded vendor delivers goods/services directly to the participating member.
- Awarded vendor invoices the participating TIPS Member directly.
- Awarded vendor receives payment directly from the participating member.
- Awarded vendor reports sales monthly to TIPS (unless prior arrangements have been made with TIPS to report monthly).

Form of Agreement and Reporting

If a vendor submitting an offer requires TIPS and/or TIPS Member to sign an additional agreement, a copy of the proposed agreement must be included with the proposal to the TIPS Member. TIPS does not require a review a TIPS Member's Job Order contract TYPE AIA or other similar Contract provided by the TIPS Member. This clause does not relieve the Vendor from the responsibility to report the contract execution and the amount of the contract and any change orders.

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Licenses

Awarded vendor shall maintain in current status all federal, state and local licenses, bonds and permits required for the operation of the business conducted by awarded vendor. Awarded vendor shall remain fully informed of and in compliance with all ordinances and regulations pertaining to the lawful provision of services under the Agreement. TIPS reserves the right to stop work and/or cancel Agreement of any awarded vendor whose license(s) expire, lapse, are suspended or terminated.

Novation

If awarded vendor sells or transfers all assets or the entire portion of the assets used to perform this Agreement, a successor in interest must guarantee to perform all obligations under this Agreement. TIPS reserves the right to accept or reject any new party. A simple change of name agreement will not change the Agreement obligations of awarded vendor.

Site Requirements (when applicable to service or job)

Cleanup: Awarded vendor shall clean up and remove all debris and rubbish resulting from their work as required or directed by TIPS Member. Upon completion of work, the premises shall be left in good repair and an orderly, neat, clean and unobstructed condition.

Preparation: Awarded vendor shall not begin a project for which TIPS Member has not prepared the site, unless awarded vendor does the preparation work at no cost, or until TIPS Member includes the cost of site preparation in a purchase order.

Site preparation includes, but is not limited to: moving furniture, installing wiring for networks or power, and similar pre-installation requirements.

Registered sex offender restrictions: For work to be performed at schools, awarded vendor agrees that no employee of a sub-contractor who has been adjudicated to be a registered sex offender will perform work at any time when students are or reasonably expected to be present. Awarded vendor agrees that a violation of this condition shall be considered a material breach and may result in the cancellation of the purchase order at the TIPS Member's discretion. Awarded vendor must identify any additional costs associated with compliance of this term. If no costs are specified, compliance with this term will be provided at no additional charge. Safety measures: Awarded vendor shall take all reasonable precautions for the safety of employees on the worksite, and shall erect and properly maintain all necessary safeguards for protection of workers and the public. Awarded vendor shall post warning signs against all hazards created by the operation and work in progress. Proper precautions shall be taken pursuant to state law and standard practices to protect workers, general public and existing structures from injury or damage.

Smoking

Persons working under Agreement shall adhere to local smoking policies. Smoking will only be permitted in posted areas or off premises.

Marketing

Awarded vendor agrees to allow TIPS to use their name and logo within website, marketing materials and advertisement subject to any reasonable restrictions provided to TIPS in the Proposal to the Solicitation. Any use of TIPS name and logo or any form of publicity, inclusive of press release, regarding this Agreement by awarded vendor must have prior approval from TIPS.

Supplemental agreements

The TIPS Member entity participating in the TIPS Agreement and awarded vendor may enter into a separate supplemental agreement or contract to further define the level of service requirements over and above the minimum defined in this Agreement i.e. invoice requirements, ordering requirements, specialized delivery, etc. Any supplemental agreement or contract developed as a result of this Agreement is exclusively between the participating entity and awarded vendor. TIPS, its agents, TIPS Members and employees shall not be made party to any claim for breach of such agreement.

Survival Clause

All applicable software license agreements, warranties or service agreements that were entered into between Vendor and TIPS or the TIPS Member Customer under the terms and conditions of the Agreement shall survive the expiration or termination of the Agreement. All Orders, Purchase Orders issued or contracts executed by TIPS or a TIPS Member and accepted by the Vendor prior to the expiration or termination of this agreement, shall survive expiration or termination of the Agreement, subject to previously agreed terms and conditions agreed by the parties or as otherwise specified herein relating to termination of this agreement.

Legal obligations

It is the responding vendor's responsibility to be aware of and comply with all local, state and federal laws governing the sale of products/services identified in this Solicitation and any awarded Agreement thereof. Applicable laws and regulations must be followed even if not specifically identified herein.

Audit rights

Due to transparency statutes and public accountability requirements of TIPS and TIPS Members', the awarded Vendor shall, at their sole expense, maintain appropriate due diligence of all purchases made by TIPS Member that utilizes this Agreement. TIPS and Region 8 ESC each reserve the right to audit the accounting of TIPS related purchases for a period of three (3) years from the time such purchases are made. This audit right shall survive termination of this Agreement for a period of one (1) year from the effective date of termination. In order to ensure and confirm compliance with this agreement, TIPS shall have authority to conduct random audits of Awarded Vendor's pricing that is offered to TIPS Members with 30 days'

notice unless the audit is ordered by a Court Order or by a Government Agency with authority to do so without notice. Notwithstanding the foregoing, in the event that TIPS is made aware of any pricing being offered to eligible entities that is materially inconsistent with the pricing under this agreement, TIPS shall have the ability to conduct the audit internally or may engage a third-party auditing firm to investigate any possible non-complying conduct or may terminate the Agreement according to the terms of this Agreement. In the event of an audit, the requested materials shall be reasonably provided in the format and at the location designated by Region 8 ESC or TIPS.

Force Majeure

If by reason of Force Majeure, either party hereto shall be rendered unable wholly or in part to carry out its obligations under this Agreement then such party shall give notice and fully particulars of Force Majeure in writing to the other party within a reasonable time after occurrence of the event or cause relied upon, and the obligation of the party giving such notice, so far as it is affected by such Force Majeure, shall be suspended during the continuance of the inability then claimed, except as hereinafter provided, but for no longer period, and such party shall endeavor to remove or overcome such inability with all reasonable dispatch.

Bonding

When applicable, performance bonds and payment bonds will be required on construction or labor required jobs. Awarded vendor will meet the TIPS Member's local and state purchasing requirements. Awarded vendors may need to provide additional capacity as jobs increase. Bonds costs are passed through at cost to the TIPS Member and are not subject to the TIPS Participation fee be paid to TIPS. The actual cost of the bond will be a pass through to the TIPS Member and added to the purchase order or Contract.

Professional Engineering and Architect's Services

Professional Engineering and Architect's Services are not permitted to be provided under this Agreement. Texas statutes prohibit the procurement of Professional Engineering and Architect's Services through a cooperative agreement.

Scope of Services

The specific scope of work for each job shall be determined in advance and in writing between TIPS Member, Member's design professionals and Vendor. It is permitted for the TIPS Member to provide a general scope description, but the awarded vendor should provide a written scope of work, and if applicable, according to the TIPS Member's design Professional as part of the proposal. Once the scope of the job is agreed to, the TIPS Member will issue a PO and/or an Agreement or Contract with the Job Order Contract Proposal referenced or as an attachment along with bond and any other special provisions agreed by the TIPS Member. If special terms and conditions other than those covered within this solicitation and awarded Agreements are required, they will be attached to the PO and/or an Agreement or Contract and shall take precedence over those in this base TIPS Vendor Agreement.

Project Delivery Order Procedures

The TIPS Member having approved and signed an interlocal agreement, or other TIPS Membership document, may make a request of the awarded vendor under this Agreement when the TIPS Member has services that need to be undertaken. Notification may occur via phone, the web, email, fax, or in person. Upon notification of a pending request, the awarded vendor shall make contact with the TIPS Member as soon as possible, but must make contact with the TIPS Member within two working days.

Scheduling of Projects

Scheduling of projects (if applicable) may be accomplished when the TIPS Member issues a Purchase Order and/or an Agreement or Contract that will serve as “the notice to proceed” as agreed by the Vendor and the TIPS Member. The period for the delivery order will include the mobilization, materials purchase, installation and delivery, design, weather, and site cleanup and inspection. No additional claims may be made for delays as a result of these items. When the tasks have been completed the awarded vendor shall notify the client and have the TIPS Member or a designated representative of the TIPS Member inspect the work for acceptance under the scope and terms in the Purchase Order and/or Agreement or Contract. The TIPS Member will issue in writing any corrective actions that are required. Upon completion of these items, the TIPS Member will issue a completion notice and final payment will be issued per the contractual requirements of the project with the TIPS Member. Any Construction contract prepared by the TIPS Member’s Legal Counsel may alter the terms of this subsection, “Scheduling of Projects”.

Support Requirements

If there is a dispute between the awarded vendor and TIPS Member, TIPS or its representatives will assist in conflict resolution or third party (mandatory mediation), if requested by either party. TIPS, or its representatives, reserves the right to inspect any project and audit the awarded vendors TIPS project files, documentation and correspondence.

Status of TIPS Members as Related to This Agreement

TIPS Members stand in the place of TIPS as related to this agreement and have the same access to the proposal information and all related documents. TIPS Members have all the same rights under the awarded Agreement as TIPS.

Incorporation of Solicitation

The TIPS Solicitation, whether a Request for Proposals, the Request for Competitive Sealed Proposals or Request for Qualifications solicitation, the Vendor’s response to same and all associated documents and forms made part of the solicitation process, including any addenda, that resulted in the execution of this agreement are hereby incorporated by reference into this agreement as if copied verbatim.

SECTION HEADERS OR TITLES

THE SECTION HEADERS OR TITLES WITHIN THIS DOCUMENT ARE MERELY GUIDES FOR CONVENIENCE AND ARE NOT FOR CLASSIFICATION OR LIMITING OF THE RESPONSIBILITIES OF THE PARTIES TO THIS DOCUMENT.

NEW STATUTORY REQUIREMENT EFFECTIVE SEPTEMBER 1, 2017.

You certify that your company (1) does not boycott Israel; and (2) will not boycott Israel during the term of the Agreement. Texas governmental entities are prohibited from doing business with companies that fail to certify to this condition as required by Texas Government Code Sec. 2270.

You certify that your company is not listed on and we do not do business with companies that are on the Texas Comptroller of Public Accounts list of Designated Foreign Terrorists Organizations per Texas Gov't Code 2270.0153 found at <https://comptroller.texas.gov/purchasing/docs/foreign-terrorist.pdf>

You certify that pursuant to Texas Business and Commerce Code Chapter 272, as revised September 1, 2017, any construction contract or agreement as defined in the Statute with a TIPS, Education Service Center Region 8 or a Texas TIPS Member subject to the Statute shall include a Choice of Law provision providing that this agreement shall be subject to and interpreted by the Laws of the State of Texas without regard to any conflict of laws principles for any action shall be in a court of competent jurisdiction in Texas and any arbitration shall be in the State of Texas. Pursuant to the Texas Business and Commerce Code, as amended by the 85th Texas Legislature, this Construction Agreement for Job Order Contract services is, in the event of a dispute between the parties, subject to interpretation according to the Laws of the state of Texas only, without regard to any conflict of laws principles. Venue for any alternative dispute resolution procedure or process shall be in the state of Texas. If the dispute is litigated, venue and jurisdiction shall be in a court of competent jurisdiction in the state of Texas.

Pursuant to 85th Texas Legislative H.B. 3270, as it applies to Texas Education Code § 22.0834 et seq, the Vendor shall comply with all relevant sections related to student contact, background checks, fingerprinting and other related requirements.

Special Terms and Conditions

It is the intent of TIPS to award to reliable, high performance vendors to supply products and services to government and educational agencies. It is the experience of TIPS that the following procedures provide TIPS, the Vendor, and the participating agency the necessary support to facilitate a mutually beneficial relationship. The specific procedures will be negotiated with the successful vendor.

- **Agreements:** All vendor Purchase Orders and/or Agreements/Contracts must be emailed to TIPS at tipspo@tips-usa.com. Should an agency send an order direct to vendor, it is the vendor's responsibility to forward the order to TIPS at the email above within 24 business hours and confirm its receipt with TIPS.
- **Promotion of Agreement:** It is agreed that Vendor will encourage all eligible entities to purchase from the TIPS Program. Encouraging entities to purchase directly from the Vendor, bypassing the TIPS Agreement when the Member has requested the TIPS agreement is a violation of the terms and conditions of this Agreement and will result in removal of the Vendor from the TIPS Program.

Page 12 of 12 will be the TIPS Vendor Agreement Signature Page

TIPS Vendor Agreement Signature Form

RCSP 180602 Roofing (JOC)

Company Name Seamless Systems, Inc.

Address 5707 South 73rd Place

City Fort Smith State AR Zip 72903

Phone 479-648-0037 Fax 479-648-9366

Email of Authorized Representative duane@seamlesssystems.com

Name of Authorized Representative Duane Logsdon

Title Project Manager

Signature of Authorized Representative *Duane Logsdon*

Date 8/9/2018

TIPS Authorized Representative Name Meredith Barton

Title Vice-President of Operations

TIPS Authorized Representative Signature *Meredith Barton*

Approved by ESC Region 8 *David Wayne Fitts*

Date 9/27/18

The Interlocal Purchasing System (TIPS Cooperative) Supplier Response

Bid Information		Contact Information		Ship to Information
Bid Creator	Mr. David Mabe Vice-President of Construction	Address	Region VIII Education Service Center 4845 US Highway 271 North Pittsburg, TX 75686	Address
Email	david.mabe@tips-usa.com			Contact
Phone	+1 (903) 243-4759 x			
Fax	+1 (866) 749-6674 x	Contact	David Mabe, Vice-President of Construction	Department Building
Bid Number	180702			
Title	Roofing (JOC)			Floor/Room
Bid Type	RFP	Department		Telephone
Issue Date	7/5/2018 08:03 AM (CT)	Building		Fax
Close Date	8/17/2018 03:00:00 PM (CT)			Email
		Floor/Room		
		Telephone	+1 (866) 839-8477 x	
		Fax	+1 (866) 839-8472 x	
		Email	bids@tips-usa.com	

Supplier Information

Company Seamless Systems Inc
 Address 5571 Universal Drive

 Memphis, TN 38118

 Contact
 Department
 Building
 Floor/Room
 Telephone (901) 795-4265
 Fax (901) 795-0527
 Email
 Submitted 8/9/2018 04:04:14 PM (CT)
 Total \$0.00

By submitting your response, you certify that you are authorized to represent and bind your company.

Signature Duane Logdon

Email duane@seamlesssystems.com

Supplier Notes

Bid Notes

Bid Activities

Bid Messages

Bid Attributes

Please review the following and respond where necessary

#	Name	Note	Response
1	Yes - No	Disadvantaged/Minority/Women Business Enterprise - D/M/WBE (Required by some participating governmental entities) Vendor certifies that their firm is a D/M/WBE? Vendor must upload proof of certification to the "Response Attachments" D/M/WBE CERTIFICATES section.	No
2	Yes - No	Historically Underutilized Business - HUB (Required by some participating governmental entities) Vendor certifies that their firm is a HUB as defined by the State of Texas at https://comptroller.texas.gov/purchasing/vendor/hub/ or in a HUBZone as defined by the US Small Business Administration at https://www.sba.gov/offices/headquarters/ohp Proof of one or both may be submitted. Vendor must upload proof of certification to the "Response Attachments" HUB CERTIFICATES section.	No
3	Yes - No	The Vendor can provide services and/or products to all 50 US States? Select YES, ONLY if your company is licensed to work in all 50 states, or the state does not require a license; otherwise select NO.	No
4	States Served:	If answer is NO to question #3, please list which states can be served. (Example: AR, OK, TX)	AR,OK,TX,TN,MS,KS,AL,GA,MO,LA
5	Company and/or Product Description:	This information will appear on the TIPS website in the company profile section, if awarded a TIPS contract. (Limit 750 characters.)	Seamless Systems, Inc. was incorporated in 1979 in Memphis TN. and has been servicing clients throughout the southwest region. Our Fort Smith office opened in 1994 and services clients west of the Mississippi River. Consulting/Design/Installation service of roofing projects have included low-slope single ply heat weld applications and standing seam architectural metal roofs. All roof systems we install are backed by manufactures warranties up to 30 years.
6	Primary Contact Name	Primary Contact Name	Duane Logdon
7	Primary Contact Title	Primary Contact Title	Project Manager
8	Primary Contact Email	Primary Contact Email	duane@seamlesssystems.com
9	Primary Contact Phone	Enter 10 digit phone number. (No dashes or extensions) Example: 8668398477	479-648-0037
10	Primary Contact Fax	Enter 10 digit fax number. (No dashes or extensions) Example: 8668398477	476-648-9366
11	Primary Contact Mobile	Enter 10 digit mobile phone number. (No dashes or extensions) Example: 8668398477	479-221-6800
12	Secondary Contact Name	Secondary Contact Name	Randy Purkey

13	Secondary Contact Title	Secondary Contact Title	President
14	Secondary Contact Email	Secondary Contact Email	randy@seamlesssystems.com
15	Secondary Contact Phone	Enter 10 digit phone number. (No dashes or extensions) Example: 8668398477	901-795-4265
16	Secondary Contact Fax	Enter 10 digit phone number. (No dashes or extensions) Example: 8668398477	901-795-0527
17	Secondary Contact Mobile	Enter 10 digit phone number. (No dashes or extensions) Example: 8668398477	901-233-7496
18	Admin Fee Contact Name	Admin Fee Contact Name. This person is responsible for paying the admin fee to TIPS.	Duane Logsdon
19	Admin Fee Contact Email	Admin Fee Contact Email	duane@seamlesssystems.com
20	Admin Fee Contact Phone	Enter 10 digit phone number. (No dashes or extensions) Example: 8668398477	479-648-0037
21	Purchase Order Contact Name	Purchase Order Contact Name. This person is responsible for receiving Purchase Orders from TIPS.	Duane Logsdon
22	Purchase Order Contact Email	Purchase Order Contact Email	duane@seamlesssystems.com
23	Purchase Order Contact Phone	Enter 10 digit phone number. (No dashes or extensions) Example: 8668398477	479-648-0377
24	Company Website	Company Website (Format - www.company.com)	www.seamlesssystems.com
25	Federal ID Number:	Federal ID Number also known as the Employer Identification Number. (Format - 12-3456789)	62-1096403
26	Primary Address	Primary Address	5707 South 73rd Place
27	Primary Address City	Primary Address City	Fort Smith
28	Primary Address State	Primary Address State (2 Digit Abbreviation)	AR
29	Primary Address Zip	Primary Address Zip	72903
30	Search Words:	Please list search words to be posted in the TIPS database about your company that TIPS website users might search. Words may be product names, manufacturers, or other words associated with the category of award. YOU MAY NOT LIST NON-CATEGORY ITEMS. (Limit 500 words) (Format: product, paper, construction, manufacturer name, etc.)	Roofing Standing Seam TPO Roof Repairs Metal Roofing Roof Coatings Roof Consultant
31	Do you want TIPS Members to be able to spend Federal grant funds with you if awarded? Is it your intent to be able to sell to our members regardless of the fund source, whether it be local, state or federal?	Most of our members receive Federal Government grants and they make up a significant portion of their budgets. The members need to know if your company is willing to sell to them when they spend federal budget funds on their purchase. There are attributes that follow that are provisions from the federal regulations in 2 CFR part 200. Your answers will determine if your award will be designated as Federal or Education Department General Administrative Regulations (EDGAR) compliant. Do you want TIPS Members to be able to spend Federal grant funds with you if awarded and is it your intent to be able to sell to our members regardless of the fund source, whether it be local, state or federal?	Yes

32	Yes - No	<p>Certification of Residency (Required by the State of Texas) The vendor's ultimate parent company or majority owner:</p> <p>(A) has its principal place of business in Texas;</p> <p>OR</p> <p>(B) employs at least 500 persons in Texas?</p>	No
33	Company Residence (City)	Vendor's principal place of business is in the city of?	Memphis
34	Company Residence (State)	Vendor's principal place of business is in the state of?	TN
35	TIPS administration fee	By submitting a proposal, I agree that all pricing submitted to TIPS shall include the participation fee, as designated in the solicitation or as otherwise agreed in writing and shall be remitted to TIPS by the Vendor as agreed in the Vendor agreement. I agree that the fee shall not and will not be added by the vendor as a separate line item on a TIPS member invoice, quote, proposal or any other written communications with the TIPS member.	(No Response Required)
36	Yes - No	<p>Vendor agrees to remit to TIPS the required administration fee?</p> <p>TIPS/ESC Region 8 is required by Texas Government Code § 791 to be compensated for its work and thus, failure to agree shall render your response void and it will not be considered.</p>	Yes
37	Regular Hours Coefficient	<p>What is your regular hours coefficient for the RS Means Price Book?</p> <p>Example:</p> <p>A 5% discount for the RS Means Price Book would be a .95 regular hours coefficient.</p> <p>Remember that this is a ceiling discount. You can discount lower than the contract coefficient, but not higher.</p>	98
38	After Hours Coefficient	<p>What is your after hours coefficient for the RS Means Price Book for work performed after normal working hours?</p> <p>Example:</p> <p>The most common after hours coefficient is time and a half. If your regular hours coefficient is .95, your after hours coefficient would be 1.45.</p> <p>Remember that this is a ceiling discount. You can discount lower than the contract coefficient, but not higher.</p>	1.49
39	Non-Pre-Priced Markup	<p>If the material being utilized for a project cannot be found in the RS Means Price Book, what is your materials markup?</p> <p>Remember that this is a ceiling markup. You may markup a lesser percentage, but not a greater percentage.</p>	30%
40	Yes - No	Do you offer additional discounts to TIPS members for large order quantities or large scope of work?	Yes
41	Years Experience	Company years experience in this category?	24
42	Price coefficients and non-pre-priced markups are guaranteed for?	Does the vendor agrees to honor the proposed pricing coefficients and non-pre-priced markups for the term of the award?	YES
43	Right of Refusal	Does the proposing vendor wish to reserve the right not to perform under the awarded agreement with a TIPS member at vendor's discretion?	Yes

44	NON-COLLUSIVE BIDDING CERTIFICATE	By submission of this bid or proposal, the Bidder certifies that:	(No Response Required)
		<p>1) This bid or proposal has been independently arrived at without collusion with any other Bidder or with any Competitor;</p> <p>2) This bid or proposal has not been knowingly disclosed and will not be knowingly disclosed, prior to the opening of bids, or proposals for this project, to any other Bidder, Competitor or potential competitor;</p> <p>3) No attempt has been or will be made to induce any other person, partnership or corporation to submit or not to submit a bid or proposal;</p> <p>4) The person signing this bid or proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties being applicable to the Bidder as well as to the person signing in its behalf. Not a negotiable term. Failure to agree will render your proposal non-responsive and it will not be considered.</p>	
45	CONFLICT OF INTEREST QUESTIONNAIRE - FORM CIQ -Do you have any CONFLICT OF INTEREST TO REPORT OR DISCLOSE under this statutory requirement?	<p>Do you have any CONFLICT OF INTEREST TO REPORT OR DISCLOSE under this statutory requirement? YES or NO</p> <p>If you have a conflict of interest as described in this form or the Local Government Code Chapter 176, cited therein- you are required to complete and file with TIPS. You may find the Blank CIQ form on the "Attachments" tab. There is an optional upload on the "Response Attachments" tab for this form provided if you have a conflict and must file the form.</p>	No
46	Filing of Form CIQ	If yes (above), have you filed a form CIQ by uploading the form to this RCSP as directed above?	
47	Regulatory Standing	I certify to TIPS for the proposal attached that my company is in good standing with all governmental agencies, Federal or state, that regulate any part of our business operations. If not, please explain in the next attribute question.	Yes
48	Regulatory Standing	Regulatory Standing explanation of no answer on previous question.	
49	Antitrust Certification Statements (Tex. Government Code § 2155.005)	<p>By submission of this bid or proposal, the Bidder certifies that:</p> <p>I affirm under penalty of perjury of the laws of the State of Texas that:</p> <p>(1) I am duly authorized to execute this contract on my own behalf or on behalf of the company, corporation, firm, partnership or individual (Company) listed below;</p> <p>(2) In connection with this bid, neither I nor any representative of the Company has violated any provision of the Texas Free Enterprise and Antitrust Act, Tex. Bus. & Comm. Code Chapter 15;</p> <p>(3) In connection with this bid, neither I nor any representative of the Company has violated any federal antitrust law;</p> <p>(4) Neither I nor any representative of the Company has directly or indirectly communicated any of the contents of this bid to a competitor of the Company or any other company, corporation, firm, partnership or individual engaged in the same line of business as the Company.</p>	(No Response Required)

Instructions for Certification:

(No Response Required)

1. By answering yes to the next Attribute question below, the vendor and prospective lower tier participant is providing the certification set out herein in accordance with these instructions.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification in addition to other remedies available to the federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension and / or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participants," "person," "primary covered transaction," "principal," "proposal" and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction" without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the federal government, the department or agency with which this

transaction originated may pursue available remedies, including suspension and / or debarment.

51 Suspension or Debarment Certification

By answering yes, you certify that no federal suspension or debarment is in place, which would preclude receiving a federally funded contract as described above. Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the government-wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

Yes

By answering yes, you certify that no federal suspension or debarment is in place, which would preclude receiving a federally funded contract as described above.

52 Non-Discrimination Statement and Certification

In accordance with Federal civil rights law, all U.S. Departments, including the U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident. Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English. To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at How to File a Program Discrimination Complaint and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov. (Title VI of the Education Amendments of 1972; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975; Title 7 CFR Parts 15, 15a, and 15b; the Americans with Disabilities Act; and FNS Instruction 113-1, Civil Rights Compliance and Enforcement – Nutrition Programs and Activities) All U.S. Departments, including the USDA are equal opportunity provider, employer, and lender.

Yes

Not a negotiable term. Failure to agree will render your proposal non-responsive and it will not be considered. I certify that in the performance of a contract with TIPS or its members, that our company will conform to the foregoing anti-discrimination statement and comply with the cited and all other applicable laws and regulations.

53 2 CFR PART 200 Contract Provisions
Explanation

Required Federal contract provisions of Federal Regulations for Contracts for contracts with ESC Region 8 and TIPS Members:

(No Response Required)

The following provisions are required to be in place and agreed if the procurement is funded in any part with federal funds.

The ESC Region 8 and TIPS Members are the subgrantee or Subrecipient by definition. Most of the provisions are located in 2 CFR PART 200 - Appendix II to Part 200—Contract Provisions for Non-Federal Entity Contracts Under Federal Awards at 2 CFR PART 200. Others are included within 2 CFR part 200 et al.

In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.

54 2 CFR PART 200 Contracts

Contracts for more than the simplified acquisition threshold currently set at \$150,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Notice: Pursuant to the above, when federal funds are expended by ESC Region 8 and TIPS Members, ESC Region 8 and TIPS Members reserves all rights and privileges under the applicable laws and regulations with respect to this procurement in the event of breach of contract by either party.
Does vendor agree?

55 2 CFR PART 200 Termination

Termination for cause and for convenience by the grantee or subgrantee including the manner by which it will be effected and the basis for settlement. (All contracts in excess of \$10,000)
Pursuant to the above, when federal funds are expended by ESC Region 8 and TIPS Members, ESC Region 8 and TIPS Members reserves the right to terminate any agreement in excess of \$10,000 resulting from this procurement process for cause after giving the vendor an appropriate opportunity and up to 30 days, to cure the causal breach of terms and conditions. ESC Region 8 and TIPS Members reserves the right to terminate any agreement in excess of \$10,000 resulting from this procurement process for convenience with 30 days notice in writing to the awarded vendor. The vendor would be compensated for work performed and goods procured as of the termination date if for convenience of the ESC Region 8 and TIPS Members. Any award under this procurement process is not exclusive and the ESC Region 8 and TIPS reserves the right to purchase goods and services from other vendors when it is in the best interest of the ESC Region 8 and TIPS.
Does vendor agree?

56	2 CFR PART 200 Clean Air Act	Yes
57	2 CFR PART 200 Byrd Anti-Lobbying Amendment	Yes
58	2 CFR PART 200 Federal Rule	Yes

Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended—Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Pursuant to the Clean Air Act, et al above, when federal funds are expended by ESC Region 8 and TIPS Members, ESC Region 8 and TIPS Members requires that the proposer certify that during the term of an award by the ESC Region 8 and TIPS Members resulting from this procurement process the vendor agrees to comply with all of the above regulations, including all of the terms listed and referenced therein. Does vendor agree?

Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. Pursuant to the above, when federal funds are expended by ESC Region 8 and TIPS Members, ESC Region 8 and TIPS Members requires the proposer certify that during the term and during the life of any contract with ESC Region 8 and TIPS Members resulting from this procurement process the vendor certifies to the terms included or referenced herein. Does vendor agree?

Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (Contracts, subcontracts, and subgrants of amounts in excess of \$100,000) Pursuant to the above, when federal funds are expended by ESC Region 8 and TIPS Members, ESC Region 8 and TIPS Members requires the proposer certify that in performance of the contracts, subcontracts, and subgrants of amounts in excess of \$100,000, the vendor will be in compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). Does vendor certify that it is in compliance with the Clean Air Act?

<p>59 2 CFR PART 200 Procurement of Recovered Materials</p>	<p>A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.</p> <p>Does vendor certify that it is in compliance with the Solid Waste Disposal Act as described above?</p>	<p>Yes</p>
<p>60 Certification Regarding Lobbying</p>	<p>Applicable to Grants, Subgrants, Cooperative Agreements, and Contracts Exceeding \$100,000 in Federal Funds</p> <p>Submission of this certification is a prerequisite for making or entering into this transaction and is imposed by section 1352, Title 31, U.S. Code. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p> <p>The undersigned certifies, to the best of his or her knowledge and belief, that:</p> <p>(1) No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of congress, or an employee of a Member of Congress in connection with the awarding of a Federal contract, the making of a Federal grant, the making of a Federal loan, the entering into a cooperative agreement, and the extension, continuation, renewal, amendment, or modification of a Federal contract, grant, loan, or cooperative agreement.</p> <p>(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "disclosure Form to Report Lobbying," in accordance with its instructions.</p> <p>(3) The undersigned shall require that the language of this certification be included in the award documents for all covered subawards exceeding \$100,000 in Federal funds at all appropriate tiers and that all subrecipients shall certify and disclose accordingly.</p>	<p>I HAVE NOT Lobbied per above</p>
<p>61 Lobbying Report Standard Form-LLL, "disclosure Form to Report Lobbying,"</p>	<p>ONLY IF you answered "I HAVE Lobbied per above" to attribute #60, please download and complete and upload the Standard Form-LLL, "disclosure Form to Report Lobbying," in the Response attachments section.</p>	<p>(No Response Required)</p>

- | | | | |
|----|---|--|-----|
| 62 | Federal Requirements for Procurement and Contracting with small and minority businesses, women's business enterprises, and labor surplus area firms. | Federal Requirements for Procurement and Contracting with small and minority businesses, women's business enterprises, and labor surplus area firms. Do you ever anticipate the possibility of subcontracting any of your work under this award if you are successful? | NO |
| 63 | If yes to the above question OR if you ever do subcontract any part of your performance under the TIPS Agreement, do you agree to comply with the following federal requirements? | If yes to the above question OR if you ever do subcontract any part of your performance under the TIPS Agreement, do you agree to comply with the following federal requirements? Federal Regulation 2 CFR §200.321 Contracting with small and minority businesses, women's business enterprises, and labor surplus area firms. (a)The non-Federal entity must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.
(b) Affirmative steps must include:(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
(2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
(4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
(5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
(6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs(1) through (5) of this section. | YES |

Texas Statute requires compliance with Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

BY SUBMITTING A PROPOSAL FOR THIS SOLICITATION, the Vendor agrees, AS REQUIRED BY LAW, to comply with the Davis Bacon Act, IF APPLICABLE.

Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. By submitting a proposal to this solicitation, and IF the customer is utilizing federal funds as described above, the Vendor agrees to comply with the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708).

66 Indemnification

The ESC Region 8 and TIPS is a Texas Political Subdivision and a local governmental entity; therefore, is prohibited from indemnifying third parties pursuant to the Texas Constitution (Article 3, Section 52) except as specifically provided by law or as ordered by a court of competent jurisdiction. A provision in a contract to indemnify or hold a party harmless is a promise to pay for any expenses the indemnified party incurs, if a specified event occurs, such as breaching the terms of the contract or negligently performing duties under the contract. Article III, Section 49 of the Texas Constitution states that "no debt shall be created by or on behalf of the State ... " The Attorney General has counseled that a contractually imposed obligation of indemnity creates a "debt" in the constitutional sense. Tex. Att'y Gen. Op. No. MW-475 (1982). Contract clauses which require the System or institutions to indemnify must be deleted or qualified with "to the extent permitted by the Constitution and Laws of the State of Texas." Liquidated damages, attorney's fees, waiver of vendor's liability, and waiver of statutes of limitations clauses should also be deleted or qualified with "to the extent permitted by the Constitution and laws of State of Texas." Not a negotiable term. Failure to agree will render your proposal non-responsive and it will not be considered. Do you agree to these terms?

Yes

67 Remedies

The parties shall be entitled to exercise any right or remedy available to it either at law or in equity, subject to the choice of law, venue and service of process clauses limitations agreed herein. Nothing in this agreement shall commit the TIPS to an arbitration resolution of any disagreement under any circumstances. Any Claim arising out of or related to the Contract, except for those specifically waived under the terms of the Contract, may, after denial of the Board of Directors, be subject to mediation at the request of either party. Any issues not resolved hereunder MAY be referred to non-binding mediation to be conducted by a mutually agreed upon mediator as a prerequisite to the filing of any lawsuit over such issue(s). The parties shall share the mediator's fee and any associated filing fee equally. Mediation shall be held in Camp or Titus County, Texas. Agreements reached in mediation shall be reduced to writing, and will be subject to the approval by the District's Board of Directors, signed by the Parties if approved by the Board of Directors, and, if signed, shall thereafter be enforceable as provided by the laws of the State of Texas. Do you agree to these terms?

Yes, I Agree

68 Remedies Explanation of No Answer

69	Choice of Law	<p>The agreement between the Vendor and TIPS/ESC Region 8 and any addenda or other additions resulting from this procurement process, however described, shall be governed by, construed and enforced in accordance with the laws of the State of Texas, regardless of any conflict of laws principles. THIS DOES NOT APPLY to a vendor's agreement entered into with a TIPS Member, as the Member may be located outside Texas.</p> <p>Not a negotiable term. Failure to agree will render your proposal non-responsive and it will not be considered. Do you agree to these terms?</p>	Yes
70	Jurisdiction and Service of Process	<p>Any Proceeding arising out of or relating to this procurement process or any contract issued by TIPS resulting from or any contemplated transaction shall be brought in a court of competent jurisdiction in Camp County, Texas and each of the parties irrevocably submits to the exclusive jurisdiction of said court in any such proceeding, waives any objection it may now or hereafter have to venue or to convenience of forum, agrees that all claims in respect of the Proceeding shall be heard and determined only in any such court, and agrees not to bring any proceeding arising out of or relating to this procurement process or any contract resulting from or any contemplated transaction in any other court. The parties agree that either or both of them may file a copy of this paragraph with any court as written evidence of the knowing, voluntary and freely bargained for agreement between the parties irrevocably to waive any objections to venue or to convenience of forum. Process in any Proceeding referred to in the first sentence of this Section may be served on any party anywhere in the world. Venue clauses in contracts with TIPS members may be determined by the parties.</p> <p>Not a negotiable term. Failure to agree will render your proposal non-responsive and it will not be considered. Do you agree to these terms?</p>	Yes
71	Alternative Dispute Resolution Explanation of No Answer		
72	Infringement(s)	<p>The successful vendor will be expected to indemnify and hold harmless the TIPS and its employees, officers, agents, representatives, contractors, assignees and designees from any and all third party claims and judgments involving infringement of patent, copyright, trade secrets, trade or service marks, and any other intellectual or intangible property rights attributed to or claims based on the Vendor's proposal or Vendor's performance of contracts awarded and approved.</p> <p>Do you agree to these terms?</p>	Yes, I Agree
73	Infringement(s) Explanation of No Answer		

74	Acts or Omissions	<p>The successful vendor will be expected to indemnify and hold harmless the TIPS, its officers, employees, agents, representatives, contractors, assignees and designees from and against any and all liability, actions, claims, demands or suits, and all related costs, attorney's fees and expenses arising out of, or resulting from any acts or omissions of the vendor or its agents, employees, subcontractors, or suppliers in the execution or performance of any agreements ultimately made by TIPS and the vendor.</p> <p>Do you agree to these terms?</p>	Yes, I Agree
75	Acts or Omissions Explanation of No Answer		
76	Contract Governance	<p>Any contract made or entered into by the TIPS is subject to and is to be governed by Section 271.151 et seq, Tex Loc Gov't Code. Otherwise, TIPS does not waive its governmental immunities from suit or liability except to the extent expressly waived by other applicable laws in clear and unambiguous language.</p>	Yes
77	Payment Terms and Funding Out Clause	<p>Payment Terms:</p> <p>TIPS or TIPS members shall not be liable for interest or late payment fees on past due balances at a rate higher than permitted by the laws or regulations of the jurisdiction of the TIPS Member.</p> <p>Funding Out Clause:</p> <p>Vendor agrees to abide by the laws and regulations, including Texas Local Government Code § 271.903, or any statutory or regulatory limitations of the jurisdiction of any TIPS Member which governs contracts entered into by the Vendor and TIPS or a TIPS Member that requires all contracts approved by TIPS or a TIPS Member are subject to the budgeting and appropriation of currently available funds by the entity or its governing body.</p> <p>See statute(s) for specifics or consult your legal counsel.</p> <p>Not a negotiable term. Failure to agree will render your proposal non-responsive and it will not be considered.</p> <p>Do you agree to these terms?</p>	Yes
78	Insurance and Fingerprint Requirements Information	<p>Insurance</p> <p>If applicable and your staff will be on TIPS member premises for delivery, training or installation etc. and/or with an automobile, you must carry automobile insurance as required by law. You may be asked to provide proof of insurance.</p> <p>Fingerprint</p> <p>It is possible that a vendor may be subject to Chapter 22 of the Texas Education Code. The Texas Education Code, Chapter 22, Section 22.0834. Statutory language may be found at: http://www.statutes.legis.state.tx.us/</p> <p>If the vendor has staff that meet both of these criterion:</p> <p>(1) will have continuing duties related to the contracted services; and</p> <p>(2) has or will have direct contact with students</p> <p>Then you have "covered" employees for purposes of completing the attached form.</p> <p>TIPS recommends all vendors consult their legal counsel for guidance in compliance with this law. If you have questions on how to comply, see below. If you have questions on compliance with this code section, contact the Texas Department of Public Safety Non-Criminal Justice Unit, Access and Dissemination Bureau, FAST-FACT at NCJU@txdps.state.tx.us and you should send an email identifying you as a contractor to a Texas Independent</p>	(No Response Required)

School District or ESC Region 8 and TIPS. Texas DPS phone number is (512) 424-2474.
See form in the next attribute to complete entitled:
Texas Education Code Chapter 22 Contractor Certification for Contractor Employees

79 Texas Education Code Chapter 22 Contractor Certification for Contractor Employees

Introduction: Texas Education Code Chapter 22 requires entities that contract with school districts to provide services to obtain criminal history record information regarding covered employees. Contractors must certify to the district that they have complied. Covered employees with disqualifying criminal histories are prohibited from serving at a school district.

Definitions: Covered employees: Employees of a contractor or subcontractor who have or will have continuing duties related to the service to be performed at the District and have or will have direct contact with students. The District will be the final arbiter of what constitutes direct contact with students. Disqualifying criminal history: Any conviction or other criminal history information designated by the District, or one of the following offenses, if at the time of the offense, the victim was under 18 or enrolled in a public school:

- (a) a felony offense under Title 5, Texas Penal Code; (b) an offense for which a defendant is required to register as a sex offender under Chapter 62, Texas Code of Criminal Procedure; or (c) an equivalent offense under federal law or the laws of another state.

I certify that:

NONE (Section A) of the employees of Contractor and any subcontractors are covered employees, as defined above. If this box is checked, I further certify that Contractor has taken precautions or imposed conditions to ensure that the employees of Contractor and any subcontractor will not become covered employees. Contractor will maintain these precautions or conditions throughout the time the contracted services are provided.

OR

SOME (Section B) or all of the employees of Contractor and any subcontractor are covered employees. If this box is checked, I further certify that:

- (1) Contractor has obtained all required criminal history record information regarding its covered employees. None of the covered employees has a disqualifying criminal history.
- (2) If Contractor receives information that a covered employee subsequently has a reported criminal history, Contractor will immediately remove the covered employee from contract duties and notify the District in writing within 3 business days.
- (3) Upon request, Contractor will provide the District with the name and any other requested information of covered employees so that the District may obtain criminal history record information on the covered employees.
- (4) If the District objects to the assignment of a covered employee on the basis of the covered employee's criminal history record information, Contractor agrees to discontinue using that covered employee to provide services at the District.

Noncompliance or misrepresentation regarding this certification may be grounds for contract termination.

80	<p>Texas Business and Commerce Code § 272 Requirements as of 9-1-2017</p> <p>SB 807 prohibits construction contracts to have provisions requiring the contract to be subject to the laws of another state, to be required to litigate the contract in another state, or to require arbitration in another state. A contract with such provisions is voidable. Under this new statute, a "construction contract" includes contracts, subcontracts, or agreements with (among others) architects, engineers, contractors, construction managers, equipment lessors, or materials suppliers. "Construction contracts" are for the design, construction, alteration, renovation, remodeling, or repair of any building or improvement to real property, or for furnishing materials or equipment for the project. The term also includes moving, demolition, or excavation. BY RESPONDING TO THIS SOLICITATION, AND WHEN APPLICABLE, THE PROPOSER AGREES TO COMPLY WITH THE TEXAS BUSINESS AND COMMERCE CODE § 272 WHEN EXECUTING CONTRACTS WITH TIPS MEMBERS THAT ARE TEXAS GOVERNMENT ENTITIES.</p>	(No Response Required)
81	<p>Texas Government Code 2270 Verification Form</p> <p>Texas Government Code 2270 Verification Form Texas 2017 House Bill 89 has been signed into law by the governor and as of September 1, 2017 will be codified as Texas Government Code § 2270 and 808 et seq. The relevant section addressed by this form reads as follows: Texas Government Code Sec. 2270.002. PROVISION REQUIRED IN CONTRACT. A governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract engaged by ESC Region 8/The Interlocal Purchasing System (TIPS) 4845 Highway 271 North Pittsburg,TX 75686 Verify by this writing that the above-named company affirms that it (1) does not boycott Israel; and (2) will not boycott Israel during the term of this contract, or any contract with the above-named Texas governmental entity in the future. I further affirm that if our company's position on this issue is reversed and this affirmation is no longer valid, that the above-named Texas governmental entity will be notified in writing within one (1) business day and we understand that our company's failure to affirm and comply with the requirements of Texas Government Code 2270 et seq. shall be grounds for immediate contract termination without penalty to the above-named Texas governmental entity. AND Our company is not listed on and we do not do business with companies that are on the the Texas Comptroller of Public Accounts list of Designated Foreign Terrorists Organizations per Texas Gov't Code 2270.0153 found at https://comptroller.texas.gov/purchasing/docs/foreign-terrorist.pdf</p> <p>I swear and affirm that the above is true and correct.</p>	YES
82	<p>Solicitation Deviation/Compliance</p> <p>Does the vendor agree with the General Conditions Standard Terms and Conditions or Item Specifications listed in this proposal invitation?</p>	Yes

83 Solicitation Exceptions/Deviations Explanation	<p>If the bidder intends to deviate from the General Conditions Standard Terms and Conditions or Item Specifications listed in this proposal invitation, all such deviations must be listed on this attribute, with complete and detailed conditions and information included or attached.</p> <p>TIPS will consider any deviations in its proposal award decisions, and TIPS reserves the right to accept or reject any bid based upon any deviations indicated below or in any attachments or inclusions.</p> <p>In the absence of any deviation entry on this attribute, the proposer assures TIPS of their full compliance with the Standard Terms and Conditions, Item Specifications, and all other information contained in this Solicitation.</p>	
84 Agreement Deviation/Compliance	Does the vendor agree with the language in the Vendor Agreement?	Yes
85 Agreement Exceptions/Deviations Explanation	<p>If the proposing Vendor desires to deviate from the Vendor Agreement language, all such deviations must be listed on this attribute, with complete and detailed conditions and information included. TIPS will consider any deviations in its proposal award decisions, and TIPS reserves the right to accept or reject any proposal based upon any deviations indicated below. In the absence of any deviation entry on this attribute, the proposer assures TIPS of their full compliance with the Vendor Agreement.</p>	

Line Items		
Response Total:		\$0.00

REFERENCES

Please provide three (3) references, preferably from school districts or other governmental entities who have used your service the last three years. Additional references may be required. DO NOT INCLUDE TIPS EMPLOYEES AS A REFERENCE.

Please verify your references are current and valid, as they are a **SIGNIFICANT** required evaluation component of the evaluation process, and the evaluation cannot be completed without responses from these references when we contact them.

You may provide more than three (3) references.

[illegible]

COMPLETE ONLY IF OFFERER IS A CORPORATION,

OFFERER: Seamless Systems, Inc
(Name of Corporation)

DUSTIN JAMES POCKEY certify that I am the Secretary of the Corporation
I, (Name of Corporate Secretary)

Duane Logsdon
(Name of person who completed proposal document)

Project Manager
(Title/Position of person signing proposal/offer document within the corporation)

CORPORATE SEAL if available

~~SIGNATURE~~

DATE _____

Insert TIPS RFP# 180702

**FAILURE TO PROPERLY COMPLETE THIS FORM AND SUBMIT WITH YOUR RESPONSE MAY RESULT IN A
WAIVER OF YOUR RIGHTS UNDER THE LAW TO MAINTAIN CONFIDENTIALITY TREATMENT OF
SUBMITTED MATERIALS.**

CONFIDENTIAL INFORMATION SUBMITTED IN RESPONSE TO COMPETITIVE PROCUREMENT REQUESTS
OF EDUCATION SERVICE CENTER REGION 8 AND TIPS (ESC8) IS GOVERNED BY TEXAS GOVERNMENT
CODE, CHAPTER 552

If you consider any portion of your proposal to be confidential information and not subject to public disclosure pursuant to Chapter 552 Texas Gov't Code or other law(s), you **must make a copy of all claimed confidential materials within your proposal and put this COMPLETED form as a cover sheet to said materials then scan, name "CONFIDENTIAL" and upload with your proposal submission.** (You must include the confidential information in the submitted proposal as well, the copy uploaded is to indicate which material in your proposal, if any, you deem confidential in the event the receives a Public Information Request.) ESC8 and TIPS will follow procedures of controlling statute(s) regarding any claim of confidentiality and shall not be liable for any release of information required by law. Pricing of solicited product or service may be deemed as public information under Chapter 552 Texas Gov't Code. The Office of Texas Attorney General shall make the final determination whether the information held by ESC8 and TIPS is confidential and exempt from public disclosure.

If you claim that parts of your proposal are confidential, complete the top section below.

I claim part of my proposal to be confidential and DO NOT desire to expressly waive any claim of confidentiality as to any and all information contained within our response to the competitive procurement process (e.g. RFP, CSP, Bid, RFQ, etc.) by completing the following and submitting this sheet with our response to Education Service Center Region 8 and TIPS. The attached contains material from our proposal that I classify and deem confidential under Texas Gov't Code Sec. 552 or other law(s) and I invoke my statutory rights to confidential treatment of the enclosed materials.

Name of company claiming confidential status of material

Printed Name and Title of authorized company officer claiming confidential status of material

Address City State ZIP Phone

ATTACHED ARE COPIES OF _____ PAGES OF CONFIDENTIAL MATERIAL FROM OUR
PROPOSAL

Signature _____ Date _____

OR

If you do not claim any of your proposal to be confidential, complete the section below only.

Express Waiver: I desire to expressly waive any claim of confidentiality as to any and all information contained within our response to the competitive procurement process (e.g. RFP, CSP, Bid, RFQ, etc.) by completing the following and submitting this sheet with our response to Education Service Center Region 8 and TIPS.

Duane Logsdon

Project manager

Printed Name authorized company officer

Title of authorized company officer

5707 South 73rd Place Fort Smith AR 72903 479-648-0037

Address City State ZIP Phone

Signature Duane Logsdon Date 8/9/2018



August 9, 2018

Re: Seamless Systems, Inc.

To Whom It May Concern:

It has been the privilege of **Harris Madden & Powell, Inc.** and **North American Specialty Insurance Company** to provide surety bonds on behalf of **Seamless Systems, Inc.** for over ten years, during which time **Seamless Systems, Inc.** has performed and we have issued performance and payment bonds for contracts valued in the range of **\$1,500,000.00**. In our opinion, **Seamless Systems, Inc.** remains properly financed, well equipped, and capably managed.

At the present time, **North American Specialty Insurance Company** provides a \$1,500,000 single project / \$2,500,000 aggregate surety program to **Seamless Systems, Inc.** As always **North American Specialty Insurance Company** reserves the right to perform normal underwriting at the time of any bond request, including, without limitation, prior review and approval of relevant contract documents, bond forms, and project financing. We assume no liability to TIPS Cooperative or its affiliates if for any reason we do not execute such bonds.

North American Specialty Insurance Company is listed on the U.S. Treasury Department's Listing of Approved Sureties (Department Circular 570), and is rated **A+** by A.M. Best Company.

Very truly yours,

North American Specialty Insurance Company

A handwritten signature in black ink that reads 'Ric Stallings'. The signature is written in a cursive, slightly stylized font.

By: _____
Ric Stallings, Attorney-in-Fact

State of Arkansas
Commercial Contractors Licensing Board

SEAMLESS SYSTEMS, INC.
5571 UNIVERSAL DR
MEMPHIS, TN 38118

SEAMLESS SYSTEMS, INC.

This is to Certify That _____

is duly licensed under the provisions of Ark. Code Ann. § 17-25-101 et. seq. as amended and is entitled to practice Contracting in the State of Arkansas within the following classifications/specialties:

SPECIALTY

Roofing, Roof Decks, Roofing Sheet Metal
Special Coatings or Applications, Caulking, Waterproofing

This contractor has an Unlimited suggested bid limit.

from July 28, 2017 **until** July 31, 2018 **when this Certificate expires.**

Witness our hands of the Board, dated at North Little Rock, Arkansas:



[Signature]

CHAIRMAN

[Signature]

SECRETARY

July 28, 2017 - sh

Janis Hubbard
Administrator



Mary Fallin
Governor

State of Oklahoma Construction Industries Board

RANDY L PURKEY
SEAMLESS SYSTEMS, INC
5571 UNIVERSAL DR
MEMPHIS, TN 38118

Date: 10/30/2017 - Registration Number: 80000508

IMPORTANT: The attached card contains your registration number and commercial endorsement, and is proof of your authorization to do business in Oklahoma as a Roofing Contractor.

You are responsible for complying with the Roofing Contractor Registration Act (59 O.S. § 1151.1, *et seq.*) and the Roofing Contractor Registration Regulations (OAC 158:85). You may view these, as well as other helpful information, on the CIB web page at: www.cib.ok.gov.

Pursuant to 59 O.S. 1151.5(G) your registration and endorsement will be classified as not in good standing if you fail to maintain liability insurance coverage and worker's compensation coverage. The registrar must receive proof of insurance and workers compensation prior to restoring the registration and endorsement.

As a registered roofing contractor, you are required to display your CIB issued roofing contractor registration number and indication of commercial endorsement (issued pursuant to the Roofing Contractor Registration Act) at job sites and on vehicles, business signs and cards, correspondence, all media containing the registrant's name, and contracts used to solicit and conduct roofing services in this state. Rubber stamping your registration number/commercial endorsement on your cards, correspondence, and other documents will be sufficient while you use existing printed material.

Some Oklahoma municipal and county jurisdictions require a permit for roofing work and may ask for your roofing contractor registration number when you apply for their permit.

Contact us at: (405) 521-6550 or Toll Free (877) 484-4424 for immediate assistance.





Seamless Systems Inc

has achieved the status of
Master Select Commercial Roofing Contractor for GAF,
North America's largest roofing manufacturer.



Only 1% of the roofing contractors in the U.S. have achieved Master Select status!
Based on their uncompromising commitment to installation excellence and continuous education,
they have pledged to insure that each customer receives their "best and safest choice" in roofing.

GAF License # 22854

Valid Through 10/2014

A handwritten signature in blue ink, reading "Robert B. Tafaro".

Robert B. Tafaro,
President and CEO, GAF

A handwritten signature in blue ink, reading "James R. Slauson".

James R. Slauson,
Vice President, Certified Program and Services, GAF



Novemeber 21, 2013

Duane Logsdon
Seamless Systems, Inc.
5706 South 73rd Place
Fort Smith, AR 72903

To Whom It May Concern:

This letter is to confirm that Seamless Systems, Inc. located in Fort Smith, AR is a Carlisle Authorized Applicator.

If you should have any further questions, please feel free to contact me.

Sincerely,



Stephen F. Schwar
Director, National Sales

/ems

Sika Sarnafil Inc.

World Class Roofing and Waterproofing

Duane Logsdon
Seamless Systems, Inc. of Fort Smith
5707 South 73rd Place
Fort Smith, AR 72903

Re: Sarnafil Approved Applicator

Dear Mr. Logsdon:

Please use this letter as verification that Seamless Systems, Inc. of Fort Smith is a Sarnafil Approved and Trained Applicator. Your company has been very active in the promotion and installation of our roofing products and systems for over ten years. During this time period, your company has averaged over 50,000 square feet per year of Sarnafil installations.

For any Sarnafil project, we are very confident Seamless Systems, Inc. of Fort Smith of being extremely knowledgeable of installing any of our roofing systems, i.e. adhered or mechanically attached. We have found Seamless Systems, Inc. of Fort Smith has the manpower and equipment to successfully complete a Sarnafil roofing project on time. It is commendable also to note, your company has been able to maintain a good working force, with some of the workers becoming "long-term" employees with your company. You should be proud to know your employees have developed an image for your company of being dependable, proficient, and possess exceptional-quality in the roofing industry.

I would highly recommend the utilization of your company for any Sarnafil roofing project. Should anyone question your company's capability of installing any of Sarnafil's roofing systems, please have the interested party contact our corporate office or myself.

Sincerely,
Sarnafil Inc.



Rick Chappell
Southwest Region District Manager



Sika Sarnafil Inc., 3727 Greenbriar, Suite 404, Stafford, TX 77477
Tel.: 1-281-325-0182, Fax: 281-325-0185, www.sikacorp.com

Sarnafil®



Seamless Systems, Inc.
5706 South 73rd. Place
Fort Smith, AR. 72903

Ref: Approved Applicator Letter

To Whom It May Concern:

Seamless Systems, Inc. of Fort Smith, Arkansas is an approved contractor for installation of Petersen Aluminum Corporation's Standing Seam Panels, Coping Systems, and Gravel Stops. They have proven that their workmanship is of the highest quality on numerous projects.

They qualify for all watertightness warranties including our 20 year No Dollar Limit warranties.

Sincerely,


Mark Humphrey

Petersen Aluminum Corporation

10551 PAC Road
Tyler, TX 75707

tel: 800 441 8661
fax: 903 581 8592

visit our website @ www.pac-clad.com

Everguard Diamond Pledge NDL Roof Guarantee

Guarantee

Updated: 5/09



***Your Best And Safest Choice...
Quality You Can Trust Since 1886!***



EverGuard® DIAMOND PLEDGE™ NDL ROOF GUARANTEE

No. _____



OWNER: _____ PERIOD OF COVERAGE: _____ YEARS

NAME AND TYPE OF BUILDING: _____

ADDRESS OF BUILDING: _____

SPECIFICATION: _____ AREA OF ROOF: _____ SQUARES

APPLIED BY: _____

DATE OF COMPLETION: _____ GUARANTEE EXPIRATION DATE: _____

THE GUARANTEE/SOLE AND EXCLUSIVE REMEDY

GAF MATERIALS CORPORATION ("GAF") guarantees to you, the original owner of the building described above, that GAF will provide "Edge To Edge" protection by repairing leaks through the GAF roofing membrane, liquid applied membrane or coating, base flashing, high wall waterproofing flashing, insulation, expansion joint covers, preflashed accessories and metal flashings used by the contractor of record that meet SMACNA standards (the "GAF Roofing Materials") resulting from manufacturing defects, ordinary wear and tear or workmanship in applying the GAF Roofing Materials.

There is no dollar limit on covered repairs. Leaks caused by any materials other than those listed above, such as the roof deck, non-GAF insulation, or any other materials used in the construction of the roof system, are not covered.

GUARANTEE PERIOD

This guarantee ends on the expiration date listed above. **NOTE:** Lexsuco® flashings are covered by this guarantee only for the first ten years.

OWNER'S RESPONSIBILITIES

Notification of Leaks

In the event of a leak through the GAF Roofing Materials, you must make sure that GAF is notified directly about the leak, in writing, within 30 days by email (preferred) at guaranteeservices@gaf.com, or in writing to Guarantee Services Department, 1361 Alps Road, Bldg. 11-1, Wayne, New Jersey 07470, or GAF will have no responsibility for making repairs. **NOTE:** The roofing contractor is NOT an agent of GAF; notice to the roofing contractor is NOT notice to GAF.

By notifying GAF, you authorize GAF to investigate the cause of the leak. If the investigation reveals that the leak is not covered by this guarantee, you agree to pay an investigation cost of \$500. This guarantee will be cancelled if you fail to pay this cost within 30 days of receipt of an invoice for it.

Preventative Maintenance and Repairs

- In order to maximize the trouble-free performance of your roof, you must perform regular inspections and maintenance and keep records of this work.
- To keep this guarantee in effect, you must repair any conditions in the building structure or roofing system that are not covered by this guarantee but that GAF concludes may be threatening the integrity of the GAF Roofing Materials (e.g., porous walls allowing water entry into the roofing system).
- You may make temporary repairs to minimize damage to the building or its contents in an emergency, at your sole expense. These repairs will not result in cancellation of the guarantee as long as they are reasonable and customary and do not result in permanent damage to the GAF Roofing Materials.
- Any equipment or material that impedes any inspection or repair must be removed at your expense so that GAF can perform inspections or repairs.

EXCLUSIONS FROM COVERAGE

(e.g., items that are not "ordinary wear and tear" or are beyond GAF's control)

This guarantee does NOT cover conditions other than leaks. This guarantee also does not cover leaks caused by the following:

- Inadequate roof maintenance, that is, the failure to follow the Scheduled Maintenance Checklists provided with this guarantee (extra copies available by calling Guarantee Services at 1-800-ROOF-411).
- Unusual weather conditions or natural disasters including, but not limited to, windstorms, hail, floods, hurricanes, lightning, tornados, and earthquakes, unless specifically covered under this guarantee.
- Damage to the roof constructed of the GAF Roofing Materials due to:
(a) movement or cracking of the roof deck or building; (b) improper installation or failure of any non-GAF insulation or materials; (c) infiltration or condensation of moisture through or around the walls, copings, building structure or surrounding materials except where high wall GAF waterproofing flashings are installed; (d) chemical attack on the membrane, including, but not limited to, exposure to grease or oil; or (e) the failure of wood nailers to remain attached to the structure.
- Traffic of any nature on the roof unless using GAF walkways applied in accordance with GAF's Application and Specifications Manual.
- Blisters in the GAF Roofing Materials that have not resulted in leaks.
- Changes in the use of the building or any repairs, modifications or additions to the GAF Roofing Materials after the roof is completed, unless approved in writing by GAF.
- Exposure to post-installation sustained temperatures in excess of 160°F.
- Any condition (e.g., base flashing height or lack of counterflashing) that is not in accordance with GAF's Application and Specifications Manual or any deviation or modification from any specification published in the Manual, unless specifically authorized by a GAF Contractor Services Manager or Director in writing.

No representative, employee or agent of GAF has the authority to assume any additional liability or responsibility for GAF, except in writing signed by an authorized GAF Contractor Services Manager or Director. **NOTE:** Any inspections made by GAF are limited to a surface inspection only, are for GAF's sole benefit, and do not constitute a waiver of any of the terms and conditions of this guarantee.

TRANSFERABILITY

You may transfer or assign this guarantee to a subsequent owner of this building for the remaining term only if: 1) the request is in writing to GAF at the address listed below within 60 days after ownership transfer; 2) you make any repairs to the GAF Roofing Materials or other roofing or building components that are identified by GAF after an inspection as necessary to preserve the integrity of the GAF Roofing Materials; and 3) you pay an assignment fee of \$500. This guarantee is NOT otherwise transferable or assignable by contract or operation of law, either directly or indirectly.

LIMITATION OF DAMAGES; MEDIATION; JURISDICTION; CHOICE OF LAW

THIS GUARANTEE IS EXPRESSLY IN LIEU OF ANY OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, and of any other obligations or liability of GAF, whether any claim against it is based upon negligence, breach of warranty or any other theory. In NO event shall GAF be liable for any CONSEQUENTIAL OR INCIDENTAL DAMAGES of any kind, including, but not limited to interior or exterior damages and/or mold growth.

The parties agree that, as a condition precedent to litigation, any controversy or claim relating to this Guarantee shall be first submitted to mediation before a mutually acceptable mediator. In the event that mediation is unsuccessful, the parties agree that neither one will commence or prosecute any lawsuit or proceeding other than before the appropriate state or federal court in the State of New Jersey. This Guarantee shall be governed by the laws of the State of New Jersey, without regard to principles of conflicts of laws. Each party irrevocably consents to the jurisdiction and venue of the identified courts above.

NOTE: This Guarantee becomes effective only when all bills for installation and supplies have been paid in full to the roofing contractor and materials suppliers, and the Guarantee charge has been paid to GAF Materials Corporation.

This guarantee must have a raised seal to be valid.

GAF MATERIALS CORPORATION
1361 ALPS ROAD, BUILDING 11-1
WAYNE, NJ 07470

By _____ Date _____
Authorized Signature



EverGuard® Diamond Pledge™ “NDL” Roof Guarantee With True “Edge-To-Edge” Coverage

GAF's EverGuard® Diamond Pledge™ NDL Roof Guarantee provides you with comprehensive system protection so that if your roof membrane system leaks from either material defects or application errors, the costs of repair are 100% covered!

	“Typical” Ltd. Product Warranty	
What Does The Guarantee Cover?	Material Defects Only	Material Defects & Workmanship Errors
Covers Entire System, Including Accessories & GAF Insulation?	No	Yes
Unlimited Dollar Amount For Covered Repairs?	No	Yes
Coverage Period?	5-10 Years	5-25 Years (Up to 31% years with the Well Roof™ Advantage*)
Well Roof™ Advantage Available? (FREE 25% Coverage Extension)*	No	Yes
Fast Track™ 24-Hour Rapid Leak Repair Available?**	No	Yes
Includes Replacement Material?	Yes, Pro-rated Based On Use	Yes, 100%
Includes Cost Of Labor To Correct Problem?	No	Yes
Who Can Offer Guarantee?	Anyone	GAF Master & Master Select™ Certified Contractors
Is Guarantee Transferable To Next Owner?	No	Yes
Metal Flashings Including “Custom Fit” Covered?	No	Yes
High Wind Coverage Available?	No	Yes

*Please see Well Roof™ Advantage brochure for complete requirements.

**Note: 24-hour response time may only be available during normal business hours.

Eligibility Requirements for the EverGuard® Diamond Pledge™ NDL Guarantee

1. Your roof must be installed by a GAF Master Select™ or Master roofing contractor certified in the single ply technology.
2. The roofer must follow GAF's procedures for guarantee issuance, including notifying GAF of the need for a guarantee before roofing commences.
3. You must use GAF products in conjunction with the single ply technology.



**Quality You Can Trust Since 1886...From
North America's Largest Roofing Manufacturer**

CARLISLE GOLDEN SEAL TOTAL ROOFING SYSTEM WARRANTY

SERIAL NO. _____

DATE OF ISSUE: _____

BUILDING OWNER: _____

NAME OF BUILDING: _____

BUILDING ADDRESS: _____

DATE OF COMPLETION OF THE CARLISLE TOTAL ROOFING SYSTEM: _____

DATE OF ACCEPTANCE BY CARLISLE: _____

SAMPLE

Carlisle Roofing Systems, Inc., warrants to the Building Owner (Owner) of the above described building, that; subject to the terms, conditions, and limitations stated in this warranty, Carlisle will repair any leak in the Carlisle Golden Seal™ Total Roofing System (Carlisle Total Roofing System) installed by a Carlisle Authorized Roofing applicator for a period of () years commencing with the date of Carlisle's acceptance of the Carlisle Total Roofing System installation. However, in no event shall Carlisle's obligations extend beyond () years subsequent to the date of substantial completion of the Carlisle Total Roofing System. See below for exact date of warranty expiration.

The Carlisle Total Roofing System is defined as the following Carlisle brand materials: Membrane, Flashings, Counterflashings, Adhesives and Sealants, Insulation, Recovery Board, Fasteners, Fastener Plates, Fastening Bars, Metal Edging, Metal Termination Bars, and any other Carlisle brand products utilized in this installation.

TERMS, CONDITIONS, LIMITATIONS

- Owner shall provide Carlisle with written notice within thirty (30) days of the discovery of any leak in the Carlisle Total Roofing System. Owner should send written notice of a leak to Carlisle's Warranty Services Department at the address set forth at the bottom of this warranty. By so notifying Carlisle, the Owner authorizes Carlisle or its designee to investigate the cause of the leak. Should the investigation reveal the cause of the leak to be outside the scope of this Warranty, investigation and repair costs for this service shall be paid by the Owner.
- If, upon inspection, Carlisle determines that the leak is caused by a defect in the Carlisle Total Roofing System's materials, or workmanship of the Carlisle Authorized Roofing Applicator in installing the same, Owner's remedies and Carlisle's liability shall be limited to Carlisle's repair of the leak.
- This warranty shall not be applicable if, upon Carlisle's inspection, Carlisle determines that any of the following has occurred:
 - The Carlisle Total Roofing System is damaged by natural disasters, including, but not limited to, lightning, fire, insect infestations, earthquake, tornado, hail, hurricanes, and winds of peak gust speeds of () mph or higher measured at 10 meters above ground; or
 - The Carlisle Total Roofing System is damaged by any intentional or negligent acts, accidents, misuse, abuse, vandalism, civil disobedience, or the like.
 - Deterioration or failure of building components, including, but not limited to, the roof substrate, walls, mortar, HVAC units, non-Carlisle brand metal work, etc., occurs and causes a leak, or otherwise damages the Carlisle Total Roofing System; or
 - Acids, oils, harmful chemicals and the like come in contact with the Carlisle Total Roofing System and cause a leak, or otherwise damage the Carlisle Total Roofing System.
- This Warranty shall be null and void if any of the following shall occur:
 - If, after installation of the Carlisle Total Roofing System by a Carlisle Authorized Roofing Applicator there are any alterations or repairs made on or through the roof or objects such as, but not limited to, structures, fixtures, or utilities are placed upon or attached to the roof without first obtaining written authorization from Carlisle; or
 - Failure by the Owner to use reasonable care in maintaining the roof, said maintenance to include, but not be limited to, those items listed on Carlisle's Care & Maintenance Information sheet which accompanies this Warranty.
- Only Carlisle brand insulation products are covered by this warranty. Carlisle specifically disclaims liability, under any theory of law, for damages sustained by or caused by non-Carlisle brand insulation products.
- During the term of this Warranty, Carlisle shall have free access to the roof during regular business hours.
- Carlisle shall have no obligation under this Warranty while any bills for installation, supplies, service, and warranty charges have not been paid in full to the Carlisle Authorized Roofing Applicator, Carlisle, or material suppliers.
- Carlisle's failure at any time to enforce any of the terms or conditions stated herein shall not be construed to be a waiver of such provision.
- Carlisle shall not be responsible for the cleanliness or discoloration of the Carlisle Total Roofing System caused by environmental conditions including, but not limited to, dirt, pollutants, or biological agents.
- Carlisle shall have no liability under any theory of law for any claims, repairs, restoration, or other damages including, but not limited to, consequential or incidental damages relating, directly or indirectly, to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins, or the like in the building or in the air, land, or water serving the building.
- This warranty is not assignable by operation of law or otherwise. Application may be made by a new building owner for reissuance of the warranty during the original warranty period. Certain procedures including, but not limited to, an inspection of the Roofing System by a Carlisle representative and fees will apply to any reissuance. Carlisle reserves the right, in its sole discretion, to refuse to reissue this warranty.

CARLISLE DOES NOT WARRANT PRODUCTS UTILIZED IN THIS INSTALLATION WHICH IT HAS NOT FURNISHED; AND SPECIFICALLY DISCLAIMS LIABILITY, UNDER ANY THEORY OF LAW, ARISING OUT OF THE INSTALLATION AND PERFORMANCE OF, OR DAMAGES SUSTAINED BY OR CAUSED BY, PRODUCTS NOT FURNISHED BY CARLISLE.

THE REMEDIES STATED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES FOR FAILURE OF THE CARLISLE TOTAL ROOFING SYSTEM OR ITS COMPONENTS. THERE ARE NO WARRANTIES EITHER EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY, WHICH EXTEND BEYOND THE FACE HEREOF. CARLISLE SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR DAMAGE TO THE BUILDING OR ITS CONTENTS UNDER ANY THEORY OF LAW.

Investing in Roofing Solutions for Over 45 Years

800-4-SYNTEC • P.O. Box 7000 • Carlisle, PA 17013 • Fax: 717-245-7053 • www.carlisle-syntec.com
© 2007 Carlisle.

CARLISLE
Carlisle SynTec

Sika Sarnafil Inc.

World Class Roofing and Waterproofing

20 Year System Warranty

Warranty Serial No.: SAMPLE

SIKA SARNAFIL ROOFING WARRANTY FOR COMMERCIAL BUILDING

Building Owner: SAMPLE
Building Name: SAMPLE
Building Address: SAMPLE
Date of Substantial Completion: SAMPLE
Date of Inspection: SAMPLE
Contractor: SAMPLE

Used as: SAMPLE
Area Warranted: SAMPLE sq. ft.
By: SAMPLE
Telephone: SAMPLE

Sika Sarnafil Inc. ("Sika Sarnafil"), warrants to the owner of the building described above ("Owner"), that subject to the terms, conditions, and limitations stated herein, Sika Sarnafil will repair leaks originating from the Sarnafil Roofing Membrane, Sarnatherm Insulation or Sika Sarnafil Roofing Accessories installed according to Sika Sarnafil's Technical Instructions by a Sika Sarnafil Authorized Roofing Applicator for a period of 20 (twenty) years commencing with the date of substantial completion of the installation of the Roofing Membrane.

TERMS, CONDITIONS, LIMITATIONS

- Owner shall notify Sika Sarnafil on the first business day immediately following the discovery of each leak in the Roofing System and confirm in writing within one week.
- If on Sika Sarnafil's inspection, Sika Sarnafil determines that the leak is caused by a defect in Sarnafil's Roofing Membrane, Sarnatherm Insulation or Accessory provided by Sika Sarnafil to the Applicator for this building or from a defect in the Sika Sarnafil Authorized Applicator's workmanship applied to that Sarnafil Membrane, except as provided in the following paragraph three (3) Owner's remedies and Sika Sarnafil's liability shall be limited to Sika Sarnafil's repair of the Roofing Membrane, Sarnatherm Insulation or Accessory.
- This warranty does not apply and may be null and void if any of the following occur:
 - The Roofing Membrane or Accessory is damaged by a natural disaster including, but not limited to, earthquake, lightning, hail, windstorm in excess of sixty mph, hurricane, or tornado, or;
 - The Roofing Membrane or Accessory is damaged by any act of negligence, accident, or misuse including, but not limited to, vandalism, falling objects, civil disobedience, or act of war, or;
 - A deficient pre-existing condition or equipment is causing water entry, or
 - There are any alterations or repairs made on or through the completed roof, or objects such as but not limited to fixtures, equipment, or structures are placed on or attached to the completed roof without first obtaining written authorization from Sika Sarnafil, or;
 - Failure by the Owner or his lessee to use reasonable care in maintaining the roof as described in the Owner's Guide provided with this warranty, including that of sealants and caulking, or;
 - A significant change in the use of the building by the Owner or his lessee expected by Sika Sarnafil to effect the Roofing Membrane as originally installed, or;
 - Loss of integrity of the building envelope and, or structure including, but not limited to partial or complete loss of roof decking, wall siding, windows, doors or other envelope components or from roof damage by wind blown objects, or;
 - Should building be a freezer or cooler; condensation accumulates in the roof assembly due to incorrect design or due to a reduction in the vapor barrier effectiveness, or;
 - The Owner fails to comply with every term and condition stated herein.
- During the period of this warranty, Sika Sarnafil, its agents and employees, shall have free access to the roof during regular business hours.
- Should the Roofing Membrane be concealed, the cost of exposure of the Roofing Membrane for purposes of Sika Sarnafil's investigation and/or repair, such as removal and replacement of any paving or overburden, shall be the Owner's responsibility.
- Sika Sarnafil shall have no obligation under this warranty until all invoices for materials, installation and services have been paid for in full.
- Sika Sarnafil's failure at any time to enforce any of the terms or conditions stated herein shall not be construed to be a waiver of such provision.
- This warranty is extended solely and exclusively to the owner of the Building at the time the Sarnafil Roofing System is installed. It does not extend nor is it otherwise assignable or transferable to any other party unless approved in advance and in writing by Sika Sarnafil and the costs to process the transfer and to inspect and repair the Sika Sarnafil Roofing System, if necessary, are paid for by the original owner.
- The Owner and Sika Sarnafil hereby agree that any and all claims (contractual, statutory, common law or otherwise), disputes, or suits that in any way, directly or indirectly, arise out of or relate to this Warranty, or the alleged breach thereof, or to any contracts between the owner and Sika Sarnafil, or the alleged breach thereof, or to the design, manufacture, sale, distribution, installation, and/or inspection of the Sika Sarnafil Roofing System, shall first be submitted to non-binding mediation before a neutral mediator jointly selected by the parties or, in the absence of agreement, as designated by the American Arbitration Association. In the absence of resolution by mediation, all such claims shall be settled by arbitration by the American Arbitration Association in accordance with the Construction Industry Arbitration Rules. Any such mediation and/or arbitration shall take place in Boston, Massachusetts. This Warranty, and any claims, disputes or suits between the parties hereto shall be governed by, and construed and enforced in accordance with, the laws of the Commonwealth of Massachusetts.
- THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THE REMEDIES STATED HEREIN ARE EXCLUSIVE REMEDIES AND SIKA SARNAFIL SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES INCLUDING THE PRESENCE OF MOLDS, FUNGI, BACTERIA, SPORES, MYCOTOXINS OR THE LIKE OR FURTHER LOSS OF ANY KIND WHATSOEVER, INCLUDING BUT NOT LIMITED TO, DAMAGE TO THE BUILDING ON WHICH THE COMPONENTS OF THE ROOF ARE SITUATED, DAMAGE TO THE CONTENTS THEREOF, LOSS OF USE OF THE BUILDING OR ANY COMPONENT PART THEREOF, OR DAMAGE TO ANY OTHER PROPERTY OR PERSONS.**

NO REPRESENTATIVE OF SIKA SARNAFIL HAS AUTHORITY TO MAKE ANY REPRESENTATIONS OR PROMISES EXCEPT AS STATED HEREIN.

Issued By: SAMPLE

This Warranty is effective from: SAMPLE

Authorized
Signature: SAMPLE

Title: SAMPLE Date: SAMPLE

Through: SAMPLE



Sika Sarnafil Inc., 100 Dan Road, Canton, MA 02021
Tel.: 1-800-451-2502, Fax: 828-5365

Sarnafil®

Petersen Standing Seam Manufactures Warranty

LIMITED WARRANTY AGREEMENT FOR WEATHER-TIGHTNESS LIMITED WARRANTY

THIS LIMITED WARRANTY AGREEMENT, dated _____, sets forth the understanding and agreement between the parties concerning the limited warranty with respect to the following:

BUILDING OWNER:
BUILDING TYPE:
BUILDING LOCATION:
JOB NUMBER:
ROOFING SYSTEM TYPE:
DATE OF COMPLETION:
CONTRACT AMOUNT (material and installation only):
WARRANTY TYPE: Full System (excluding gutters, downspouts, Vented Flashings)

PETERSEN ALUMINUM CORPORATION ("PAC") and the Roofing Contractor whose signature appears below ("Roofing Contractor") severally warrant to the above-named Building Owner ("Owner") that subject to all terms, conditions, limitations, allocations, and responsibilities stated herein, PAC's materials and workmanship and Roofing Contractor's workmanship in installing the PAC Roofing System ("Roofing System") on the above-named building will be adequate to prevent leaks for (XX) years commencing with the above date of completion of installation of the subject Roofing System.

Limited Warranty Terms and Conditions

1. This warranty will be fully satisfied by repair of the Roofing System, and any such repair shall be subject to this limited warranty against leaks only for any then remaining balance of the original XX-year warranty period. PAC and Roofing Contractor's aggregate total cumulative liability under this XX-year Weather-tightness Limited Warranty is limited to an amount equal to the sum of the price paid by Owner to PAC for materials furnished by PAC plus the price paid by Owner to the Roofing Contractor for the installation of those materials.
2. If upon PAC's inspection, PAC determines that the leaks in the Roofing System are caused by defects in the PAC Roofing System's material or in the workmanship of Roofing Contractor, Roofing System repair obligations shall then arise in accordance herewith, but Owner's remedies and PAC's and Roofing Contractor's liability shall in any event be limited to repair of the Roofing System, subject to the cost limitations set forth above. Otherwise, neither PAC nor Roofing Contractor shall have any liability hereunder.
3. Neither PAC nor Roofing Contractor shall have any liability

or responsibility under or in connection with either this XX-year Weather-tightness Limited Warranty or for leaks in the Roofing System, or otherwise, if any one or more of the following shall occur:

- a. deterioration caused by marine (salt water) atmosphere or by regular spray of either salt or fresh water;
 - b. corrosion caused by heavy fallout or exposure to corrosive chemicals, ash or fumes from any chemical plant, paper plant, and the like;
 - c. deterioration caused by any corrosive substance or any condensate of any harmful substance contained, generated or released inside the building;
 - d. damage caused by worker(s) on the roof;
 - e. damage to the Roofing System caused by natural disasters, including, but not limited to, lightning, or any strong wind, hurricane, fire, explosion, tornado, or earthquake or other accident or casualty;
 - f. failure by any contractor or subcontractor to follow PAC's recommended installation instructions for the layout, design and erection of the Roofing System, or other faulty or improper installation, (provided that if the faulty or improper installation is by Roofing Contractor, then only PAC shall be relieved of liability hereunder);
 - g. if, after installation of the Roofing System by Roofing Contractor, there are any alternations, such as, but not limited to, structural changes involving the Roofing System, or by structures, fixtures, or utilities being placed upon or attached to the roof without prior written authorization from PAC;
 - h. if there is any failure by the Owner or Lessee or other occupant or user to use reasonable care in maintaining the roof;
 - I. if Owner fails to comply with every term and/or condition stated in this Limited Warranty Agreement;
 - j. improper fabrication in the event fabrication is by other than PAC;
 - k. damage as a result of standing water in non-vertical application:
 - l. improper job site handling or storage (which includes failure to permit drainage of standing water);
 - m. vandalism, falling objects, civil commotions or acts of war, atomic radiation, acts of God, or other such similar or dissimilar occurrences beyond PAC's control.
4. Notwithstanding any other provision of this Limited Warranty Agreement, PAC shall not have any liability or responsibility at any time for, or as a consequence of, any condensation of underside corrosion which is, or was caused at any time, wholly or in part, by any condensation resulting from either or both of the following:

- i. The use of any inadequate vapor barrier where the insulation is installed immediately beneath the roof panels. An adequate vapor barrier is defined as one which has a perm rating greater than .05 or less with sealed joints and perimeter.
 - ii. The inadequate ventilation of the attic space between a roof panel and insulation, when insulation is installed directly on top of an existing roof.
5. PAC shall not have any liability or responsibility under or in connection with either this Limited Warranty Agreement or for the Roofing System in the event of a failure by any contractor or subcontractor to use only roof curbs, roof jacks, sealants, mastics, subframing, roof panels, clips, and flashing provided by PAC or such substitutes therefor approved by PAC in writing prior to their use.
6. PAC shall not have any obligation under this Weather-tightness Limited Warranty Agreement until final drawings of the completed roof are submitted to PAC by the roofing Contractor and accepted in writing by PAC. Such drawings must show the exact number, size and location of all roof penetrations and roof top equipment. Photos of the roof should accompany the drawings.
7. Neither PAC nor Roofing Contractor shall have any obligation under this Weather-tightness Limited Warranty Agreement until all bills for installation, supplies, and services have been paid in full to each of PAC, Roofing Contractor, and each material supplier, including the payment to PAC of the additional cost of this Limited Warranty.
8. Neither PAC's nor Roofing Contractor's failure at any time to enforce any of the terms or conditions stated herein shall be construed to be a waiver of any such provision or of the right thereafter to exercise any right granted thereunder.
9. This Weather-tightness Limited Warranty supersedes and is in lieu of any and all other warranties (whether express or implied) that are either in addition to or in conflict with the terms or conditions stated herein. ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE WHICH EXCEED OR DIFFER FROM THE WARRANTIES HEREIN EXPRESSED ARE DISCLAIMED BY ALL OF THE PARTIES HERETO AND EXCLUDED FROM THIS XX-YEAR WEATHER-TIGHTNESS LIMITED WARRANTY. NEITHER PAC NOR ROOFING CONTRACTOR ASSUMES ANY LIABILITY FOR, AND THIS WARRANTY DOES NOT COVER, CONSEQUENTIAL DAMAGES OF ANY KIND WHICH RESULT FROM ANY FAILURE OF, USE OR MISUSE OF THE ROOFING SYSTEM. THIS IS THE ENTIRE WARRANTY AGREEMENT AND NO OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE BY EITHER PAC OR THE ROOFING CONTRACTOR.
10. If the subject roof is covered by products of more than one roofing products manufacturer, this Limited Warranty Agreement applies only to those portions of such roof which are covered solely by PAC-manufactured products.

11. Roofing installation must be supervised by an individual who has been approved in writing by PAC.
12. This Limited Warranty is intended only for use when reroofing an existing building and for new roof applications on conventional construction, and is not applicable when the roofing material is installed over new, pre-engineered metal building structures.
13. Roof panels must be made of a material which carries a 20-year durability warranty from PAC.
14. Any claim hereunder for leakage must be presented to PAC in writing within the warranty period and, in each case, within (30) days after discovery of the leak. Failure to do so shall automatically render this warranty void. The Owner must allow representatives of PAC reasonable opportunity to inspect the material claimed to be defective prior to removal or repair. If, after inspection of the material, the determination is made that the claim is valid, PAC will repair, restore, or replace, at PAC's discretion, the defective product. PAC shall, at its option, have the right to negotiate and approve any contract or arrangement pursuant to which any replacement, repair, or restoration covered by this warranty is to be done. PAC reserves the right to discontinue items in its product line. Should the product covered under this warranty be discontinued, PAC shall have the right to substitute a product of equal quality and price at its discretion. It is understood that normal exposure to the elements may preclude a perfect color match with replacement material. Refinishing shall be performed by using standard finishing practices and materials as selected by PAC. The warranty on any refinished or replaced product supplied hereunder shall be for the remainder of the original warranty period.
15. PAC and Roofing Contractor SHALL IN NO EVENT BE LIABLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, DAMAGE OR LOSS TO OWNER'S BUILDING, ITS CONTENTS OR OTHER MATERIALS, OR CLAIMS OF THIRD PARTIES, RESULTING FROM ANY CAUSE WHATSOEVER INCLUDING LEAKS IN THE ROOFING SYSTEM. PAC OR ROOFING CONTRACTOR'S LIABILITY FOR ANY CAUSE OF ACTION, WHETHER BASED ON NEGLIGENCE, CONTRACT OR STRICT LIABILITY, SHALL NOT EXCEED THE LESSER OF EITHER THE COST OF REPAIRING DEFECTIVE MATERIALS ON SITE, OR THE UNUSED BALANCE OF PAC'S AND ROOFING CONTRACTOR'S AGGREGATE CUMULATIVE LIABILITY HEREUNDER AS PROVIDED IN PARAGRAPH 1 HEREOF. IT IS EXPRESSLY AGREED THAT THE REMEDIES UNDER THIS AGREEMENT SHALL BE EXCLUSIVE.
16. This Warranty is given to the above named Owner only, and is not transferable.
17. Notwithstanding any other portion of this Agreement, it is specifically agreed that the aggregate total cumulative liability of PAC and Roofing Contractor hereunder shall be at all times limited to the lesser of either
 - a. the unused balance of PAC's and Roofing Contractor's

- cumulative liability hereunder as provided in Paragraph 1 hereof, or
- b. the direct cost of refinishing, replacing or otherwise repairing the portion of the Roofing System evidencing failure.

The respective responsibilities of PAC and Roofing Contractor hereunder shall be as follows: During the first two (2) years plus any applicable extension period(s), Roofing Contractor shall be solely liable for all such costs and expenses of repair, refinishing or replacement of the Roofing System as are covered hereunder. In the event that a roof repair is necessary during the first two-year period, or any extension thereof, then Roofing Contractor's liability (which shall be exclusive and in lieu of all PAC liability during such period and any extensions thereof) shall be extended for a two-year period from the date of the last such repair.

After the expiration of such two-year period and all applicable extensions thereof, Roofing Contractor shall have no further liability hereunder. Thereafter, PAC shall be liable for, and its liability shall be limited to, the prorated portion of such costs and expenses of the repair, refinishing, or replacement of the Roofing System as are covered hereunder, which proration is stated in the following table:

Years after installation date in which failure occurs.	Percentage of the covered costs and expenses which PAC will pay provided that Roofing Contractor's initial 2-year period and all extensions thereof have expired.
2 but less than 5	100%
5 but less than 6	90%
6 but less than 7	80%
7 but less than 8	70%
8 but less than 9	60%
9 but less than 10	50%
10 but less than 12	40%
12 but less than 14	30%
14 but less than 17	20%
17 but less than 20	10%

18. The Warranty expressed herein shall become effective only upon the execution hereof by PAC, the Roofing Contractor, and the Owner named above. This agreement contains the entire agreement of the parties with respect to the subject matter hereof. This Agreement can only be changed or amended in writing executed by all parties hereto.
19. This Agreement shall be governed by the laws of the State of Illinois.

PETERSEN ALUMINUM CORPORATION

By: _____

Title: _____

**ACCEPTED AND AGREE TO:
BUILDING OWNER:**

By: _____

Title: _____

**ACCEPTED AND AGREED TO:
ROOFING CONTRACTOR:**

By: _____

Title: _____



Sarnafil

Adhered Single-Ply Roofing Systems



Sarnafil®

Adhered vinyl roofing systems from Sika Sarnafil provide building owners with an aesthetically pleasing roofing application that delivers superior, watertight protection—this protection is the result of time tested membranes, hot-air welded seams and a wide variety of system configurations to match the unique needs of individual building designs.

Sika Sarnafil is a pioneer and the leading authority worldwide for adhered, single-ply roofing, thanks to quality adhesives, superior membrane performance and outstanding technical assistance.

The company's involvement with adhered roofing systems and the technology behind them goes back more than 45 years, and this expertise has led to innovative systems and products that fully address the needs of building construction.



On the Cover:

*Science Teaching & Student Services Building
University of Minnesota*

An adhered Sika Sarnafil roof system provided the University of Minnesota with watertight protection for their new-construction roof featuring multiple curves and angles.

Performance and Sustainability

Energy Efficiency

Energy consumption is a prime contributor to the operational cost of commercial buildings—and to a building's environmental "footprint."

An adhered EnergySmart Roof® from Sika Sarnafil minimizes absorption of solar heat from the sun, thereby reducing air conditioning needs and lowering energy costs. A reduction in energy consumption helps to combat the "urban heat island effect" prevalent in cities across the country and impacting the quality of air. The EnergySmart Roof exceeds the cool roof requirements of the EPA's ENERGY STAR® roof program, California's Building Energy Code (Title 24), LEED® and Green Globes®.

Recycling

Sika Sarnafil established the first recycling program for single-ply roofing systems. The company's 10-foot wide membrane contains an average of 10-percent recycled content. Sika Sarnafil is the only roofing manufacturer to have received verification of its recycling claims from Underwriters Laboratories.

Fire Resistance

Fire resistance means a safer environment. Sarnafil vinyl membranes are naturally fire resistant and have UL Class A fire ratings over polyisocyanurate insulation at four times the slope of TPO membranes. (Visit our website at usa.sarnafil.sika.com to see fire test video comparing PVC, TPO, EPDM and SBS Modified Bitumen.)

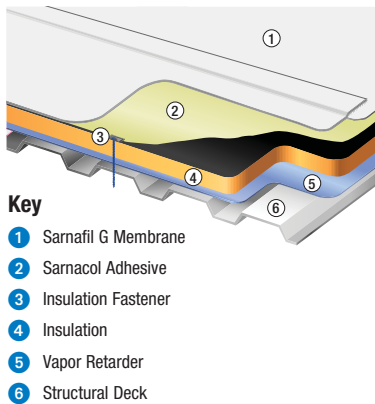
**Behind every product and every
system is our Sustainability Promise.**

sustainabilitythatpays.com

THE SIK A SARNAPIL
**SUSTAINABILITY
PROMISE**



The Leading Resource for Adhered, Energy-Efficient Single-Ply Roofing Systems



The Industry Standard

Sika Sarnafil is the undisputed leader in adhered thermoplastic roofing, having provided commercial buildings through the years with unparalleled protection from the elements. The company has produced more than 15 billion sq. ft. of high performance thermoplastic membrane—with many of the company's adhered roofing systems still performing after 25 to 30 years of service, in all types of climates.

Performance Characteristics

Sarnafil® brand adhered systems attach securely over uniquely shaped roofs to combat mechanical stress from wind uplift. The systems eliminate sheet flutter and prevent “billowing.”

Sarnafil membranes with feltback minimize the “telegraphing” of substrates, resulting in a cleaner, more even appearance. In addition, adhered systems are suitable for “non-nailable” substrates like concrete.

Adhered roofing systems are also an excellent choice when all other roof system components are adhered. These systems eliminate the need for mechanical fasteners that can cause thermal bridging.





▲ Dallas/Fort Worth International Airport, Dallas, TX

Leading the Way in Technology

Sika Sarnafil was the first single-ply company to develop a membrane specifically for adhered roofing applications. The Sarnafil G410 membrane has a non-woven fiberglass mat for superior dimensional stability and a low coefficient of thermal expansion and contraction—factors critical to the service life of an adhered roof. The G410 membrane has the best dimensional stability of any single-ply membrane, based on testing to ASTM D1204.

Sika Sarnafil's G410 relies on the same time-tested formulation utilized in all exposed Sarnafil-brand membranes—this formulation has led to a world-class reputation for reliability and performance for Sika Sarnafil roofing systems.

Complementary Sika Sarnafil products for adhered applications include both solvent and water-based adhesives—these adhesives are tailored to meet project specific needs, including compliance with regulatory requirements and green building rating systems. Adhered systems from Sika Sarnafil are available in a variety of configurations to match requirements relating to building designs and local conditions.

Simplified Application

Ease of application is an important factor in the successful installation of any roofing system. The flexibility of Sika Sarnafil's vinyl membranes—together with the company's time-tested hot-air welded seaming technology and compatibility with a variety of adhesives—makes the company's adhered roofing systems very easy to work with.

Aesthetics

Adhered roofing systems are known for their aesthetically appealing appearance. This is especially important for building designs in which the roof is visible from the ground. Sika Sarnafil's patented Décor Roof System uses vinyl profiles welded to the membrane surface to simulate the look of a standing-seam metal roof and is a popular option for steep slope installations. For this system, Sika Sarnafil produces membrane in seven standard colors and in an unlimited number of custom colors to meet design aspirations.

Sarnafil®

Sika – Your Local Partner with a Global Presence

Sika is a globally active company in the specialty and construction product and chemicals businesses. It has subsidiary manufacturing, sales and technical support facilities in more than 70 countries around the world.

Sika is THE global market and technology leader in waterproofing, sealing, bonding, strengthening and protection of buildings and civil engineering structures.

Sika has more than 13,000 employees worldwide and is therefore ideally positioned to support the success of its customers.



Sika Sarnafil

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Sika Sarnafil

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Tel: 1-800-268-0479
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Email: marketing.construction@ca.sika.com
can.sika.com

Sika Sarnafil Adhesives

Adhesive	Description/Application	Low VOC
Sarnacol 2121	A water-based dispersion adhesive used within a Sarnafil adhered system. It is formulated for adhering PVC membranes to clean, dry, water absorbent, horizontal roof surfaces with slopes up to 10° (2/12). See Technical Bulletins 03-09 and 04-09 for information on using Sarnacol 2121 on flashings or on higher slopes. For any other applications, contact Sika Sarnafil.	Yes
Sarnacol 2170	Solvent-based reactivating adhesive used with a Sarnafil adhered system and/or flashing details. It is also used to adhere flashings in Sarnafil waterproofing systems. It is formulated for adhering Sarnafil PVC membranes to properly prepared substrates such as wood, sheet steel, masonry, concrete, insulation and approved coverboards.	—
Sarnacol 2170VC	Solvent-based VOC-compliant adhesive used with a Sarnafil adhered roofing system and/or flashing details. It is also used to adhere flashings in Sarnafil waterproofing systems. It is formulated for adhering Sarnafil PVC membranes to properly prepared substrates such as wood, sheet steel, masonry, concrete, insulation and approved coverboards.	Yes*
Sarnacol 2166	One-part, VOC-free moisture curing urethane adhesive designed specifically for the installation of the Sarnafil membrane to a wide variety of insulations, recover boards or lightweight concrete.	Yes

* The U.S. EPA considers the solvent in 2170VC as "exempt," and therefore the product can be used in all jurisdictions operating under EPA guidelines. At this time, the SCAQMD does not recognize it as exempt, and therefore the adhesive cannot be used in jurisdictions governed by their regulations directly (e.g., specific counties in CA). Not eligible for credits in LEED® or Green Globes® projects.

Our most current General Sales Conditions shall apply.

Please consult the Product Data Sheet prior to any use and processing.

ISO 14001: 2004-Compliant



ENERGY STAR® is a trademark of the U.S. EPA.
LEED® is a trademark of the U.S. Green Building Council.
Green Globes® is a trademark of the Green Building Initiative.

Sarnafil®





Sarnafil

Décor Roof Systems



Sarnafil®



"The Décor Roof System gave the school district the performance they needed, with the appearance they wanted."

— Richard Skendzel, president of Architecture Technology

Sarnafil Décor Roof Systems – Take roofing to a new level

You have a vision of your building design. You want the roof to enhance your design, not dictate it.

To look like a metal roof, but protect like a one-piece membrane. To inspire confidence, regardless of slope, shape, or complexity. To fit the owner's budget now—and for decades to come.

Your vision demands the best.

Realize your design with Sarnafil® Décor Roof Systems. Décor is the ideal choice for new or existing buildings that call for the appearance of a metal roof, yet require maximum watertight performance. Décor Roof Systems deliver...

Aesthetics of metal roofs, but the watertight integrity of hot-air welded thermoplastic membrane.

Design flexibility to express your creativity as never before—regardless of roof slope, shape, or complexity.

Proven performance spanning 50 years of delivering long-lasting, high-quality roofing systems.

Low life-cycle costs driven by minimal maintenance requirements and exceptional system longevity.

EnergySmart Roof® colors that meet ENERGY STAR®,* Title 24, LEED® and Green Globes® requirements for solar reflectance and emissivity ratings.** Improve the energy saving performance of your roof by choosing one of four EnergySmart Roof colors.



* ENERGY STAR for roofing products is only valid in the United States.

** See product data sheets for reflectivity and emissivity ratings.

**Project**

Traverse Bay Area Intermediate
School District, Traverse City, MI

Architect

Architecture Technology,
Traverse City, MI

Roofing Contractor

Bloxsom Roofing and Siding Company,
Traverse City, MI

The Challenge

Select a roofing system that will
perform well over time and be
aesthetically pleasing

The Solution

Sarnafil Décor Roof System in
Copper Brown



Décor is available in seven standard colors: White, Tan,
Light Gray, Patina Green, Lead Gray, Copper Brown,
Evergreen, or a nearly unlimited number of custom colors.



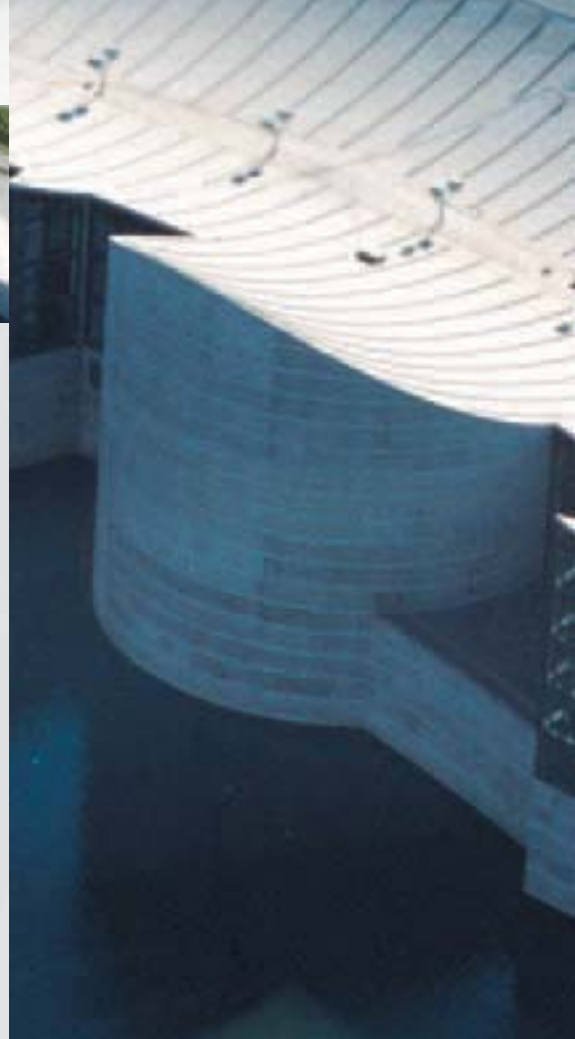
EnergySmart Roof colors

Because of printing process variations, colors shown in this brochure may vary slightly from actual
membrane colors. Call Sika Sarnafil at (800) 576-2358 to request membrane samples.

**Sarnafil Milestone Management®**

The Sarnafil Milestone Management
process integrates proven materials,
skilled workmanship, and expert
assistance into every phase of
every project for comprehensive
quality control. The result: peace
of mind for architects, engineers,
owners, and occupants alike.

Sarnafil®

**Project**

Exploration Place, Wichita, KS

Architect

Moshe Safdie & Associates, Boston, MA

Roofing Contractor

Buckley Roofing Co., Inc., Wichita, KS

The Challenge

Select a roofing system that will meet the architect's design objectives

The Solution

Sarnafil Décor Roof System in custom colored Cement Gray

Sarnafil Décor Roof Systems – Because appearance counts

The Aesthetics of Metal Roofs

A Décor Profile hot-air welded to the membrane surface mimics the appearance of a standing seam metal roof. You enjoy the appearance of metal without the cost or performance issues.*

Design Flexibility

With Décor, you are no longer held hostage to roof or building geometry. You can expand your artistic expression without being limited by roofing materials that are ill-suited to free-form design and require expensive recaulking and other annual maintenance.

Freedom to Choose

- Décor Profile
- Décor colors: White, Tan, Light Gray, Patina Green, Lead Gray, Copper Brown, Evergreen, or a custom color. Or, one color for ribs, another for membrane
- Rib length and spacing
- The positioning of ribs before they are hot-air welded in place



* As with all roof system assemblies, appearance may vary due to roof deck conditions, system buildup or other conditions specific to the project.



“The powerful geometries of the island and land wings of Exploration Place required a roofing system that would lend itself to the positive and negative toroidal forms of the roofs.”

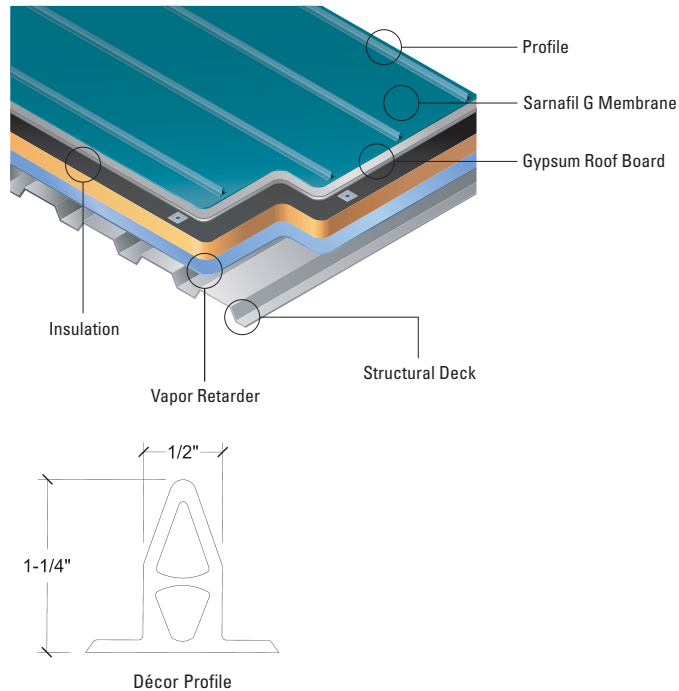
— Hugh Phillips, principal at Moshe Safdie and Associates



Décor Profiles have the same product formulation as the Sarnafil membrane, ensuring that colors match, both initially and over time. The ribs come in ten-foot sections that are connected on the roof and permanently fused to the Sarnafil membrane using the Sarnamatic hot-air welder. The Sarnamatic is designed specifically to weld Sarnafil membranes and includes a patented* kit for welding Décor Profiles.

The result

The finished roof conforms to your design.



*U.S. patent numbers 6,325,126; 6,533,014; 6,453,964; and 6,554,947

"The Sarnafil Décor Roof System resulted in a savings of about one million dollars."

— Robert Marz, vice president at Roth Marz Partnership



Sarnafil Décor Roof Systems – Because performance is mandatory

Manufacturing high-quality roofing systems for fifty years, Sika Sarnafil has more experience than any other North American thermoplastic membrane manufacturer. Our roofs have proved their worth consistently, again and again, regardless of climate.

Sarnafil membrane up close . . .

Décor Roof Systems use Sarnafil G410 thermoplastic vinyl membrane, a time-tested product that has proved its ability to withstand weather extremes in all climates around the world. The membrane has an integral fiberglass reinforcement that provides exceptional dimensional stability and a low coefficient of thermal expansion. A felt backing on the membrane helps to achieve a smooth appearance over common roofing substrates.

G410 membrane is hot-air welded to produce watertight seams that are even stronger than the membrane itself. And, unlike metal roofs, where penetrations and detailing are a common source of leakage, Décor's hot-air welded flashings remain watertight.

. . . and over the long haul.

All told, Sika Sarnafil has manufactured billions of sq. ft. of thermoplastic membrane—using the same basic formulation—since 1962. And we back up our membrane performance with a choice of warranty durations and types of coverage.

We'll show you the difference. Now.

Let Sika Sarnafil show you how good your building can look with a Décor Roof System. Request your FREE informative Décor Design Guide. Call 1-800-576-2358.

Sarnafil membrane consistently comes out on top in independent testing of roof membrane performance. Décor Roof Systems meet or exceed all relevant standards, including those of ASTM, UL, and Factory Mutual.






Project
Erie Intermodal Transportation Center,
Erie, PA

Architect
Roth Marz Partnership P.C., Erie, PA

Roofing Contractor
A.W. Farrell and Son, Inc., Erie, PA

The Challenge
A cost-effective roofing system that will
meet the architect's design objectives

The Solution
Sarnafil Décor Roof System in Patina
Green



Décor Roof System in Copper Brown



Décor Roof System in Lead Gray



Décor Roof System in Patina Green

Sarnafil Membranes Meet or Exceed All ASTM D-4434 Requirements

Parameters	ASTM Test Method	Minimum ASTM D-4434 Requirements	Sarnafil G-410 Membrane*
Reinforcing material	—	—	Fiberglass
Overall thickness, mil	D638	45	60
Thickness above scrim, mil	—	16	30
Felt Weight oz/yd ²	—	—	9
Tensile strength, min., psi (Mpa)	D638	—	—
Machine direction		1500psi (10.4)	1575
Cross direction		1500psi (10.4)	1550
Elongation at break, min.	D638		
Machine direction %		250	250
Cross direction %		220	220
Seam strength,** min. (% of original)	D638	75	Pass
Retention of properties after heat aging	D3045	—	—
Tensile strength, min. (% of original)	D638	90	Pass
Elongation, min. (% of original)	D638	90	Pass
Tearing resistance (M.D.), min., lbf (N)	D1004	10 (45.0)	17.5
Low temperature bend, -40°F (-40°C)	D2136	Pass	Pass
Accelerated weathering test (Fluorescent light, UV exposure)	G154	5,000 Hours	10,000 Hours
Cracking (7X magnification)	—	None	None
Discoloration (by observation)	—	Negligible	Negligible
Crazing (7X magnification)	—	None	None
Linear dimensional change (CD), %	D1204	0.10% max.	-0.02%
Weight change after immersion in water	D570	±3.0%	1.9%
Static puncture resistance, 33 lbf (15 kg)	D5602	Pass	Pass
Dynamic puncture resistance, 7.3 ft-lbf (10 J)	D5635	Pass	Pass

* Based on typical membrane properties. Variations in manufacturing may occur.

** Failure occurs through membrane rupture, not seam failure.

Sarnafil®

Sika – Your Local Partner with a Global Presence

Sika is a globally active company in the specialty and construction product and chemicals businesses. It has subsidiary manufacturing, sales and technical support facilities in more than 75 countries around the world.

Sika is THE global market and technology leader in waterproofing, sealing, bonding, dampening, strengthening and protection of buildings and civil engineering structures.

Sika has more than 15,000 employees worldwide and is therefore ideally positioned to support the success of its customers.



Sarnafil Décor Roof Systems are the ideal choice for aesthetics, design freedom, and long-lasting, cost-effective performance.

Sika Sarnafil

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Email: webmaster.sarnafil@us.sika.com
usa.sarnafil.sika.com

Sika Sarnafil

A Business Unit of Sika Canada Inc.
6820 Davand Drive, Unit 2
Mississauga, Ontario
L5T 1J5 Canada
Tel: 1-800-268-0479
Fax: 905-670-5278
Email: marketing.construction@ca.sika.com
can.sika.com

Quick Reference Guide

Your requirements are...	Décor Roof Systems provide...
Aesthetics	<ul style="list-style-type: none"> • Metal roof appearance with standing-seam profiles • Only thermoplastic membrane with factory-applied acrylic coating
Design flexibility	<ul style="list-style-type: none"> • Any roof size, shape, or slope • Rib design: Décor Profile, in any length and spacing • Seven standard colors or nearly unlimited custom colors
Watertight integrity	<ul style="list-style-type: none"> • Quality that meets or exceeds ASTM standards with watertight, hot-air welded seams • Permanent watertight flashing and detailing
Proven performance	<ul style="list-style-type: none"> • An industry veteran that has produced billions of sq. ft. of membrane since 1962 • The same basic membrane formulation that has protected buildings for 50 years • Material that consistently ranks as the highest quality thermoplastic membrane in independent testing
Low life-cycle costs	<ul style="list-style-type: none"> • Long-lasting membrane that does not rust or corrode • Membrane that requires no resurfacing or recoating • Hot-air welded seams that require no maintenance

Our most current General Sales Conditions shall apply.

Please consult the Product Data Sheet prior to any use and processing.

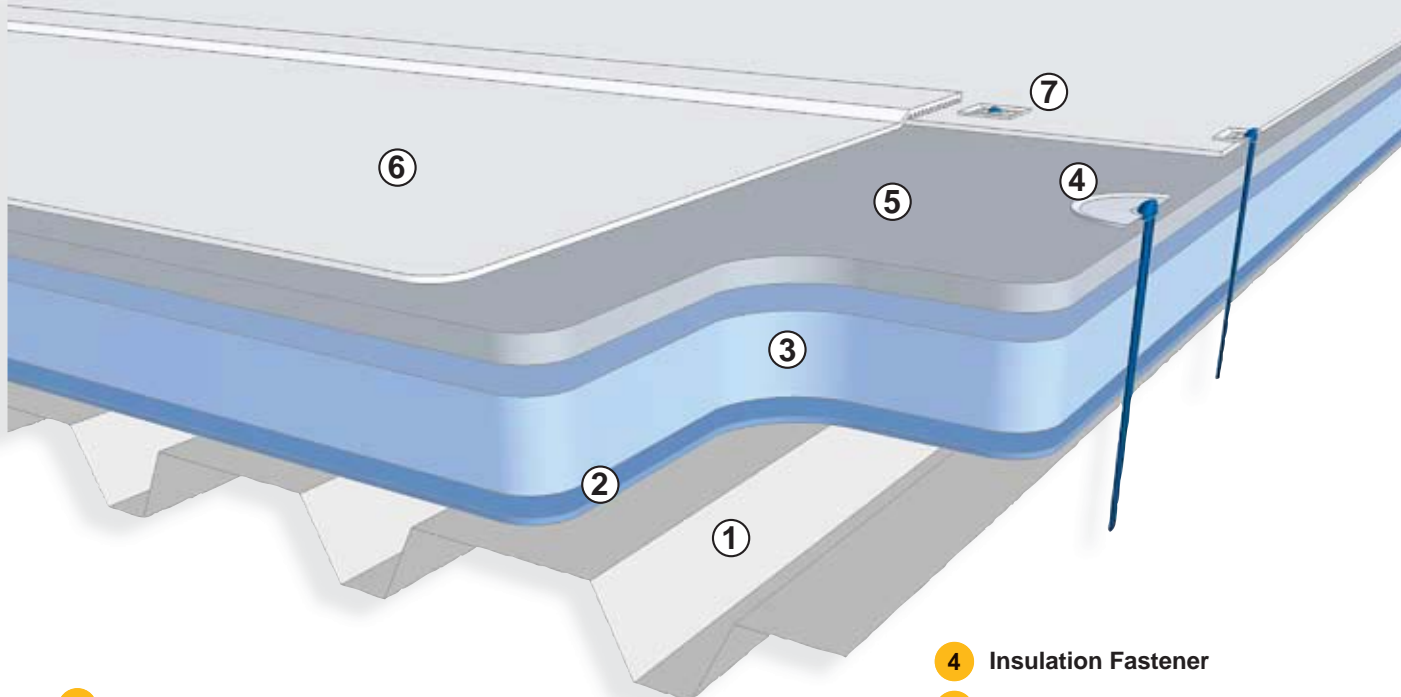
ISO 14001: 2004-Compliant



ENERGY STAR® for roofing products is only valid in the United States
ENERGY STAR® is a trademark of the U.S. EPA.
LEED® is a trademark of the U.S. Green Building Council.
Green Globes® is a trademark of the Green Building Initiative



Sarnafil®



- 1 Structural Deck
- 2 Vapor Retarder (if required)
- 3 STYROFOAM™ Insulation

- 4 Insulation Fastener
- 5 Gypsum Roof Board
- 6 Sarnafil® Membrane
- 7 Membrane Fastener

EcoSmart Roof™

Roofing systems don't have to be disposable. By maximizing system longevity and recycling at the end of its useful life, the Sika Sarnafil EcoSmart Roof provides you with a roofing option that's good for the environment and your wallet.

A Proven System Solution

The EcoSmart Roof utilizes Sarnafil® thermoplastic membrane, STYROFOAM™ brand insulation from Dow Building Solutions, and gypsum roof board to produce one of the longest lasting, most ecologically responsible roofing systems available.

Sarnafil membrane has a history of proven performance on buildings throughout North America and the rest of the world. This time-proven membrane has lasted for decades on buildings such as Robbins Hall at the University of California - Davis, where it has been in place for more than 30 years.

The white reflective surface of the membrane

minimizes solar heat gain into the building, reducing the building's cooling load; saving energy and diminishing the building's carbon footprint. When the membrane does reach the end of its useful life, it can be recycled back into roofing membrane products at Sika Sarnafil's manufacturing plant in Canton, MA.

STYROFOAM™ DECKMATE™ Plus extruded polystyrene insulation from Dow provides the insulating properties necessary to minimize heat flow through the roofing system. This reduces heating and cooling energy

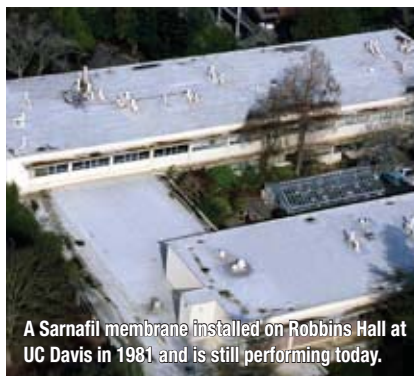
consumption, with the added benefit of being reusable when your building is re-roofed.

Resistant to Moisture

Extruded polystyrene's ability to resist moisture, which can occur in a roof assembly due to vapor drive and other sources, allows Dow Building Solutions to provide a 50-year reuse warranty on its DECKMATE Plus insulation. This means that the building owner can leave the insulation in place when the building is ready for a new roof.³

Gypsum roof board is a highly mold-resistant roof panel that consists of a moisture-resistant, noncombustible core of specially treated gypsum with glass mat facings.

Gypsum roof board improves the fire resistance and wind uplift characteristics of the roofing system, with the added benefit of providing increased resistance to foot traffic to protect the overall roofing system and enhance its longevity.



A Sarnafil membrane installed on Robbins Hall at UC Davis in 1981 and is still performing today.

Sika®

Sarnafil®



The re-roofing of a local Boston landmark in 2005, the Marriott Long Wharf hotel, presented Sika Sarnafil with the opportunity to conduct one of the first vinyl roof recycling projects in the U.S. The hotel's old membrane was processed for subsequent reuse in new commercial roofing system products.

EcoSmart Roof

Each year some 136 million tons of building construction- and demolition-related debris are generated, according to estimates from the U.S. Environmental Protection Agency. The U.S. Green Building Council has stated that this debris accounts for up to 40 percent of all solid waste in the U.S.

Sika Sarnafil was the first single-ply manufacturer to take back membrane at the end of its service life and is the only company to recycle it back into roofing membrane. Sika Sarnafil is the only company whose recycled content claim is certified by Underwriters Laboratory.

Sika Sarnafil

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Telefax: 781-828-5365
usa.sarnafil.sika.com

An Ecological and Economical Roofing Solution

Recycled Content: Sarnafil Membrane: 10% post-industrial recycled content.¹

Recyclable:

Installation: Sika Sarnafil manages a membrane trimmings program to take back scraps and trimming from the construction site.

End of Life: Sika Sarnafil will take back old vinyl membranes to be recycled into new roofing membrane products from any location in the continental United States.²

Reusable:

STYROFOAM™ DECKMATE™ Plus insulation is available with a 50-year re-use warranty.³

Energy Efficient:

A well insulated roofing system with a reflective roof membrane reduces building energy consumption for heating and cooling and reduces its carbon footprint.

Sarnafil membranes meet the cool roof requirements of ENERGY STAR®, LEED®, Green Globes® and CA Title 24.

Improved Air Quality:

When replaced with a reflective membrane, each square meter of dark colored roof could reduce CO₂ emissions by 3.02 kg per year on average.⁴

Low Life Cycle Cost:

Sika Sarnafil roofing systems have a proven track record of long-term performance, resulting in low life cycle costs. According to the British Board of Agrément, "All available evidence suggests that the durability of Sarnafil membranes when used in accordance with the relevant BBA Certificates should have a life in excess of 35 years."⁵

¹ Certified by UL Environment, Inc., an Underwriter Laboratory company. S327 and G410 (5' and 10' models), Sikaplan, PVC Protection Layer and Sarnatred collectively contain an average of 10% recycled content.

² Mechanically-attached or ballasted roofs only. Subject to terms and conditions of recycling program agreement.

³ Subject to the terms and conditions in the Dow Buildings Solutions Limited 50-Year Reuse Warranty.

⁴ Ronnen Levinson and Hashem Akbari, Heat Island Group, Lawrence Berkeley National Laboratory, "Potential benefits of cool roofs on commercial buildings: conserving energy, saving money, and reducing emission of greenhouse gases and air pollutants."

⁵ British Board of Agrément Assessment Report Numbers 08/4531 and 08/4532, 2008.

STYROFOAM and DECKMATE are trademarks of the Dow Chemical Company ("Dow") or an affiliated company of Dow.





Sarnafil

Green Roof Systems



Sarnafil®

With the increased desire for high-performance buildings and sustainable building products, green roofs have become a “growing” roofing option in North America. A “green roof,” also known as a garden roof, vegetated roof, or eco-roof, is simply a planted area on a flat or sloped roof. While conventional gardens on a rooftop usually consist of a few pots and planters, a green roof system can cover the whole roof area with the cultivation of plant life. And, depending on the type of green roof, you can have everything from low growing grass and moss to trees, shrubs, ponds and more.

Today's green roofs are modern versions of centuries old roofing practices. From the hanging gardens of Babylon to the sod roofs in Iceland during the Viking era, adaptations of earth-covered roofs have been around for many years. In Europe, extensive research and testing on how to waterproof green roofs started in the early 1970's. This work resulted in today's time-proven waterproofing solutions, allowing durable and sustainable green roofs to “grow” in popularity. Green roofs can now be found throughout Europe, as well as in North America and across the world. Green roofs are becoming a common roofing option, turning some of our green-starved cities into a living habitat for nature.

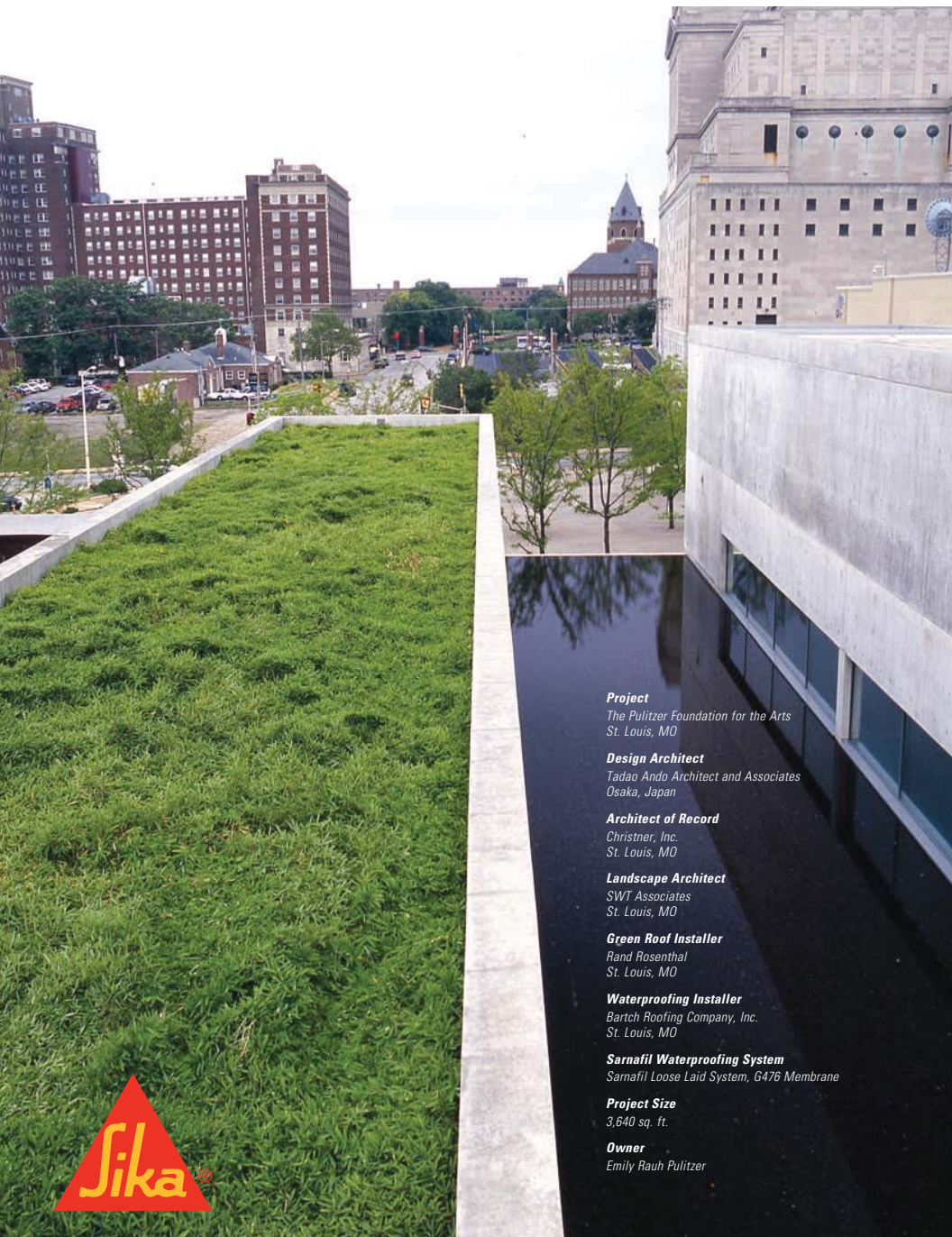


On the Cover:
The Posner Center, Carnegie Mellon University, Pittsburgh, PA

Challenge:

Choosing a green roof system that would stand up to the challenges of this unique installation and protect the rare and historic books housed inside.





Project

The Pulitzer Foundation for the Arts
St. Louis, MO

Design Architect

Tadao Ando Architect and Associates
Osaka, Japan

Architect of Record

Christner, Inc.
St. Louis, MO

Landscape Architect

SWT Associates
St. Louis, MO

Green Roof Installer

Rand Rosenthal
St. Louis, MO

Waterproofing Installer

Bartch Roofing Company, Inc.
St. Louis, MO

Sarnafil Waterproofing System

Sarnafil Loose Laid System, G476 Membrane

Project Size

3,640 sq. ft.

Owner

Emily Rauh Pulitzer

"Green roofs are healthy, sustainable and regenerative roof landscapes that can help our environment by diminishing developmental impacts on our communities."



Sika Sarnafil. The benefits are growing.

The addition of a green roof to an otherwise unused area on a building is beneficial for the surrounding environment. Initial loss of "green" space and its inherent natural processes like photosynthesis are restored; now just a few stories higher. But green roofs also have other benefits that you might not be aware of.

Storm-Water Retention: During heavy rainfalls, runoff from impervious surfaces such as pavements and rooftops can cause serious problems such as sewer overflow and water pollution. Green roofs slow down the water flow by retaining up to 75% of the rainwater, thus alleviating the pressure on storm-water infrastructures.

Reducing Energy Consumption: Green roofs are great insulators. They can reduce peak energy demand by lowering a building's cooling costs in the summer months and heating costs in the winter months.

Reducing the Urban Heat Island Effect:

More green roofs and fewer dark colored roofs equal a cooler city. Dark roofs retain heat while plants naturally cool their surrounding environments through evapotranspiration cycles. In cities where the ambient temperature can be up to 10 degrees hotter than the surrounding areas, green roofs can help bring the overall temperature down.

Waterproofing Membrane Protection:

A green roof protects the waterproofing membrane from damaging UV rays, freeze-thaw cycling and repeated foot traffic, extending its lifespan. Some green roofs in Europe have lasted more than 40 years without being replaced.

Improved Air Quality: Green roofs filter air by absorbing and converting carbon dioxide to oxygen.

LEED® and Green Globes: The U.S.

Green Building Council's (USGBC) LEED program and the Green Globes system were developed to assist in the design and construction of high-performance, sustainable buildings. Green roofs contribute to certification in both programs.

Sound Insulation: Soil and plants are effective sound insulators.

Aesthetics: Green roofs are visually stimulating and can make great areas for recreation and pleasure.

Increased Property Value: Installing a green roof can increase property value by providing a valuable building asset.

Sarnafil®



▲ Phoenix Zeppelin, Czech Republic

Sika Sarnafil. Because performance is mandatory.

Why Choose Sika Sarnafil?

Performance over time is the only true test of a waterproofing system's quality. Sika Sarnafil has been waterproofing green roofs and other landscaped areas across Europe for over 35 years and in the United States for over 25 years. With over 15 billion square feet of roofing and waterproofing membrane installed worldwide, architects, specifiers and building owners know they can depend on Sika Sarnafil for proven products and system performance.

When you specify a Sarnafil Green Roof, you get more than watertight security; you get peace of mind knowing you made the

right choice. The Sarnafil G476 membrane is specially designed for sub-grade environments, compounded to remain watertight in extreme conditions, including constant dampness, ponding water, high and low alkaline conditions, and exposure to plant roots, fungi and bacterial organisms.

Extensive and Intensive

There are two Green Roof categories: Extensive and Intensive.

Extensive green roofs are generally lower in weight and cost and require less plant maintenance. With only a few inches of soil, extensive green roofs typically support plants

that are tolerant of high heat, drought, wind and frost like grasses, wildflowers and moss. Extensive roofs are often used in areas that will not be subject to regular traffic.

Intensive green roofs are generally heavier, cost more and require more maintenance. However, because the soil is deeper, intensive green roofs can accommodate trees, shrubs, bushes, and vegetable gardens. It is not uncommon to see an intensive green roof used for recreational purposes.



Life Expressions Chiropractic Center, Sugarloaf, PA

Extensive

- Growth medium 1 - 6 inches
- Lightweight 12-35 lbs/sf
- Low growing plants
- Low maintenance
- Low water requirements
- Usually non-accessible
- Slopes up to 30 degrees



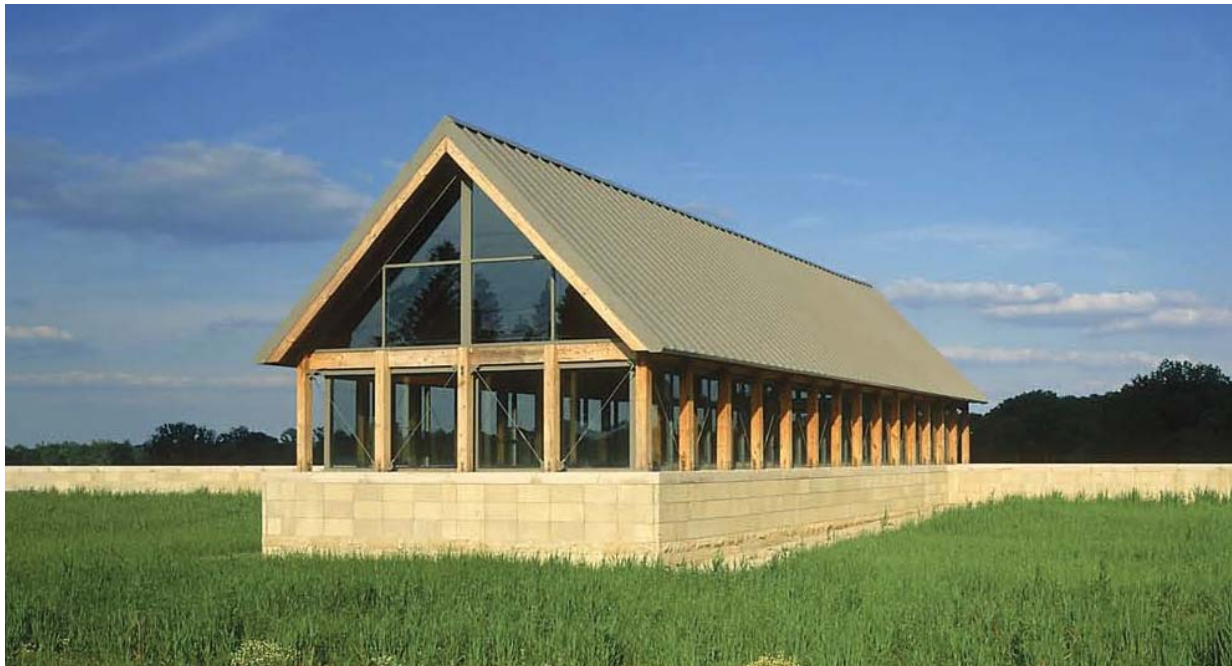
St. Louis Children's Hospital, St. Louis, MO

Intensive

- Growth medium 6 or more inches
- Heavier weight over 35 lbs/sf
- Trees, shrubs, gardens, and more
- Higher maintenance
- Irrigation usually necessary
- Designed for human recreation
- Only used on low slopes



Sarnafil®



▲ Oaklyn Branch Library, Evansville, IN

Sika Sarnafil. Designed to meet your needs.

Sika Sarnafil has green roofs systems for use on both concrete and metal deck applications, providing the flexibility to choose the system that best fits your building's design criteria.

Sika Sarnafil Over Concrete Decks

◆ Adhered System

When your building demands absolute system integrity with maximum watertight security, Sika Sarnafil's adhered system is for you. The system uses the robust Sarnafil G476 Self-Adhered (SA) membrane –

a composite sheet comprised of the heat-weldable G476 waterproofing membrane with a closed-cell foam backing. The foam backing is factory-coated with a pressure sensitive adhesive and is protected by a plastic release liner which is removed during installation.

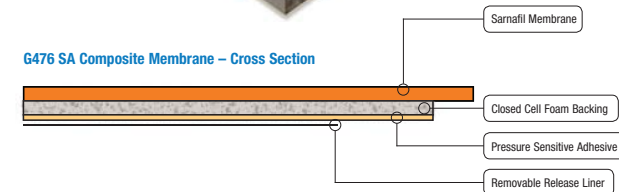
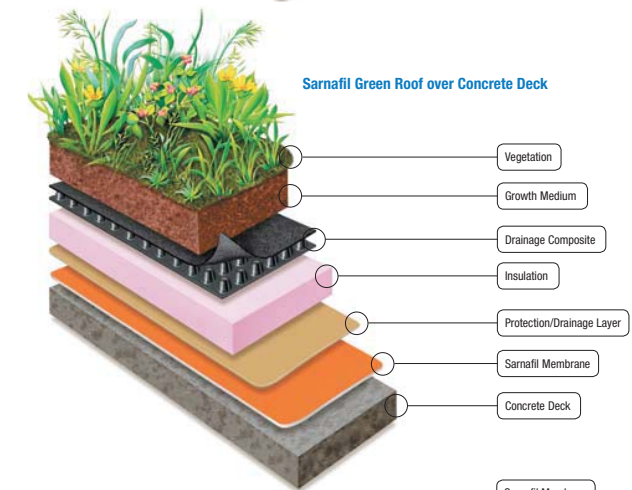
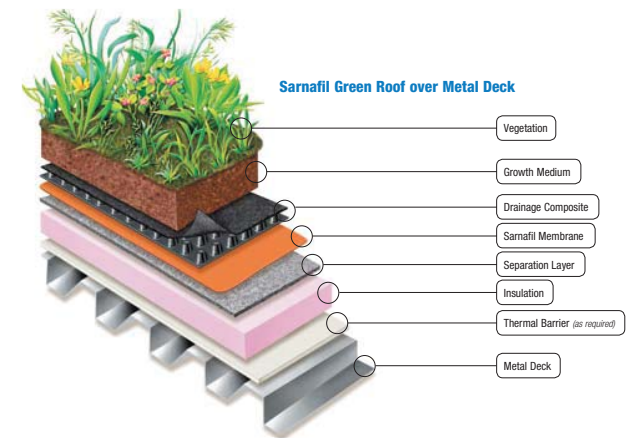
Sarnafil G476 SA combines the time-tested, proven performance of Sarnafil G476 waterproofing membrane with the added security of an adhered sheet system. G476 SA provides peace of mind for specifiers and owners who value the benefits of an adhered system and thermoplastic technology.

The flexible foam backing layer conforms to minor irregularities in the substrate and provides a cushion for the G476 waterproofing membrane. The pressure sensitive adhesive provides a tenacious bond to the substrate mitigating potential water migration under the membrane. The integration of G476 membrane with a foam backing layer and pressure sensitive adhesive eliminates the need for a field installed separation layer and adhesives. This 'all-in-one' product increases applicator productivity and helps keep the project on schedule. Sarnafil G476 SA also doesn't require hot asphalt kettles or flammable adhesives, improving worker and job site safety.

Sarnafil G476 SA is best suited for new construction. It can also be used on certain renovation projects where the old waterproofing system can be removed, or where a new concrete topping slab is placed over the structural deck.

Advantages:

- Robust, factory-manufactured composite sheet
- Conforms to minor surface irregularities and mitigates water migration under the sheet
- Improved applicator productivity and job site safety



Note: Above drawings are for illustrative purposes. Consult with Sika Sarnafil representative and printed specifications and details for project specific requirements.



Sarnafil®



Project
St. Louis Children's Hospital
St. Louis, MO

Architect
Cannon Design
St. Louis, MO

Landscape Architect
Edaw Inc.
Fort Collins, CO

Green Roof Contractor
McGrath and Associates Inc.
St. Louis, MO

Green Roof Installer
A Waldbart and Sons Nursery
Hazelwood, MO

Waterproofing Installer
Bi-state Roof Systems Inc.
St. Louis, MO

Sarnafil Waterproofing System
Sarnafil Adhered and Grid System
G476 Membrane

Project Size
8,000 sq. ft.

Owner
BJC Health Systems



▲ Chicago City Hall, Chicago, IL

◆ Grid System

For renovation projects where the substrate is contaminated or removal of the existing waterproofing system is not practical, Sika Sarnafil offers the grid system. The grid system combines all of the advantages of a loose-laid membrane installation with the added security of adhered membrane grid strips. The grid strips compartmentalize the waterproofing system into smaller areas, effectively limiting the scope of vegetated cover removal if a problem develops. Optional control drains can be installed in each grid area as an active monitoring and alerting mechanism. The drain opening can be used as an injection port to facilitate repair without vegetated cover removal. And, because grid strips are only adhered to small portions of the roof, deck preparation and removal of existing waterproofing system are minimized.

Advantages:

- Adhered grid strips act as a sub-membrane waterstop
- The grid system can be installed economically, due to installation, over existing waterproofing systems with minimal deck preparation
- Optional control drains allow active system monitoring and facilitate repairs

Sika Sarnafil Over Metal Decks

◆ Loose-Laid System

The most common design approach over a metal deck is to build a 'conventional' loose-laid roof assembly under the vegetated cover.

The rigid insulation material is typically extruded polystyrene (XPS), which is resistant to moisture absorption and has been used in green roof applications for decades. It is available in 40 psi, 60 psi, and 100 psi compressive strengths so it will not crush during construction or under load after placement of the vegetated cover.

Local building codes usually require the installation of a rigid, fire-tested thermal barrier over the metal deck prior to installing the XPS insulation board. A separation felt is installed over the XPS prior to installing the waterproofing membrane.

Rigid isocyanurate foam insulation may be used in this configuration. The benefit is it does not require a thermal barrier. However, since isocyanurate foam is typically manufactured with a 20 or 25 psi compressive strength, rigid hardboard should be installed over the isocyanurate insulation to protect it from damage and potential long-term creep from the weight of the vegetated cover. The Sarnafil G476 waterproofing membrane is installed over the hardboard.

Both XPS and isocyanurate insulation are available in tapered designs to enhance drainage.

After the Sarnafil G476 is installed, it is covered by a drainage composite or protection layer followed by the vegetated cover.

Advantages:

- Insulation is protected from the elements
- Insulation will not float since it is under the waterproofing membrane
- Allows the designer to create slope in the roof assembly

Sarnafil®



▲ Howard Hughes Medical Institute, Janella Farm Research Campus, Ashburn, VA

Sika Sarnafil. Integrated system solutions.



Sarnafil Milestone Management
The Sarnafil Milestone Management™ process integrates proven materials, skilled workmanship, and expert assistance into every phase of every project for comprehensive quality control. The result: peace of mind for architects, engineers, owners, and occupants alike.

Single-Source Responsibility

Sika Sarnafil offers a single-source warranty program for extensive green roof systems (less than 6" vegetated cover). The integration of Sika Sarnafil's waterproofing expertise with the vegetated cover know-how simplifies the design and project delivery process. Specifications, construction documents and trade coordination are no longer difficult tasks. Contact your Sika Sarnafil representative for specific requirements.

'Phased' Green Roof Design Option

Sika Sarnafil also offers a 'phased' green roof design option if the vegetated cover installation is planned months or years after the roof installation. This is especially helpful for clients who want a green roof, but the budget may not allow for it. The solution is to install a Sarnafil roof system that allows for a vegetated cover down the road. The roof system will meet the requirements of an exposed roof so you don't have to worry about when the vegetated cover is placed. Please contact your Sika Sarnafil representative for specific roofing system requirements.

More Sika Sarnafil Benefits

Sika Sarnafil's G476 waterproofing membrane is specially designed for sub-grade environments. The G476 membrane is available in a range of thicknesses to match your application, overburden type and specific project requirements. Highly puncture resistant, its bright orange color makes it easy to identify and inspect to maintain high levels of quality assurance and control during installation.

Root Resistance

Many waterproofing membranes are not resistant to root penetration. They fail due to root infiltration into the field seams and flashings. Sarnafil membranes are inherently root and algae resistant and require no additional barriers to be added to the system. Sarnafil membranes have passed the most stringent European tests for root resistance including both the German FLL and the Swiss SIA 280 standards. The FLL standard test exposes the waterproofing membrane to 4 years of accelerated root growth.

Hot-Air Welded Seams and Flashings

Faulty seams and details are a common source of leaks in green roofs. Some waterproofing membranes use sealants, adhesives or tapes to secure the seams, but because Sika Sarnafil's membrane is thermoplastic, seams and flashings are welded together using Sika Sarnafil's automatic hot-air welder, the Sarnamatic. When welded together, the sheets become one monolithic layer of material impervious to moisture infiltration.

Call 1-800-576-2358 to request a FREE Green Roof Design Guide.

Quick Reference Guide

Green Roof Systems provide...

Storm Water Retention: Green roofs greatly lessen erosion and storm water burden on sewer systems

Reduction in Energy Consumption: Green roofs can reduce peak energy demand by lowering a building's heating and cooling costs

Reduction in the Urban Heat Island Effect: Dark roofs hold onto the heat while plants naturally cool their surrounding environments

Waterproofing Membrane Protection: A green roof protects the waterproofing membrane from damaging UV rays and freeze-thaw cycling, extending its lifespan

Improved Air Quality: Green roofs filter air and produce oxygen

LEED and Green Globes: Green roofs contribute to certification within these programs

Sound Insulation: Soil and plants can be great sound insulators

Aesthetics: Green roofs are visually stimulating and can make great areas for recreation and pleasure

Increased Property Value: Installing a green roof can increase property value by providing a valuable building asset

Sarnafil Green Roof Systems provide...

Proven Performance

- An industry veteran, Sika Sarnafil has produced more than 15 billion sq. ft. of membrane worldwide
- The same basic membrane formulation that has protected buildings for more than 40 years
- Material that consistently ranks as the highest quality thermoplastic membrane in independent testing

Watertight Integrity

- Permanent watertight flashings and details with hot-air welded seams and flashings
- The G476 membrane is designed for sub-grade environments such as constant dampness, ponding water, high and low alkaline conditions, exposure to plant roots, fungi and bacterial organisms

Milestone Management

- Proven Materials – Sika Sarnafil's manufacturing process uses only the highest quality materials to produce a monolithic, non-laminated membrane that offers excellent waterproofing and dimensional stability
- Expert Assistance – We're involved at each major milestone, offering design assistance to architects and specifiers if needed
- Skilful Workmanship – We sell directly to a select group of trained, authorized applicators – only the best are invited to join our team

Warranty Options

Sika Sarnafil offers several types of warranties, including 5, 10, 15 and 20 year durations:

- Waterproofing Membrane only
- Waterproofing Labor and Material (Standard)
- Single-Source warranty*

** Sika Sarnafil offers a single-source warranty for extensive green roof assemblies that includes overburden removal, waterproofing and vegetated cover.*



Sarnafil®

Sika – Your Local Partner with a Global Presence

Sika is a globally active company in the specialty and construction product and chemicals businesses. It has subsidiary manufacturing, sales and technical support facilities in more than 70 countries around the world.

Sika is THE global market and technology leader in waterproofing, sealing, bonding, dampening, strengthening and protection of buildings and civil engineering structures.

Sika has more than 12,000 employees worldwide and is therefore ideally positioned to support the success of its customers.



Sika Sarnafil

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Internet www.sikacorp.com

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L5T 1J5 Canada
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Telefax 905-670-5278
Internet www.sika.ca

Serving Your Needs Worldwide from Roof to Floor



Sika Corporation can assist you with your construction needs from roof to floor. Call 1-800-576-2358 to learn about our complete building system solutions.

**Our most current General Sales Conditions shall apply.
Please consult the Product Data Sheet prior to any use and processing.
ISO 14001: 2004-Compliant**



Sarnafil®



Sarnafil

Green Roof Systems



Sarnafil®

With the increased desire for high-performance buildings and sustainable building products, green roofs have become a “growing” roofing option in North America. A “green roof,” also known as a garden roof, vegetated roof, or eco-roof, is simply a planted area on a flat or sloped roof. While conventional gardens on a rooftop usually consist of a few pots and planters, a green roof system can cover the whole roof area with the cultivation of plant life. And, depending on the type of green roof, you can have everything from low growing grass and moss to trees, shrubs, ponds and more.

Today's green roofs are modern versions of centuries old roofing practices. From the hanging gardens of Babylon to the sod roofs in Iceland during the Viking era, adaptations of earth-covered roofs have been around for many years. In Europe, extensive research and testing on how to waterproof green roofs started in the early 1970's. This work resulted in today's time-proven waterproofing solutions, allowing durable and sustainable green roofs to “grow” in popularity. Green roofs can now be found throughout Europe, as well as in North America and across the world. Green roofs are becoming a common roofing option, turning some of our green-starved cities into a living habitat for nature.

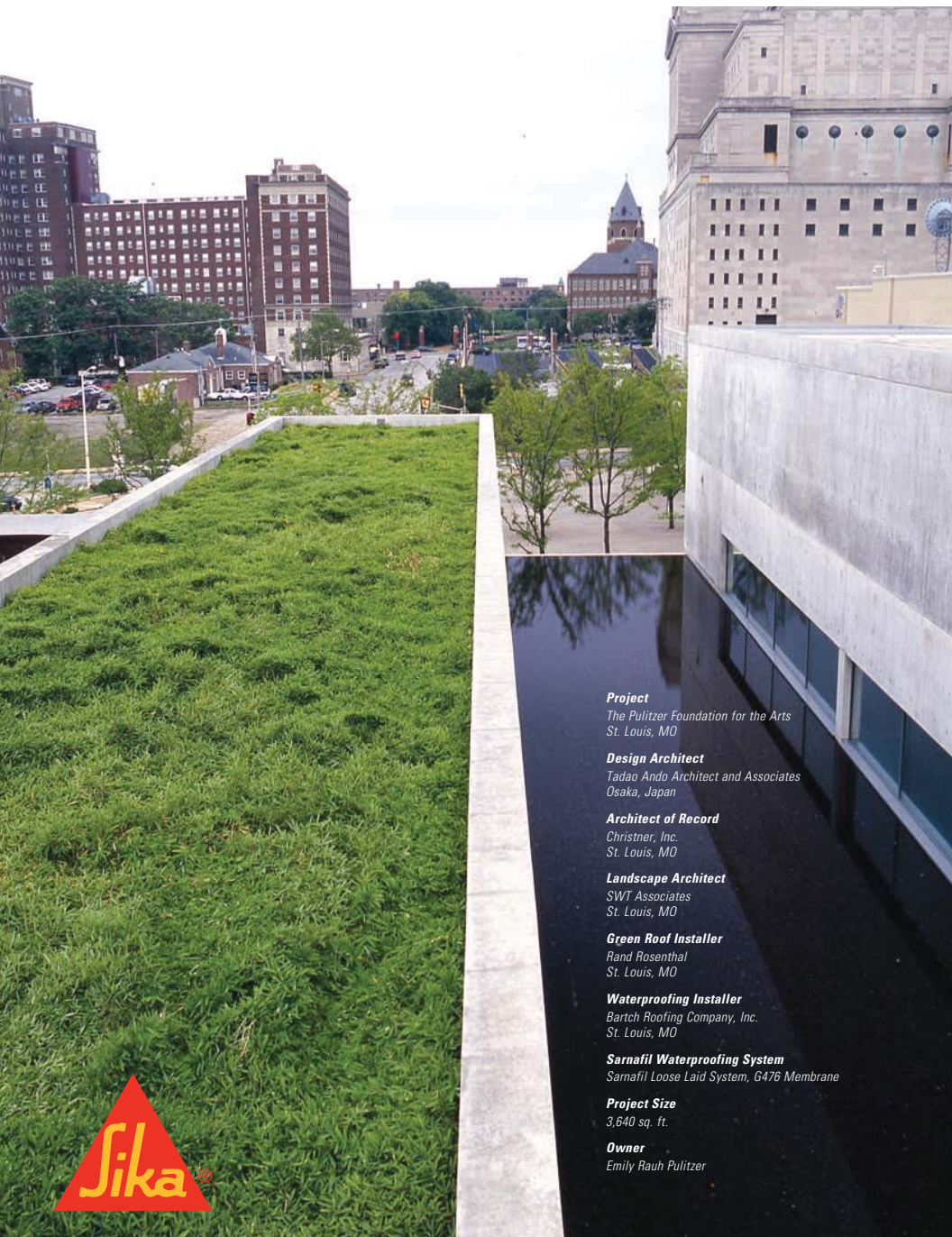


On the Cover:
The Posner Center, Carnegie Mellon University, Pittsburgh, PA

Challenge:

Choosing a green roof system that would stand up to the challenges of this unique installation and protect the rare and historic books housed inside.





Project
The Pulitzer Foundation for the Arts
St. Louis, MO

Design Architect
Tadao Ando Architect and Associates
Osaka, Japan

Architect of Record
Christner, Inc.
St. Louis, MO

Landscape Architect
SWT Associates
St. Louis, MO

Green Roof Installer
Rand Rosenthal
St. Louis, MO

Waterproofing Installer
Bartch Roofing Company, Inc.
St. Louis, MO

Sarnafil Waterproofing System
Sarnafil Loose Laid System, G476 Membrane

Project Size
3,640 sq. ft.

Owner
Emily Rauh Pulitzer

"Green roofs are healthy, sustainable and regenerative roof landscapes that can help our environment by diminishing developmental impacts on our communities."



Sika Sarnafil. The benefits are growing.

The addition of a green roof to an otherwise unused area on a building is beneficial for the surrounding environment. Initial loss of "green" space and its inherent natural processes like photosynthesis are restored; now just a few stories higher. But green roofs also have other benefits that you might not be aware of.

Storm-Water Retention: During heavy rainfalls, runoff from impervious surfaces such as pavements and rooftops can cause serious problems such as sewer overflow and water pollution. Green roofs slow down the water flow by retaining up to 75% of the rainwater, thus alleviating the pressure on storm-water infrastructures.

Reducing Energy Consumption: Green roofs are great insulators. They can reduce peak energy demand by lowering a building's cooling costs in the summer months and heating costs in the winter months.

Reducing the Urban Heat Island Effect: More green roofs and fewer dark colored roofs equal a cooler city. Dark roofs retain heat while plants naturally cool their surrounding environments through evapotranspiration cycles. In cities where the ambient temperature can be up to 10 degrees hotter than the surrounding areas, green roofs can help bring the overall temperature down.

Waterproofing Membrane Protection: A green roof protects the waterproofing membrane from damaging UV rays, freeze-thaw cycling and repeated foot traffic, extending its lifespan. Some green roofs in Europe have lasted more than 40 years without being replaced.

Improved Air Quality: Green roofs filter air by absorbing and converting carbon dioxide to oxygen.

LEED® and Green Globes: The U.S. Green Building Council's (USGBC) LEED program and the Green Globes system were developed to assist in the design and construction of high-performance, sustainable buildings. Green roofs contribute to certification in both programs.

Sound Insulation: Soil and plants are effective sound insulators.

Aesthetics: Green roofs are visually stimulating and can make great areas for recreation and pleasure.

Increased Property Value: Installing a green roof can increase property value by providing a valuable building asset.

Sarnafil®



▲ Phoenix Zeppelin, Czech Republic

Sika Sarnafil. Because performance is mandatory.

Why Choose Sika Sarnafil?

Performance over time is the only true test of a waterproofing system's quality. Sika Sarnafil has been waterproofing green roofs and other landscaped areas across Europe for over 35 years and in the United States for over 25 years. With over 15 billion square feet of roofing and waterproofing membrane installed worldwide, architects, specifiers and building owners know they can depend on Sika Sarnafil for proven products and system performance.

When you specify a Sarnafil Green Roof, you get more than watertight security; you get peace of mind knowing you made the

right choice. The Sarnafil G476 membrane is specially designed for sub-grade environments, compounded to remain watertight in extreme conditions, including constant dampness, ponding water, high and low alkaline conditions, and exposure to plant roots, fungi and bacterial organisms.

Extensive and Intensive

There are two Green Roof categories: Extensive and Intensive.

Extensive green roofs are generally lower in weight and cost and require less plant maintenance. With only a few inches of soil, extensive green roofs typically support plants

that are tolerant of high heat, drought, wind and frost like grasses, wildflowers and moss. Extensive roofs are often used in areas that will not be subject to regular traffic.

Intensive green roofs are generally heavier, cost more and require more maintenance. However, because the soil is deeper, intensive green roofs can accommodate trees, shrubs, bushes, and vegetable gardens. It is not uncommon to see an intensive green roof used for recreational purposes.



Life Expressions Chiropractic Center, Sugarloaf, PA

Extensive

- Growth medium 1 - 6 inches
- Lightweight 12-35 lbs/sf
- Low growing plants
- Low maintenance
- Low water requirements
- Usually non-accessible
- Slopes up to 30 degrees



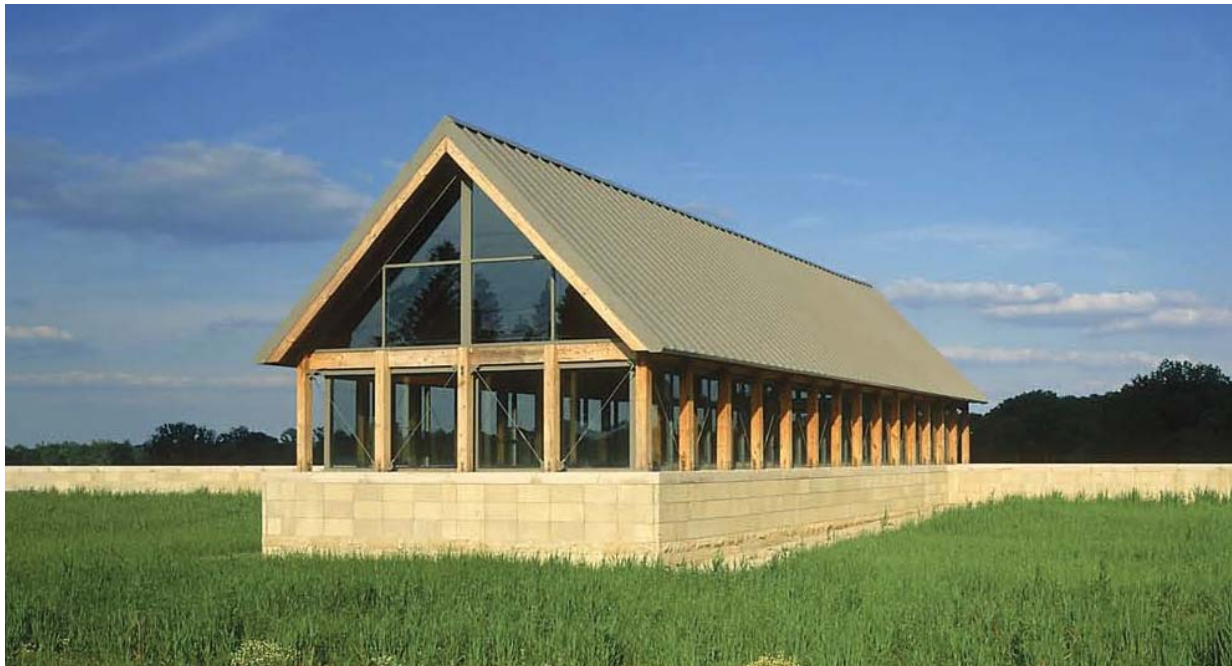
St. Louis Children's Hospital, St. Louis, MO

Intensive

- Growth medium 6 or more inches
- Heavier weight over 35 lbs/sf
- Trees, shrubs, gardens, and more
- Higher maintenance
- Irrigation usually necessary
- Designed for human recreation
- Only used on low slopes



Sarnafil®



▲ Oaklyn Branch Library, Evansville, IN

Sika Sarnafil. Designed to meet your needs.

Sika Sarnafil has green roofs systems for use on both concrete and metal deck applications, providing the flexibility to choose the system that best fits your building's design criteria.

Sika Sarnafil Over Concrete Decks

◆ Adhered System

When your building demands absolute system integrity with maximum watertight security, Sika Sarnafil's adhered system is for you. The system uses the robust Sarnafil G476 Self-Adhered (SA) membrane –

a composite sheet comprised of the heat-weldable G476 waterproofing membrane with a closed-cell foam backing. The foam backing is factory-coated with a pressure sensitive adhesive and is protected by a plastic release liner which is removed during installation.

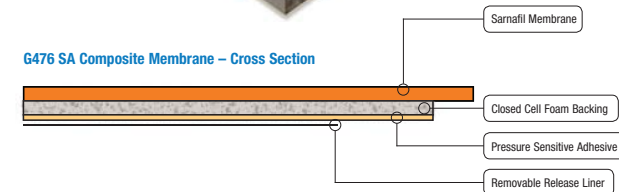
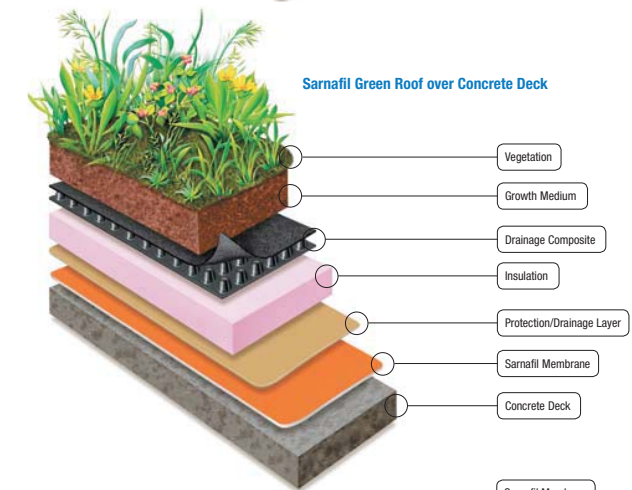
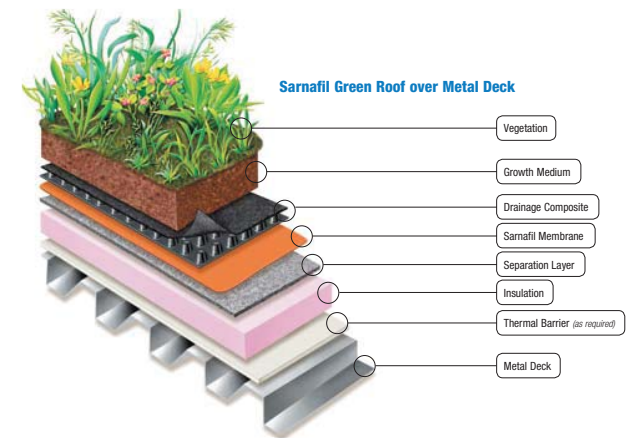
Sarnafil G476 SA combines the time-tested, proven performance of Sarnafil G476 waterproofing membrane with the added security of an adhered sheet system. G476 SA provides peace of mind for specifiers and owners who value the benefits of an adhered system and thermoplastic technology.

The flexible foam backing layer conforms to minor irregularities in the substrate and provides a cushion for the G476 waterproofing membrane. The pressure sensitive adhesive provides a tenacious bond to the substrate mitigating potential water migration under the membrane. The integration of G476 membrane with a foam backing layer and pressure sensitive adhesive eliminates the need for a field installed separation layer and adhesives. This 'all-in-one' product increases applicator productivity and helps keep the project on schedule. Sarnafil G476 SA also doesn't require hot asphalt kettles or flammable adhesives, improving worker and job site safety.

Sarnafil G476 SA is best suited for new construction. It can also be used on certain renovation projects where the old waterproofing system can be removed, or where a new concrete topping slab is placed over the structural deck.

Advantages:

- Robust, factory-manufactured composite sheet
- Conforms to minor surface irregularities and mitigates water migration under the sheet
- Improved applicator productivity and job site safety



Note: Above drawings are for illustrative purposes. Consult with Sika Sarnafil representative and printed specifications and details for project specific requirements.



Sarnafil®



Project
St. Louis Children's Hospital
St. Louis, MO

Architect
Cannon Design
St. Louis, MO

Landscape Architect
Edaw Inc.
Fort Collins, CO

Green Roof Contractor
McGrath and Associates Inc.
St. Louis, MO

Green Roof Installer
A Waldbart and Sons Nursery
Hazelwood, MO

Waterproofing Installer
Bi-state Roof Systems Inc.
St. Louis, MO

Sarnafil Waterproofing System
Sarnafil Adhered and Grid System
G476 Membrane

Project Size
8,000 sq. ft.

Owner
BJC Health Systems



▲ Chicago City Hall, Chicago, IL

◆ Grid System

For renovation projects where the substrate is contaminated or removal of the existing waterproofing system is not practical, Sika Sarnafil offers the grid system. The grid system combines all of the advantages of a loose-laid membrane installation with the added security of adhered membrane grid strips. The grid strips compartmentalize the waterproofing system into smaller areas, effectively limiting the scope of vegetated cover removal if a problem develops. Optional control drains can be installed in each grid area as an active monitoring and alerting mechanism. The drain opening can be used as an injection port to facilitate repair without vegetated cover removal. And, because grid strips are only adhered to small portions of the roof, deck preparation and removal of existing waterproofing system are minimized.

Advantages:

- Adhered grid strips act as a sub-membrane waterstop
- The grid system can be installed economically, due to installation, over existing waterproofing systems with minimal deck preparation
- Optional control drains allow active system monitoring and facilitate repairs

Sika Sarnafil Over Metal Decks

◆ Loose-Laid System

The most common design approach over a metal deck is to build a 'conventional' loose-laid roof assembly under the vegetated cover.

The rigid insulation material is typically extruded polystyrene (XPS), which is resistant to moisture absorption and has been used in green roof applications for decades. It is available in 40 psi, 60 psi, and 100 psi compressive strengths so it will not crush during construction or under load after placement of the vegetated cover.

Local building codes usually require the installation of a rigid, fire-tested thermal barrier over the metal deck prior to installing the XPS insulation board. A separation felt is installed over the XPS prior to installing the waterproofing membrane.

Rigid isocyanurate foam insulation may be used in this configuration. The benefit is it does not require a thermal barrier. However, since isocyanurate foam is typically manufactured with a 20 or 25 psi compressive strength, rigid hardboard should be installed over the isocyanurate insulation to protect it from damage and potential long-term creep from the weight of the vegetated cover. The Sarnafil G476 waterproofing membrane is installed over the hardboard.

Both XPS and isocyanurate insulation are available in tapered designs to enhance drainage.

After the Sarnafil G476 is installed, it is covered by a drainage composite or protection layer followed by the vegetated cover.

Advantages:

- Insulation is protected from the elements
- Insulation will not float since it is under the waterproofing membrane
- Allows the designer to create slope in the roof assembly

Sarnafil®



▲ Howard Hughes Medical Institute, Janella Farm Research Campus, Ashburn, VA

Sika Sarnafil. Integrated system solutions.



Sarnafil Milestone Management
The Sarnafil Milestone Management™ process integrates proven materials, skilled workmanship, and expert assistance into every phase of every project for comprehensive quality control. The result: peace of mind for architects, engineers, owners, and occupants alike.

Single-Source Responsibility

Sika Sarnafil offers a single-source warranty program for extensive green roof systems (less than 6" vegetated cover). The integration of Sika Sarnafil's waterproofing expertise with the vegetated cover know-how simplifies the design and project delivery process. Specifications, construction documents and trade coordination are no longer difficult tasks. Contact your Sika Sarnafil representative for specific requirements.

'Phased' Green Roof Design Option

Sika Sarnafil also offers a 'phased' green roof design option if the vegetated cover installation is planned months or years after the roof installation. This is especially helpful for clients who want a green roof, but the budget may not allow for it. The solution is to install a Sarnafil roof system that allows for a vegetated cover down the road. The roof system will meet the requirements of an exposed roof so you don't have to worry about when the vegetated cover is placed. Please contact your Sika Sarnafil representative for specific roofing system requirements.

Quick Reference Guide

Green Roof Systems provide...

Storm Water Retention: Green roofs greatly lessen erosion and storm water burden on sewer systems

Reduction in Energy Consumption: Green roofs can reduce peak energy demand by lowering a building's heating and cooling costs

Reduction in the Urban Heat Island Effect: Dark roofs hold onto the heat while plants naturally cool their surrounding environments

Waterproofing Membrane Protection: A green roof protects the waterproofing membrane from damaging UV rays and freeze-thaw cycling, extending its lifespan

Improved Air Quality: Green roofs filter air and produce oxygen

LEED and Green Globes: Green roofs contribute to certification within these programs

Sound Insulation: Soil and plants can be great sound insulators

Aesthetics: Green roofs are visually stimulating and can make great areas for recreation and pleasure

Increased Property Value: Installing a green roof can increase property value by providing a valuable building asset

Sarnafil Green Roof Systems provide...

Proven Performance

- An industry veteran, Sika Sarnafil has produced more than 15 billion sq. ft. of membrane worldwide
- The same basic membrane formulation that has protected buildings for more than 40 years
- Material that consistently ranks as the highest quality thermoplastic membrane in independent testing

Watertight Integrity

- Permanent watertight flashings and details with hot-air welded seams and flashings
- The G476 membrane is designed for sub-grade environments such as constant dampness, ponding water, high and low alkaline conditions, exposure to plant roots, fungi and bacterial organisms

Milestone Management

- Proven Materials – Sika Sarnafil's manufacturing process uses only the highest quality materials to produce a monolithic, non-laminated membrane that offers excellent waterproofing and dimensional stability
- Expert Assistance – We're involved at each major milestone, offering design assistance to architects and specifiers if needed
- Skilful Workmanship – We sell directly to a select group of trained, authorized applicators – only the best are invited to join our team

Warranty Options

Sika Sarnafil offers several types of warranties, including 5, 10, 15 and 20 year durations:

- Waterproofing Membrane only
- Waterproofing Labor and Material (Standard)
- Single-Source warranty*

* Sika Sarnafil offers a single-source warranty for extensive green roof assemblies that includes overburden removal, waterproofing and vegetated cover.

More Sika Sarnafil Benefits

Sika Sarnafil's G476 waterproofing membrane is specially designed for sub-grade environments. The G476 membrane is available in a range of thicknesses to match your application, overburden type and specific project requirements. Highly puncture resistant, its bright orange color makes it easy to identify and inspect to maintain high levels of quality assurance and control during installation.

Root Resistance

Many waterproofing membranes are not resistant to root penetration. They fail due to root infiltration into the field seams and flashings. Sarnafil membranes are inherently root and algae resistant and require no additional barriers to be added to the system. Sarnafil membranes have passed the most stringent European tests for root resistance including both the German FLL and the Swiss SIA 280 standards. The FLL standard test exposes the waterproofing membrane to 4 years of accelerated root growth.

Hot-Air Welded Seams and Flashings

Faulty seams and details are a common source of leaks in green roofs. Some waterproofing membranes use sealants, adhesives or tapes to secure the seams, but because Sika Sarnafil's membrane is thermoplastic, seams and flashings are welded together using Sika Sarnafil's automatic hot-air welder, the Sarnamatic. When welded together, the sheets become one monolithic layer of material impervious to moisture infiltration.

Call 1-800-576-2358 to request a FREE Green Roof Design Guide.



Sarnafil®

Sika – Your Local Partner with a Global Presence

Sika is a globally active company in the specialty and construction product and chemicals businesses. It has subsidiary manufacturing, sales and technical support facilities in more than 70 countries around the world.

Sika is THE global market and technology leader in waterproofing, sealing, bonding, dampening, strengthening and protection of buildings and civil engineering structures.

Sika has more than 12,000 employees worldwide and is therefore ideally positioned to support the success of its customers.



Sika Sarnafil

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Telephone 1-800-268-0479
Telefax 905-670-5278
Internet www.sika.ca

Serving Your Needs Worldwide from Roof to Floor



Sika Corporation can assist you with your construction needs from roof to floor. Call 1-800-576-2358 to learn about our complete building system solutions.

**Our most current General Sales Conditions shall apply.
Please consult the Product Data Sheet prior to any use and processing.
ISO 14001: 2004-Compliant**



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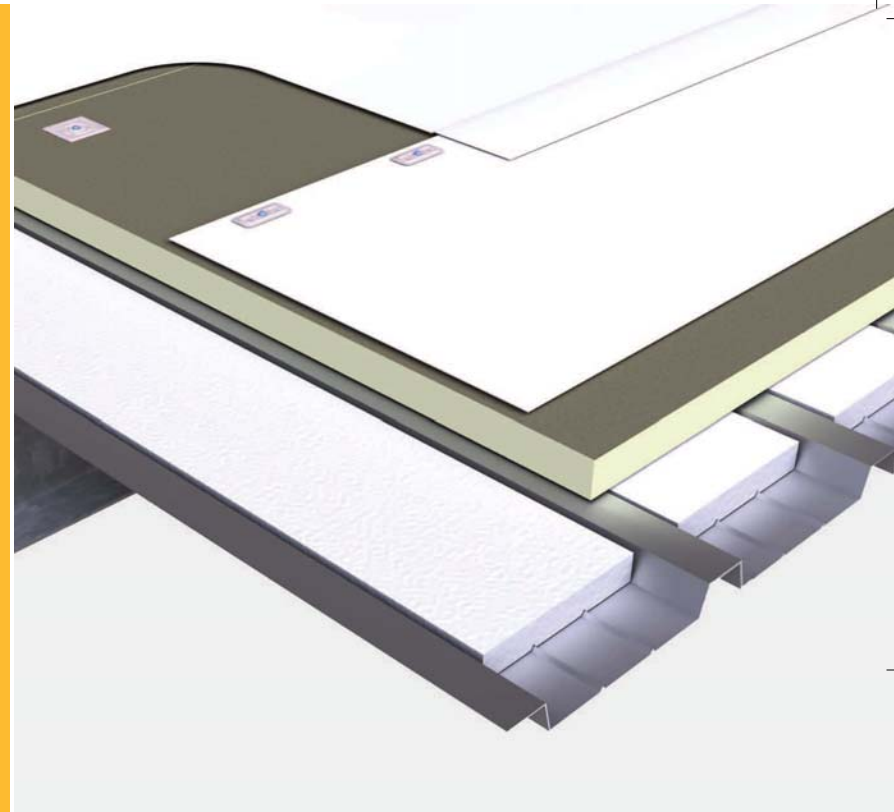
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Sarnafil®

1152/SM0408 © Sika Sarnafil

Metal Retrofit System



Sika®

Sarnafil®



Sika Sarnafil stops leaks. So your operation can keep going.

Initially, metal can be an attractive roofing alternative for cost or aesthetic reasons. But weather takes its toll over time, eventually causing leaks. Finding and repairing the leaks is a challenge. Most solutions, such as caulking and coatings, are temporary at best. You need a permanent solution that will eliminate leaks, have a long service life, and offer low maintenance and life-cycle costs.

You Know What Causes the Leaks But How Do You Stop Them?

You've experienced the leaks, the condensation, or the rusting and corrosion, and now you are looking to put a stop to it. Like many decisions, there are quick fixes and there are long-term solutions.

■ **Caulking the joints and applying a waterproofing coating** – This is the quickest and initially most inexpensive solution. It involves using caulking to seal the joints and applying a coating to the roof surface. While this might stop leaking for the short term, the roof will continue to expand and contract with the temperature changes, compromising the coating and sealants leading to more leaks.

■ **Insulate the roof with spray urethane foam and apply a sealant** – To help stop condensation, urethane foam with a waterproof coating can be applied on the rooftop to help insulate the roof. However, the foam often creates irregular surfaces that make the roof susceptible to ponding water. In addition, the coating requires continual maintenance to preserve its waterproof integrity. If a problem with the system should develop, removing the spray foam can damage the roof and is very costly.

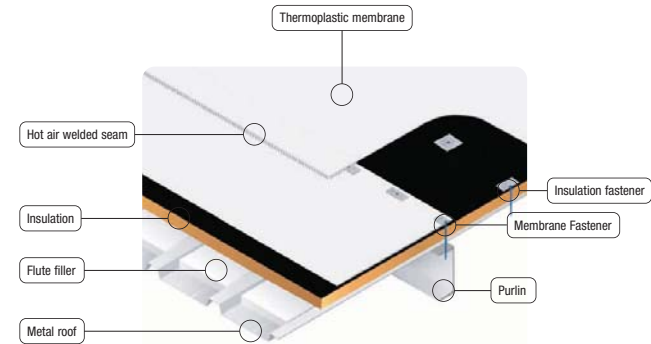
■ **Replace the roof** – You could replace the roof entirely with another metal roof, but this option is expensive and disruptive to building operations. And, you will eventually have to address the same roof issues in the future.

Solve the Problem and Save Money Over the Life of the Roof.

Solve the problem for the long-term with Sika Sarnafil's Metal Retrofit System. There is no need to reseal, coat or replace your roof with the Sika Sarnafil solution. The system is installed directly over your existing metal roof. The result is a long lasting roof that requires little maintenance and has a very low life-cycle cost. In addition, the highly reflective surface of Sika Sarnafil's EnergySmart Roof® membranes combined with the additional system insulation will greatly reduce roof surface temperature and heat transfer into the building, keeping the interior cooler and saving you money on cooling costs.

You Can Be Confident in the Sika Sarnafil Solution.

Recovering your metal roof with thermoplastic membrane is a cost effective, long-term solution that allows you to stop worrying about leaks. Unlike metal roofs, where penetrations and detailing are common sources for leakage, thermoplastic hot-air welded seams and flashings remain watertight. When the membrane is hot-air welded, the watertight seams that are created are permanent and are even stronger than the membrane itself. Sika Sarnafil has been manufacturing long-lasting, high-quality roofing systems for more than forty years, longer than any other thermoplastic membrane manufacturer. So selecting Sika Sarnafil's Metal Retrofit System will give you peace of mind, knowing that you have purchased a roofing system that is proven to perform for decades.



Design Options

To make your metal roof watertight and retain its original appearance, consider the Sarnafil Décor Roof System. A Décor Roof System provides you with the look of a metal roof by adding a choice of ribs to the roof surface that simulates a standing seam or batten seam metal roof. It will give you the aesthetics of a metal roof with the integrity of Sika Sarnafil's hot-air welded thermoplastic membrane. The systems are the ideal choice for buildings that call for the appearance of metal yet require maximum watertight performance. And, with Décor, you can choose from a variety of membrane colors to meet your design objectives.



Décor is available in seven standards colors: White, Tan, Light Grey, Patina Green, Lead Grey, Copper Brown, Evergreen, or an unlimited number of custom colors.

Tired of your leaking metal roof but aren't sure what's causing the leaks?
Here's some problems and causes that might be ailing your roof.

❖ Metal Corrosion

Rusting and corrosion of metal roofs occur from normal precipitation and acid rain as well as ponding water. Over time, this corrosion makes its way through the metal, leaving holes for water to penetrate.

❖ Expansion and Contraction

As seasons and temperatures change, leaks can occur. As the metal roof expands and contracts, fasteners loosen at the joints. The thermal movement ends up leaving loose seams and cracks at penetrations leading to leaks in your roof.

❖ Condensation

Metal roofs are difficult to seal and insulate. Moist interior air can condense on the back side of the metal. The condensate drips into the building, causing the same problems as leaks.

❖ Transition Areas

Metal roofs are only watertight if the slope is adequate. Transitions, valleys and interior gutters are prone to leaking with metal roofing.

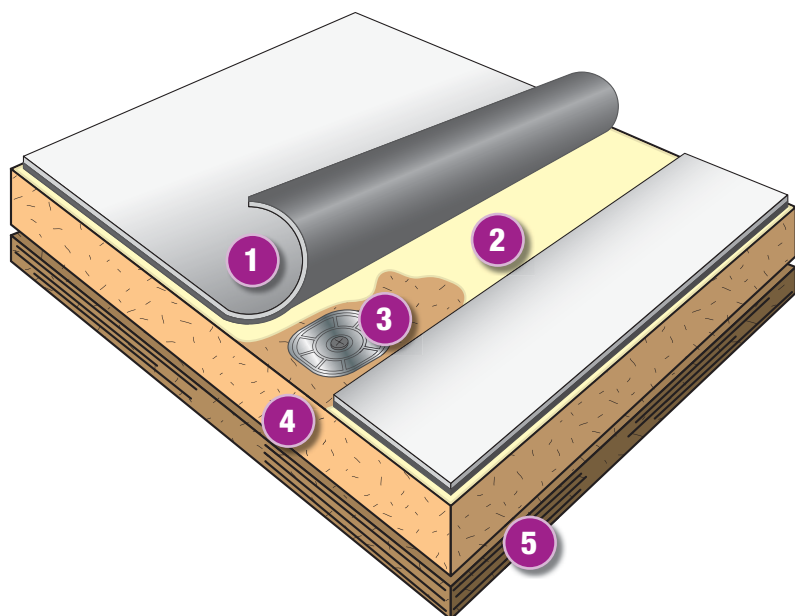


Sarnafil®



SURE-FLEX™

FULLY ADHERED
ROOFING SYSTEM



TYPICAL APPLICATION

- 1 Sure-Flex 50-, 60-, 80-mil Reinforced Membrane
- 2 Bonding Adhesive
- 3 Fasteners and Plates
- 4 Carlisle Insulation
- 5 Approved Roof Deck

SYSTEM FEATURES AND BENEFITS INCLUDE:

- Meets ENERGY STAR®, CRR, LEED® and Title 24 guidelines
- Heat-weldable membranes
- UL/FM codes and approvals
- Highly solar reflective “cool” membrane saves on air conditioning costs
- Enhanced physical property characteristics for long-term weatherability
- Excellent chemical resistance to acids, bases, restaurant oils and greases

Sure-Flex Membrane for Fully Adhered Roofing Systems is available in the following:

Colors: gray and tan

Thicknesses (mils): 50, 60 and 80

Standard Widths: Membrane: 120" or 81"
Perimeter Sheets: 60" or 40.5"

Standard Lengths: 50-mil: 100', 60-mil: 80', 80-mil: 65'

EXISTING OR NEW DECK TYPE	NEW CONSTRUCTION						REROOFING		
	STEEL	PLYWOOD OR OSB	LT. WT. CONCRETE	STRUCTURAL CONCRETE	WOOD PLANKS	GYPSUM & FIBROUS CEMENT	SMOOTH-SURFACE BUR	GRAVEL-SURFACE BUR	EXISTING SINGLE-PLY
INSULATION REQUIRED	YES	NO	YES	NO	YES	YES	NO	YES	YES
RECOMMENDED INSULATION	CARLISLE POLYISO, OSB, CARLISLE HP RECOVERY BOARD, DENSDECK® PRIME OR APPROVED INSULATION OVER CARLISLE POLYSTYRENE						← REFER TO NEW CONSTRUCTION		
INSULATION ATTACHED BY	URETHANE FOAM ADHESIVE, INSULFAST™ OR CARLISLE HP FASTENERS						REFER TO SPECIFICATIONS		
MEMBRANE ATTACHED BY	PVC BONDING ADHESIVE OR AQUA BASE 120						← REFER TO NEW CONSTRUCTION		

FOR TEAR-OFF OPTIONS, REFER TO NEW CONSTRUCTION ABOVE.

For current Code Approvals and Warranties, visit Carlisle's web site, or contact a Carlisle Design Analyst.



SURE-FLEX

FULLY ADHERED
ROOFING SYSTEM

Installation

Carlisle's Sure-Flex Fully Adhered Roofing System utilizes white membranes in reinforced 50-, 60- or 80-mil thicknesses. Insulation, where required, is secured to an acceptable roof deck.

Sure-Flex membrane sheets are fully adhered to the insulation or substrate with either Carlisle's Sure-Flex (Low-VOC) Bonding Adhesive or Aqua Base 120. Adjoining sheets are hot-air welded.

The above information represents a typical Carlisle Sure-Flex Fully Adhered Roofing System. Refer to Carlisle's published specifications and details for more complete information.

Membrane and System Strengths

- Sure-Flex membranes come in 120"- and 81"-wide sheets in 50-, 60-, and 80-mil thicknesses
- Available in standard highly reflective white as well as, gray and tan
- Incorporates a strong polyester reinforcement giving the membrane excellent tear, breaking and puncture resistance
- Excellent chemical resistance to acids, bases, restaurant oils and greases
- Also available with fiberglass reinforcement for additional dimensional stability
- Wide window of weldability affords easy membrane seaming
- Hot-air-welded seams enhance ease of installation
- High solar reflectivity "cool" roof saves on air conditioning costs

Certified Fabricated Accessories

Certified Fabricated Accessories (CFAs) are the only factory-fabricated PVC accessories that meet the stringent quality tolerances required to be included in a warranted Carlisle PVC roofing system.

System Codes

UL Class A, B and Unlimited Slope ratings are available over standard roof deck types. FM uplift values up to 90 psf can be achieved. For code specifics, refer to Carlisle's Sure-Flex Code Approval Guide.

Inspection

Upon installation completion, and prior to the issuance of a membrane system warranty, an inspection will be conducted by a Carlisle Field Service Representative.

Warranty

Consult your Authorized Applicator or Carlisle Manufacturer's Representative/Distributor for associated warranty charges.

Provided all materials are manufactured or marketed by Carlisle. This system properly installed and inspected on a commercial project may receive:

WARRANTY OPTIONS										
	Sure-Flex PVC and Sure-Flex FRS PVC Membranes					Sure-Flex KEE Membrane				
	10-Year	15-Year	20-Year	25-Year	30-Year	10-Year	15-Year	20-Year	25-Year	30-Year
50-Mil	X	X				X	X	X		
60-Mil	X	X	X			X	X	X	X	
80-Mil	X	X	X	X	X	X	X	X	X	X

For more specifics or for International warranty programs, contact Carlisle.

Sure-Flex Fully Adhered PVC Membrane

Typical Properties and Characteristics

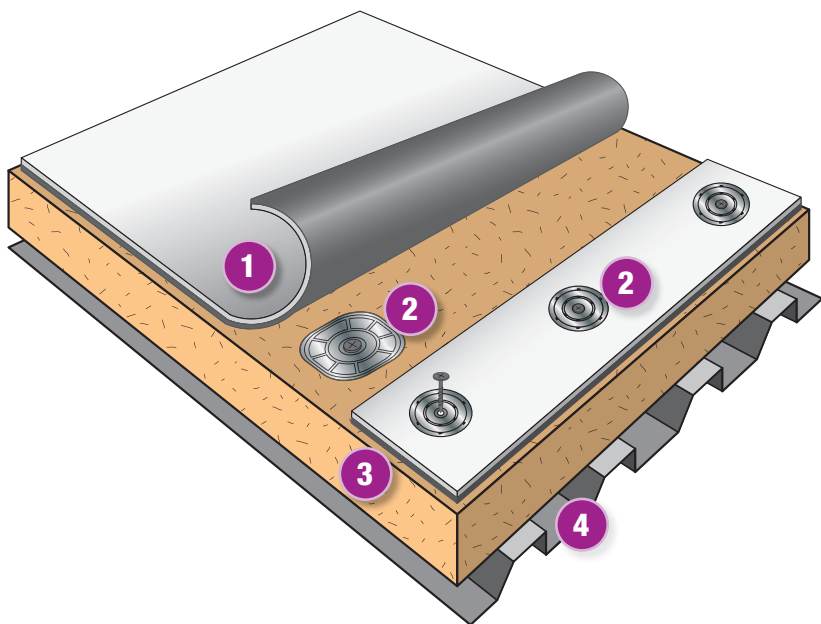
	Test Method	White PVC	Tan PVC	Gray PVC
ENERGY STAR® initial solar reflectance	Solar Spectrum Reflectometer	0.87	N/A	N/A
ENERGY STAR solar reflectance after 3 years	Solar Spectrum Reflectometer (uncleaned)	0.61	N/A	N/A
CRRC initial solar reflectance	ASTM C1549	0.87	0.45	0.39
CRRC solar reflectance after 3 years	ASTM C1549 (uncleaned)	0.61	Pending	Pending
CRRC initial thermal emittance	ASTM C1371	0.95	0.86	0.87
CRRC thermal emittance after 3 years	ASTM C1371 (uncleaned)	0.86	Pending	Pending
LEED® thermal emittance	ASTM E408	0.94	0.94	0.94
SRI (Solar Reflectance Index)	ASTM E1980	110	49	42





SURE-FLEX™

MECHANICALLY FASTENED
ROOFING SYSTEM



TYPICAL APPLICATION

- 1 Sure-Flex Reinforced PVC Membrane
- 2 Carlisle Fasteners and Plates
- 3 Acceptable Insulation
- 4 Approved Roof Deck

SYSTEM FEATURES AND BENEFITS INCLUDE:

- ENERGY STAR®-qualified membranes
- Heat-weldable membranes
- UL/FM codes and approvals
- Highly solar reflective “cool” membrane saves on air conditioning costs
- Enhanced physical property characteristics for long-term weatherability
- Excellent chemical resistance to acids, bases, restaurant oils, greases and jet fuel fall-out

Sure-Flex Membrane for Mechanically Fastened Roofing Systems is available in the following:

Colors: White, gray and tan (custom colors available upon request)

Thicknesses (mils): 50, 60 and 80

Standard Widths: Membrane: 81" and 120", Perimeter Sheets: 40.5" and 60"

Standard Lengths: 50-mil: 100', 60-mil: 80', 80-mil: 65'

EXISTING OR NEW DECK TYPE	NEW CONSTRUCTION						RE-ROOFING		
	STEEL	PLYWOOD OR OSB	LT. WT. CONCRETE	STRUCTURAL CONCRETE	WOOD PLANKS	GYPSUM & FIBROUS CEMENT	SMOOTH-SURFACE BUR	GRAVEL-SURFACED BUR	EXISTING SINGLE-PLY
DECK OVERLAYMENT REQUIRED	INSULATION	NO	INSULATION	INSULATION	INSULATION	INSULATION	INSULATION	INSULATION	INSULATION
RECOMMENDED INSULATIONS	CARLISLE POLYISO, CARLISLE HP RECOVERY BOARD, DENSDECK®, OR APPROVED INSULATION OVER CARLISLE POLYSTYRENE						← REFER TO NEW CONSTRUCTION		
INSULATION ATTACHED BY	CARLISLE FASTENERS AND PLATES						← REFER TO NEW CONSTRUCTION		
MEMBRANE ATTACHED BY	HP-X FASTENERS™/PIRANHA PLATES™; HP-XTRA FAST/PIRANHA XTRA PLATE	HP-X FASTENERS/PIRANHA PLATES; HP-XTRA FAST/PIRANHA XTRA PLATE	LT.WT. DECK FASTENERS/PLATES	CD-10/PIRANHA PLATES; HD 14-10 FASTENERS/PIRANHA PLATES	HP-X FASTENERS/PIRANHA PLATES	LT.WT. DECK FASTENERS/PLATES	← REFER TO NEW CONSTRUCTION		

FOR TEAR-OFF OPTIONS, REFER TO NEW CONSTRUCTION ABOVE.

For current Code Approvals and Warranties, visit Carlisle's web site or contact a Design Analyst.



SURE-FLEX

MECHANICALLY FASTENED
ROOFING SYSTEM

Installation

Carlisle's Sure-Flex Mechanically Fastened Roofing System utilizes white, gray and tan membranes in standard 50-mil, 60-mil or 80-mil thicknesses.

Insulation is mechanically fastened to an acceptable roof deck. Sure-Flex membrane sheets are mechanically fastened through the insulation to the deck with Carlisle HP-X or HP-Xtra Fasteners and appropriate Piranha or Barbed Oval Plates. Adjoining sheets are overlapped and joined together with a minimum 1½"-wide hot-air weld.

The above information represents a typical Carlisle Sure-Flex Mechanically Fastened Roofing System. Refer to Carlisle's published specifications and details for more complete information.

Membrane and System Strengths

- Sure-Flex membranes come in 81"- and 120"-wide sheets in 50-, 60- and 80-mil thicknesses
- Available in highly reflective white, as well as gray and tan
- Incorporates a strong polyester reinforcement giving the membrane excellent tear, breaking and puncture resistance
- Excellent chemical resistance to acids, bases, restaurant oils, greases and jet fuel fall-out
- Sure-Flex KEE membranes enhanced with Elvaloy are available
- Wide window of weldability affords easy membrane seaming
- Hot-air-welded seams enhance ease of installation
- High solar reflectivity "cool" roof saves on air conditioning costs

Certified Fabricated Accessories

Certified Fabricated Accessories (CFAs) are the only factory-fabricated PVC accessories that meet the stringent quality tolerances required to be included in a warranted Carlisle PVC roofing system.

System Codes

UL Class A, B and Unlimited Slope ratings are available over standard roof deck types. FM uplift values of up to 165 psf can be achieved. For code specifics, refer to Carlisle's Code Approval Guide.

Quality Assurance

Carlisle Authorized Applicators have been trained to install Carlisle's Sure-Flex Roofing Systems.

Inspection

Upon installation completion, and prior to the issuance of a membrane system warranty, an inspection will be conducted by a Carlisle Field Service Representative.

Warranty

Consult your Authorized Applicator or Carlisle Manufacturer's Representative/Distributor for associated warranty charges.

Provided all materials are manufactured or marketed by Carlisle, this system properly installed and inspected on a commercial project may receive:

- A 30-year Golden Seal warranty when using 80-mil Sure-Flex KEE membrane all materials used for the roofers installation are manufactured or marketed by Carlisle

WARRANTY OPTIONS

	Sure-Flex PVC and Sure-Flex FRS PVC Membranes					Sure-Flex KEE Membrane				
	10-Year	15-Year	20-Year	25-Year	30-Year	10-Year	15-Year	20-Year	25-Year	30-Year
50-Mil	X	X				X	X	X		
60-Mil	X	X	X			X	X	X	X	
80-Mil	X	X	X	X	X	X	X	X	X	X

For more specifics or for International warranty programs, contact Carlisle.

Sure-Flex Reinforced PVC Membrane

Typical Properties and Characteristics

	Test Method	White PVC	Tan PVC	Gray PVC
ENERGY STAR® initial solar reflectance	Solar Spectrum Reflectometer	0.87	N/A	N/A
ENERGY STAR solar reflectance after 3 years	Solar Spectrum Reflectometer (uncleaned)	0.61	N/A	N/A
CRRC initial solar reflectance	ASTM C1549	0.87	0.45	0.39
CRRC solar reflectance after 3 years	ASTM C1549 (uncleaned)	0.61	Pending	Pending
CRRC initial thermal emittance	ASTM C1371	0.95	0.86	0.87
CRRC thermal emittance after 3 years	ASTM C1371 (uncleaned)	0.86	Pending	Pending
LEED® thermal emittance	ASTM E408	0.94	0.94	0.94
SRI (Solar Reflectance Index)	ASTM E1980	110	49	42



Sika – Your Local Partner with a Global Presence

Sika is a globally active company in the specialty and construction product and chemicals businesses. It has subsidiary manufacturing, sales and technical support facilities in more than 70 countries around the world.

Sika is THE global market and technology leader in waterproofing, sealing, bonding, dampening, strengthening and protection of buildings and civil engineering structures.

Sika has more than 12,000 employees worldwide and is therefore ideally positioned to support the success of its customers.



Sika Sarnafil

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Serving Your Needs Worldwide from Roof to Floor



Sika Corporation can assist you with your construction needs from roof to floor. Call 1-800-576-2358 to learn about our complete building system solutions.

Our most current General Sales Conditions shall apply. Please consult the Product Data Sheet prior to any use and processing.



Sarnafil®

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Sarnafil World Class Roofing Systems

Sika®

Sarnafil®



How to Save Thousands with Your Roof

The Sarnafil EnergySmart Roof® has a reflective surface proven to help building owners reduce their energy consumption. In a two-year study co-sponsored by the Environmental Protection Agency and the U.S. Department of Energy, the Sarnafil white reflective membrane reduced peak summertime air conditioning demand by **14 percent** on a 100,000 square foot retail store in Austin, Texas*. Scientific testing methods were used to monitor energy consumption before and after the Sarnafil membrane replaced the existing black rubber EPDM roof.

Over a conservative lifetime estimate of the Sarnafil membrane, the retailer could save over \$70,000 in abated energy costs.

A copy of the full report is available upon request.

*S. Konopacki and H. Akbari, 2001, Lawrence Berkeley Laboratory Report LBNL-47149, Berkeley, CA.



Performance

Choosing the right roofing system for your needs

Whether you are a building owner, design professional or a roofing contractor, choosing the right roofing system for your building or project is one of the most important decisions you will make. The right roofing system will protect your investment for decades, while the wrong roofing system could result in costly repairs, damage to the building and its contents and possibly an early tear off and re-roof.

To help you make an informed decision, Sika Sarnafil has outlined a few important points to consider:

Proven Performance

Performance over time is the only true test of a roofing system's quality. Sarnafil membranes have been produced with the same basic formulation for more than 40 years. This "winning formula" has lasted for decades on facilities as diverse as high-rises, museums, retail stores, hospitals, sports arenas and schools.

Membrane Reinforcement

Sarnafil membranes have always been produced with an integrated reinforcement for roofing and waterproofing applications. Reinforcement is critical to long term dimensional stability of any single ply membrane.

Polymer Thickness

While the reinforcement's role is to provide dimensional stability and mechanical properties, the polymer provides the waterproofing. Increased polymer thickness improves the life expectancy of the membrane, provides a stronger, continuous weld, and improves resistance to rooftop traffic. According to ASTM guidelines, "nominal" membrane thickness can be up to 10% less than advertised. This means a 45 mil nominal membrane may only be 40 mils thick. To guarantee the materials you select meet your requirements, Sika Sarnafil offers a certified polymer thickness program, assuring you without a doubt that the product specified is the product delivered! Sika Sarnafil offers a variety of thicknesses of membrane to match your need with your budget.

Water Absorption

Another defining performance property of a roofing membrane is water resistance. Water absorption can cause membrane delamination, affect the quality of seam welds and reduce the long-term performance of the membrane. When submerged under water at 158°F for one week (in accordance with ASTM Test Method D 570) Sarnafil membranes have only a 3% change in weight.

Fire Resistance

Vinyl materials, such as Sarnafil membrane, can self-extinguish and resist the spread of flames. In a laboratory test, a flame source was applied for 10 seconds to fire-retardant polyolefin (TPO), Sarnafil (PVC), and fire-retardant rubber (EPDM). When the flame source was removed, the flame extinguished on the Sarnafil membrane, while the alternative membranes continued to burn.

Energy Savings

Reflective roofing, such as the Sarnafil EnergySmart Roof® membrane, has proven to help building owners reduce their energy consumption, abate urban heat islands, and help slow the formation of smog forming pollutants.

Hot-air Welded Seams and Flashings

Faulty seams and details are a common source of leaks with many roofing systems. Some roofing membranes use sealants, adhesives or tapes that can deteriorate over time. The Sarnafil membrane is thermoplastic, so seams and flashings are welded together using Sika Sarnafil's automatic hot-air welder, the Samamatic. When welded together, the sheets of membrane become one monolithic layer of material impervious to water and moisture infiltration.



On the Cover: Use your roof to communicate your message. Sika Sarnafil can incorporate your logo or marketing message on your roof for dramatic impact.



Sarnafil®



Our reputation precedes us

Why Sika Sarnafil?

At Sika Sarnafil, our reputation stems from proven performance. Sarnafil roofing systems are widely recognized for exemplifying the highest standards of quality, reliability and watertight protection. Our record of proven performance is on display on buildings worldwide, in every imaginable climate. All told, we've manufactured billions of square feet of thermoplastic roofing and waterproofing systems since 1964.

Our commitment to performance and reliability is a product of our Swiss heritage. Sika Sarnafil is dedicated to creating products that last — long-lasting quality that's evident in the durable roofing and waterproofing systems we produce in the United States for the North American market.

Sarnafil Roofing Systems

Sarnafil membrane is available in both G and S configurations. The Sarnafil "G" series membranes, used in adhered and loose laid systems, are fiberglass reinforced offering exceptional dimensional stability and a low coefficient of thermal expansion, further aiding in the service life of the roof.

The Sarnafil "S" series membranes are polyester reinforced to resist the high point loads imposed on the membrane in mechanically-attached systems. Both membrane series use the same time-proven membrane formulation that has established Sarnafil membrane's world-class reputation of reliability and performance.

Study Confirms Durability of the Sarnafil Vinyl Roofing Membrane

Roofing membrane samples from 44 roofs in North America and Europe document the durability of Sarnafil vinyl roofing membranes in exposed applications. Laboratory evaluations tested physical properties considered essential in estimating long-term behavior of vinyl roofing membranes according to ASTM (USA), DIN (Germany) and SIA (Switzerland) standards. The average age of the roofs tested was more than 20 years with the oldest 34 years in age.

Summary Results

The laboratory testing confirmed that the tested membranes held up very well compared to the standard minimum values for new vinyl roofing membranes according to North American and European standards.

More importantly, all of the roofs were still performing leak free. Considering the age and the condition of the roofs analyzed, the data indicate that a properly formulated, properly maintained, reinforced vinyl roof membrane system can perform in excess of 20 to 30 years in various climates throughout Europe and North America. *[A copy of the full report is available upon request.](#)*

Warranty Options

Sarnafil offers several types of warranties including 5, 10, 15, or 20-year durations of:

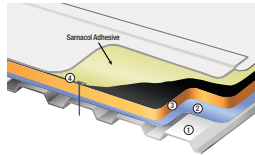
- Membrane only
- Labor and Material (Standard)
- Full System



Sarnafil Milestone Management
The Sarnafil Milestone Management™ process integrates proven materials, skilled workmanship, and expert assistance into every phase of every project for comprehensive quality control. The result: peace of mind for architects, engineers, owners, and occupants alike.

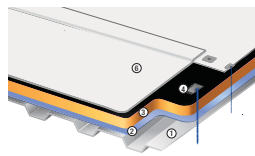


Sarnafil®



Adhered Systems

The Sarnafil adhered roof systems are best for low sloped, uniquely shaped or pitched roof applications composed of non-nailable substrates such as pre-cast or pre-stressed concrete, cementitious wood fiber or gypsum. They also work well over nailable substrates such as concrete, steel and wood decks. For rough surfaces, such as cellular concrete, the Sarnafil adhered feltback system minimizes the appearance of the substrate irregularities and offers high wind uplift resistance as well as increased puncture resistance.

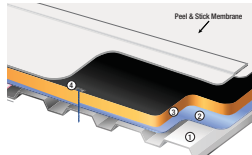


Sarnafast

This mechanically-attached system is your best choice when speed and ease of installation are important. Sarnafast features metal plates fastened in the membrane overlap, spaced according to the roof's wind uplift requirements. It is designed to meet wind conditions on most building types.

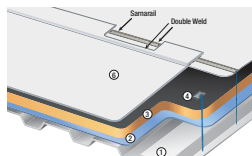
Key

- ① Structural Deck
- ② Vapor Retarder
- ③ Insulation
- ④ Insulation Fastener
- ⑤ Gypsum Roof Board
- ⑥ Sarnafil S Membrane
- ⑦ Sarnafil G Membrane



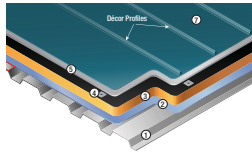
Peel & Stick

The Sarnafil Peel & Stick roof membrane provides all the benefits of an adhered roofing system without the inconveniences and odors of liquid adhesives. The specially formulated adhesive is pre-applied at the factory assuring quality control and helping speed installation. The Sarnafil Peel & Stick membrane is ideal for roofing hospitals, schools or any occupied building where odors and VOC's may be a concern.



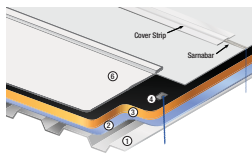
Sarnafil Express

This break-through in mechanically-attached roof systems combines the speed of installation of the Sarnafast system with the wind performance of a double-weld system. Sarnafil Express features a polymer batten strip fastened in the membrane overlap and welded on both sides. The Sarnamatic automatic seam welder, with a patented double weld kit, creates a continuous weld in a single pass on both sides of the batten. This results in symmetrical wind loading across two seams, unlike a single-weld attachment system. Sarnafil Express reduces the chance of fastener rocking and pullout, membrane tearing and seam peeling. This system is ideal for 10-foot wide membrane attachment and buildings that experience repeat high wind events.



Décor Roof Systems

Your design can become reality with the Sarnafil Décor Roof System. The ideal choice for new or existing buildings that call for a metal roof appearance with the watertight integrity and design flexibility of a thermoplastic roofing membrane. Décor Roof Systems achieve the appearance of metal with a thermoplastic rib in either standing seam or batten seam configuration that is hot-air welded to the membrane surface. Décor also comes in seven standard color options and an unlimited number of custom colors. With Décor, you not only choose the color and style of the rib, but also the rib spacing.

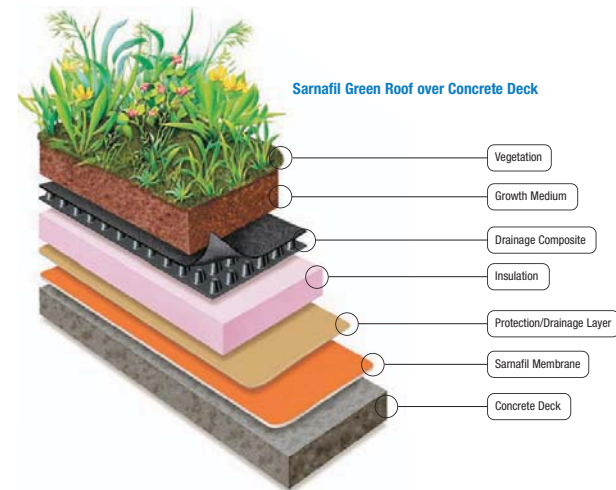


Engineered

The Sarnafil Engineered System is designed for roofs that are subject to severe or extreme wind uplift forces, such as high-rise buildings or facilities located in coastal areas. The advantage of the Engineered system is the fastening pattern – both row spacing and fastener spacing can be customized or “engineered” for any specified wind load. The Engineered System utilizes a specially designed bar which is secured to the structural roof deck with corrosion-resistant fasteners. The bar clamps the membrane fully along its length, uniformly distributing the dynamic load produced by wind uplift. Sika Sarnafil offers wind warranty protection of up to 120 mph with this system.

Green Roof System

Green roofs are growing in popularity in North America. They provide aesthetic, ecological and social benefits to modern buildings in urban areas. With over 30 years experience waterproofing green roofs across North America and Europe, Sika Sarnafil is the preferred choice of design professionals and building owners. Many building materials used for roofing and water-proofing are not resistant to root growth and infiltration. They often fail prematurely due to poor algae resistance and root intrusion into field seams and flashings. The components in the Sarnafil waterproofing systems, including our durable G476 membrane, have been proven to last decades under such conditions. To learn more about Sika Sarnafil's Green Roof System options and the benefits of installing a “Green Roof” on your building, please call or e-mail us for your free copy of the Green Roof Design Guide.



Sarnafil Membranes Meet or Exceed All ASTM D-4434 Requirements.

Physical Properties	ASTM Test Method	ASTM D-4434 Spec. (min.)	Mechanically Attached	Adhered
			Sarnafil S327*	Sarnafil G410*
Reinforcing material			Polyester	Fiberglass
Overall thickness	D-751	.045in / 1.14 mm	.048 in / 1.2 mm or greater	.048 in / 1.2 mm or greater
Tensile strength	D-638	1500 psi / 10.4 MPa	n/a	1600psi / 11.1 MPa
Breaking strength	D-751	200 lbf/in	230 lbf/in	n/a
Elongation at break S327	D-751	15%	20%	n/a
Elongation at break G410	D-638	250 x 230 (M.D. x C.D. %)	n/a	250 x 230 (MD x CD. %)
Seam strength S327 / G410 (% of tensile strength)**	D-751 / D-638	75%	85%	80%
Retention of properties after heat aging:	D-3045			
Tensile strength (% of original) S327 / G410	D-751 / D-638	90%	95%	95%
Elongation (% of original) S327 / G410	D-751 / D-638	90%	90%	90%
Tear resistance	D-1004	10 lbf	n/a	14 lbf
Tear strength	D-751	45 lbf	45 lbf	n/a
Low temperature bend	D-2136	-40 (°F)	-40 (°F)	-40 (°F)
Accelerated weathering (Xenon)	D-2565	5000 hours	10,000 hours	10,000 hours
Cracking (7x magnification)		none	none	none
Discoloration		negligible	negligible	negligible
Crazing (7x magnification)		none	none	none
Linear dimensional change S327	D-1204	0.5% max	0.1%	n/a
Linear dimensional change G410	D-1204	0.1% max	n/a	0.02%
Weight change after immersion in water	D-570	3.0% max	2.5%	2.5%
Static puncture resistance, 33 lbf (15 kg)	D-5602	Pass	Pass	Pass
Dynamic puncture resistance, 14.7 ft-lbf (20 J)	D-5635	Pass	Pass	Pass

*Based on typical membrane properties. Variations in manufacturing may occur.

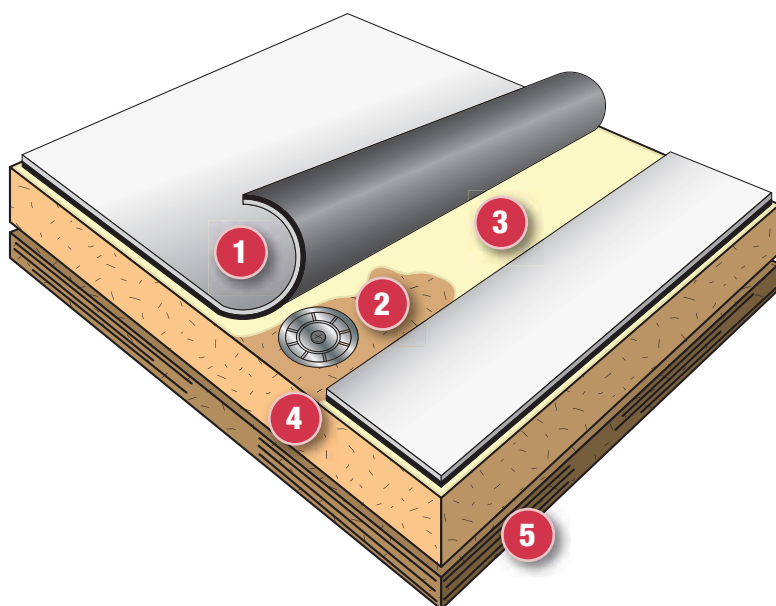
**Failure occurs through membrane rupture not seam failure. Note: Physical Properties shown are prior to applying felt, if specified.





SURE-WELD®

FULLY ADHERED
ROOFING SYSTEM



TYPICAL APPLICATION

- 1 Sure-Weld Reinforced Membrane
- 2 Carlisle Insulation Fasteners and Plates
- 3 Sure-Weld Bonding Adhesive
- 4 Acceptable Insulation
- 5 Approved Roof Deck

Sure-Weld Membrane for Fully Adhered Systems is available in the following:

Colors: White, Gray, Tan

Thickness (mils): 45, 60, 72 and 80

Standard Widths: 6', 8', 10' and 12'

Standard Lengths: 100'

SYSTEM FEATURES AND BENEFITS INCLUDE:

- Heat-weldable membranes
- High wind uplift performance
- Hail and high puncture resistance
- Top ply membrane thickness adds improved long-term weatherability and durability
- Sure-Weld white and tan membranes meet ENERGY STAR® guidelines

EXISTING OR NEW DECK TYPE	NEW CONSTRUCTION						REROOFING		
	STEEL	PLYWOOD OR OSB	LT. WT. CONCRETE	STRUCTURAL CONCRETE	WOOD PLANKS	GYPSUM & FIBROUS CEMENT	SMOOTH SURFACE BUR	GRAVEL SURFACED BUR	EXISTING SINGLE-PLY
INSULATION REQUIRED	YES	NO	*REFER TO SPECS	NO	YES	YES	NO	YES	YES
RECOMMENDED INSULATIONS	CARLISLE POLYISO, CARLISLE HP RECOVERY BOARD OR CARLISLE POLYSTYRENE WITH AN APPROVED COVERBOARD						← REFER TO NEW CONSTRUCTION		
INSULATION ATTACHED BY	FAST ADHESIVE (NON-PENETRATING), INSULFAST OR CARLISLE HP FASTENERS						← REFER TO NEW CONSTRUCTION		
MEMBRANE ATTACHED BY	SURE-WELD BONDING ADHESIVE						← REFER TO NEW CONSTRUCTION		

FOR TEAR OFF OPTIONS REFER TO NEW CONSTRUCTION ABOVE.

For current code approvals and warranties, visit Carlisle's web site or contact a design analyst.

* Refer to Carlisle's Sure-Weld Design Criteria Portion of the Current Specification.

Investing in Roofing Solutions for Over 45 Years

800-479-6832 • P.O. Box 7000 • Carlisle, PA 17013 • Fax: 717-245-7053 • www.carlisle-syntec.com

CARLISLE
Carlisle SynTec



SURE-WELD®

FULLY ADHERED
ROOFING SYSTEM

TPO Membrane

Carlisle Sure-Weld is a premium, heat-weldable, single-ply thermoplastic polyolefin (TPO) membrane, engineered to provide outstanding long-term performance in new roof construction and re-roofing applications. All Sure-Weld TPO membranes utilize the patented OctaGuard XT™ weathering package technology, which is able to withstand extreme durability testing intended to stimulate exposure to several climates.

TPO Accessories

Carlisle also offers over a dozen prefabricated, in-stock, standard-order accessories and countless custom-order accessories. All carry a CFA (Certified Fabricated Accessory) stamp of approval, so you know they are manufactured to the highest standards. Every Carlisle CFA-approved accessory saves time and money during installation.



Installation

Carlisle's Sure-Weld Fully-Adhered Roofing System utilizes white, gray or tan membranes in standard reinforced 45- or 60-mil thickness or 72- or 80-mil thick reinforced Sure-Weld EXTRA™.

Insulation, where required, is secured to an acceptable roof deck. Sure-Weld membrane sheets are fully-adhered to the insulation or substrate with Carlisle's Sure-Weld Bonding Adhesive. Adjoining sheets are hot air welded.

The above information represents a typical Carlisle Sure-Weld Fully-Adhered Roofing System. Refer to Carlisle's published specifications and details for more complete information.

Membrane and System Strengths

- Sure-Weld membrane is available in white, gray and tan; 6'-, 8'-, 10'- and 12'-widths
- Provides superior puncture and hail resistance
- Because white and tan Sure-Weld reflectivity values exceed industry standards, they both are ENERGY STAR® rated
- Puncture warranty available with 72- and 80-mil EXTRA membrane
- Membranes are eco-friendly as they do not contain chlorine or plasticizers
- Sure-Weld's top-ply surface is thicker and smoother than other membranes in the market, providing better welding results and reduced dirt pickup

System Codes

- UL Class A, B and Universal Slope ratings are available over any deck type
- FM Uplift values up to 150 psf can be achieved

For code specifics, refer to Carlisle's SW Code Approval Guide.

Quality Assurance

Carlisle Authorized Roofing Contractors have received training to install Carlisle's Sure-Weld Roofing Systems.

Inspection

Upon installation completion, and prior to the issuance of a membrane system warranty, an inspection will be conducted by a Carlisle Field Service Representative.

Warranty

Consult your roofing contractor or Carlisle Manufacturer's Representative/Distributor for associated warranty charges.

This system, properly installed and inspected on a commercial project may receive:

- A 10-year Total System or 15-year Golden Seal Warranty may be requested when all materials used for the roofing installation are manufactured or marketed by Carlisle
- A 10-year Reflectivity Warranty (based on ENERGY STAR criteria) available with white membrane
- A 20-year Golden Seal Warranty is available with Sure-Weld's 72- and 80-mil EXTRA TPO membranes
- Higher wind speed warranties (up to 120 mph peak gust wind speed) available upon review by Carlisle

For more specifics or for International warranty programs, contact Carlisle.



Investing in Roofing Solutions for Over 45 Years

800-479-6832 • P.O. Box 7000 • Carlisle, PA 17013 • Fax: 717-245-7053 • www.carlisle-syntec.com

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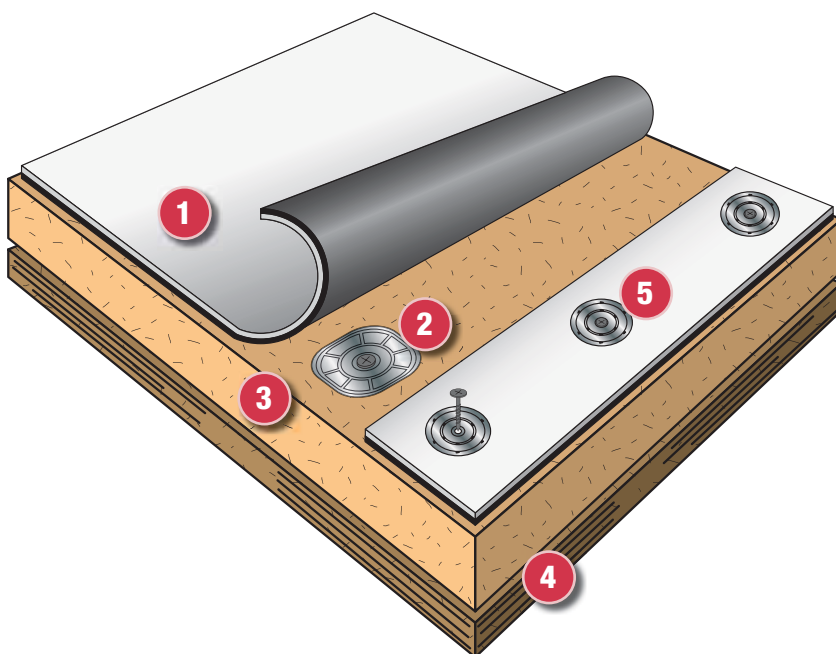
REPRINT CODE: 600337 - SW Fully Adhered System Sheet - 092010 © 2010 Carlisle.





SURE-WELD®

MECHANICALLY FASTENED
ROOFING SYSTEM



TYPICAL APPLICATION

- 1 Sure-Weld Reinforced TPO Membrane
- 2 Carlisle Insulation Fasteners and Plates
- 3 Acceptable Insulation
- 4 Approved Roof Deck
- 5 Membrane Fasteners and Plates

Sure-Weld Membrane for Mechanically-Fastened Systems is available in the following:

Colors: White, Gray, Tan

Thickness (mils): 45, 60 and 80

Standard Widths: 4', 6', 8', 10' and 12'

Standard Lengths: 100'

SYSTEM FEATURES AND BENEFITS INCLUDE:

- Heat-weldable membranes
- High wind uplift performance
- Resistant to hail and accidental punctures
- Top ply membrane thickness adds improved long-term weatherability and durability
- Sure-Weld membrane meets ENERGY STAR®* qualifications and CRRC guidelines
- OctaGuard XT™ weathering package provides superior long-term performance
- Certified Fabricated Accessories

EXISTING OR NEW DECK TYPE	NEW CONSTRUCTION						REROOFING		
	STEEL	PLYWOOD OR OSB	LT. WT. CONCRETE	STRUCTURAL CONCRETE	WOOD PLANKS	GYPSUM & FIBROUS CEMENT	SMOOTH BUR SURFACE	GRAVEL SURFACED BUR	EXISTING SINGLE PLY
DECK OVERLAYMENT REQUIRED	INSULATION	NO	NO	HP MAT	INSULATION	INSULATION	NO	INSULATION	*REFER TO SPECS
INSULATIONS	APPROVED CARLISLE INSULATION OR COVER BOARD						REFER TO NEW CONSTRUCTION		
INSULATION ATTACHED BY	CARLISLE FASTENERS AND PLATES						REFER TO NEW CONSTRUCTION		
MEMBRANE ATTACHED BY	HPX FASTENERS/PIRANHA PLATES; HPXTRA FAST/PIRANHA XTRA PLATE	HPX FASTENERS/PIRANHA PLATES; HPXTRA FAST/PIRANHA XTRA PLATE	GYPTec FASTENERS/PLATES	CD-10/PIRANHA PLATES; HD 14-10 FASTENERS/PIRANHA PLATES	HPX FASTENERS/PIRANHA PLATES	GYPTec FASTENERS/PLATES	REFER TO NEW CONSTRUCTION		

FOR TEAR OFF OPTIONS REFER TO NEW CONSTRUCTION ABOVE.

For current code approvals and warranties, visit Carlisle's web site or contact a design analyst.

* Refer to Carlisle's Sure-Weld Design Criteria Portion of the Current Specification.

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CARLISLE
Carlisle SynTec



SURE-WELD

MECHANICALLY FASTENED
ROOFING SYSTEM

Project Information

This Mechanically Fastened Roofing System is being installed for the project named below.

Job Name:

City:

State:

The Carlisle Authorized Roofing Applicator is:

Company Name:

Address:

City:

State:

Zip:

Phone:

Installation

Carlisle's Sure-Weld Mechanically-Fastened Roofing System utilizes white, gray or tan membranes in standard reinforced 45- or 60-mil thickness or 80-mil thick reinforced Sure-Weld EXTRA.

Insulation is mechanically fastened to an acceptable roof deck. Sure-Weld membrane sheets are mechanically fastened to the deck with appropriate Carlisle fasteners and plates. Adjoining sheets are overlapped and joined together with a minimum 1½"-wide hot-air weld.

The above information represents a typical Carlisle Sure-Weld Mechanically-Fastened Roofing System. Refer to Carlisle's published specifications and details for more complete information.

Membrane and System Strengths

- Sure-Weld membrane is available in white, gray and tan; 4', 6', 8' 10' and 12'-widths
- Sure-Weld TPO provides excellent puncture resistance
- Because Sure-Weld's reflectivity values exceed industry standards, the membrane meets the qualifications for the ENERGY STAR program
- Sure-Weld's reflectivity values exceed other heat-weldable membranes
- Sure-Weld's top ply surface is thicker and smoother than other membranes in the market, providing better welding results and reduced dirt pickup
- Industry-leading OctaGuard XT Weathering Package provides improved weatherability, durability and long-term rooftop performance

System Codes

UL Class A, B and Universal Slope ratings are available over any deck type.

FM Uplift values up to 135psf can be achieved.

For specific code approvals, refer to Carlisle's Code Approval Guide.

Quality Assurance

Carlisle Authorized Applicators are highly trained in the installation of Carlisle's Sure-Weld TPO Roofing Systems.

Inspection

Upon installation completion, and prior to the issuance of a membrane system warranty, an inspection will be conducted by a Carlisle Field Service Representative.

Warranty

Consult your Authorized Applicator or Carlisle Manufacturer's Representative/Distributor for associated warranty charges.

This system properly installed and inspected on a commercial project may receive:

- A 10, 15 or 20-year Total System Warranty may be requested when all materials used for the roofing installation are manufactured or marketed by Carlisle
- A 25 or 30-year Golden Seal Warranty is available with 80-mil Sure-Weld EXTRA TPO membranes
- 55 mph maximum peak gust wind speed coverage is standard; higher wind speed warranties available upon review by Carlisle
- A 10-year Reflectivity Warranty (based on ENERGY STAR qualifications) available on all white membranes
- Available Puncture Warranty with Sure-Weld 80-mil "EXTRA" TPO

For more specifics or for International warranty programs, contact Carlisle.



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*ENERGY STAR qualification is only valid in the U.S.
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