

Memorandum of Understanding between
The United States Environmental Protection Agency
and
Contact Roofing Systems

I. Common Agreements and Principles

- A. This is a voluntary agreement Contact Roofing Systems ("EPA ENERGY STAR Roof Products Partner" or "Partner") and the United States Environmental Protection Agency (EPA), by which Contact Roofing Systems joins the EPA ENERGY STAR⁷ Roof Products Program. The terms of this Memorandum of Understanding (MOU) shall apply to residential and commercial roof products sold by Partner under its own brand name(s).
- B. Partner and EPA agree that the primary purpose of the EPA ENERGY STAR Roof Products Program is to promote the manufacturing and marketing of energy-efficient products, thereby potentially reducing combustion-related pollution, including air pollution.
- C. Partner and EPA agree that the use of energy-efficient products may also reduce energy bills and that the manufacture of these products may increase profits and competitiveness for businesses.
- D. Partner and EPA agree that publicizing the EPA ENERGY STAR Roof Products Program is important to demonstrate the following: the concern of Partner for the environment, the vitality of the free enterprise system in reducing costs, and the capability of partnership programs to achieve environmental goals.
- E. Partner and EPA agree that as technologies and markets change, it may become desirable to revise the specifications contained in this MOU. Partner and EPA agree to work together on any such revisions. Partner and EPA understand that EPA will work with all ENERGY STAR Roof Products Program Partners with the goal of achieving consensus when revising the specifications contained within this MOU.
- F. Partner and EPA agree that maintaining public confidence in the EPA ENERGY STAR Roof Products Program is critical to achieving the shared goals of Partner and EPA.
- G. Partner and EPA agree that membership in the EPA ENERGY STAR Roof Products Program is essential to the cooperative effort to achieve the shared goals stated above.

II. Definitions

- A. Roof surface: The uppermost part of the roof system that is in direct contact with solar radiation.
- B. Low-Slope Roofs: Surfaces with a slope of 2:12 inches or less¹.
- C. Steep-Slope Roofs: Surfaces with a slope greater than 2:12 inches.
- D. Low-Slope Roof Products: Products that are typically installed on low-slope surfaces such as single-ply membranes, built-up-roofs (BUR), modified bitumen, spray polyurethane foam, roof coatings, and standing-seam profiled metal. Some products that are typically installed on low-slope roofs may also be installed on steep-slope roofs (e.g. single-ply membranes and roof coatings). For the purposes of this MOU, the roof product will constitute the uppermost surface of the building structure.
- E. Steep-Slope Roof Products: Products that are typically installed on steep-slope surfaces such as composite shingles, clay, concrete, or fiber-cement tile, slate, shakes, architectural profiled metal and individual metal roof components. Some products that are typically installed on low-slope roofs may also be installed on steep-slope roofs (e.g. single-ply membranes and roof coatings). For the purposes of this MOU, the roof product will constitute the upper most surface of the building structure.
- F. Roof Coating: A material typically applied in the liquid state to the roof surface at the time of construction or at a later time as a retrofit measure. Roof coatings may be bituminous, polymeric, or polymer modified. Bituminous roof coatings are formulated using bitumen. Polymeric roof coatings are formulated using a variety of synthetic resins such as acrylic, neoprene, styrene butadiene, urethane, polyvinyl acetate, and others. Polymer modified roof coatings are manufactured by combining a portion of the polymeric technology with bitumen technology.
- G. Built-Up-Roof (BUR): Traditional hot asphalt or coal tar built-up roofing membrane assembly consists of alternating layers of felts, fabrics, or mats saturated with bitumen during manufacture, assembled in place, and adhered with applied layers of hot bitumen. Surfacing for the hot BUR can be aggregate embedded in hot asphalt; mineral-surface cap sheets; modified bitumen cap sheets; or smooth-surface applications or coatings.²

¹ As defined in proposed ASTM Standard E 1918-97

² National Roofing Contractors Association Commercial Low-Slope Roofing Materials Guide 1998

H. Single-Ply Membrane: Flexible manufactured sheet of compounded synthetic materials. Single-ply membranes include EPDM (ethylene, propylene, diene monomer), Neoprene (chloroprene rubber), PVC (polyvinyl chloride polymers), CSPE (chlorosulfonated polyethylene, also known as Hypalon), CPE (chlorinated polyethylene), PIB (polyisobutylene), NBP (nitrite alloy membranes compounded from butadiene-acrylonitrile copolymers), TPO (thermoplastic polyolefin), and others.

I. Modified Bitumen: Roll roofing products consisting of asphalt, reinforcing layers, and in some cases, surfacing. During manufacture, a polymer (APP, or atactic polypropylene, and SBS, or styrene butadiene styrene, are the most common) is added to the bitumen while heating, which "modifies," or changes, its properties.³

J. Metal Roof Panel: Metal roofing systems are divided into two categories, architectural and structural. Architectural metal roofs usually require a slope of at least 3:12. Structural metal roofs can be used on roofs with slopes as low as 1/4:12. Steel and aluminum sheets are commonly used to fabricate metal roof panels. Steel requires a corrosion resistant metal coating such as zinc, aluminum, alloys of zinc-aluminum, or tin. Metallic coated steel includes galvanized steel, aluminized steel, zinc-aluminum-coated steel and terne-coated steel. Metallic coated steels are also painted to provide additional corrosion protection, as well as color.

K. Metal Roof Component: Metal roof product designed to resemble a traditional steep-slope residential product such as shingle, tile, shake, or slate.

L. Spray Polyurethane Foam Roof System: A fully adhered system that consists of a rigid closed-cell sprayed-in-place polyurethane foam insulation and a protective roof coating. Typical coatings include acrylic, silicon, or urethane elastomers.

M. Composite Shingle: Composed of a base material, either organic felt or glass fiber mat; asphalt; and surfacing material, generally in the form of mineral granules.⁴

N. Roof Tile: May be composed of clay, concrete, fiber-cement, or synthetic materials. A variety of tile profiles, styles, finishes, and colors are available.

O. Solar Spectrum: Radiation originating from the sun, including ultraviolet, visible, and near-infrared radiation. Approximately 99% of solar energy lies between wavelengths of 0.3 to 3.5 micrometers (Φm).

³ National Roofing Contractors Association Commercial Low-Slope Roofing Materials Guide 1998

⁴ Ibid

P. Solar Flux: The direct and diffuse radiation from the sun received at ground level over the solar spectrum expressed in watts per square meter.

Q. Solar Reflectance: The fraction of solar flux reflected by a surface expressed as a percent or within the range of 0.00 and 1.00.

III. Effective Date of MOU and Duration

A. This MOU shall be effective when signed by both EPA and Partner.

B. Both parties agree that Partner may begin to qualify products pursuant to section IV. D., below, beginning on October 31, 1998.

C. Both parties agree that the terms of this MOU shall govern its implementation until October 31, 2000. Both parties agree that on or before September 1, 2000, this MOU shall be reviewed and modified where appropriate, and the modification signed by both EPA and Partner in order to extend the Program into a second phase. Once the Program has been reviewed and revised, only those products that meet the revised specifications may be labeled as ENERGY STAR.

D. Both parties agree that this agreement can be terminated by Partner or EPA at any time, and for any reason, with no penalty or liability to either party. However, both parties agree that termination for noncompliance would only occur in accordance with the procedures of Section VI., below.

IV. EPA ENERGY STAR Roof Products Partner's Responsibilities

A. Reading and Understanding Logo Use Guidelines

ENERGY STAR⁷ Partner affirms that it has read, understands, and will abide by the Guidelines for Proper Use of the Energy Star Name and International Logo (See Attachment A).

B. Appointment of Liaison

Partner agrees to appoint a responsible representative of the company as liaison with EPA for the EPA ENERGY STAR Roof Products Program and to notify EPA within one month of any change in liaison designation (See Attachment B).

C. Number of Products Required

Partner agrees to develop and begin testing, and/or market during the duration of this agreement one or more products that meet the specifications outlined in Section IV. D., below.

D. Product Qualification for the EPA ENERGY STAR Label

ENERGY STAR Partner agrees that only those roof products that meet the specifications listed in either Table 1 or Table 2, below, may qualify as ENERGY STAR-compliant. **For roof products that may be applied to either low-slope or steep-slope roofs, such as roof coatings and single-ply membranes, Table 1 contains the applicable ENERGY STAR specifications.**

Table 1 - Low-Slope Roofs

Specifications	
Characteristic	Performance Specification
Energy Efficiency	
Initial Solar Reflectance	Greater than or equal to 0.65.
Maintenance of Solar Reflectance	Greater than or equal to 0.50 three years after installation under normal conditions.
Reliability	
Manufacturer warranty for defects in materials and manufacturing	Each company=s warranty for reflective roof products must be equal in all material respects to the product warranty offered by the same company for comparable non-reflective roof products. A company that sells only reflective roof products must offer a warranty that is equal in all material respects to the standard industry warranty for comparable non-reflective roof products.

Table 2 - Steep-Slope Roofs.

Specifications	
Characteristic	Performance Specification
Energy-Efficiency	
Initial Solar Reflectance	Greater than or equal to 0.25.
Maintenance of Solar Reflectance	Greater than or equal to 0.15 three years after installation under normal conditions.
Reliability	
Manufacturer warranty for defects in materials and manufacturing	Each company=s roof product warranty for reflective roof products must be equal in all material respects to the product warranty offered by the same company for comparable non-reflective roof membrane products. A company that sells only reflective roof products must offer a warranty that is equal in all material respects to the standard industry warranty for comparable non-reflective roof products.

E. Product Testing

Partner agrees to test products according to Attachment C, Test Methods for ENERGY STAR⁷ Roof Products Program, to determine which roof products comply with the specification. Based on the results of these tests, Partner will self-certify those products that it determines meet the specifications outlined in Section IV. D. Partner may submit information to EPA on compliant products on a voluntary basis. However, EPA will not officially approve any individual test reports voluntarily submitted by Partner. Partner must test products and determine compliance with the specifications before using the label.

F. Label Use

To help consumers become familiar with the ENERGY STAR Roof Products Program, the Partner will place the ENERGY STAR label onto the packaging of qualified products, in accordance with Attachment A and Section IV. G. The Partner will also strive to include the ENERGY STAR label in brochures, manuals, product samples, and advertisements, etc. for qualified products.

G. Proper Use of the ENERGY STAR Label and Name

1. Registered Marks

Partner understands that the ENERGY STAR⁷ name and the ENERGY STAR label are registered marks of the United States Government as represented by the Administrator of EPA, and are subject to the provisions of Title 15, Chapter 22, United States Code, the various state laws applicable to trademarks, and this Memorandum of Understanding. As such, the Partner must note this registered status, as appropriate. This may include: (a) inserting the registered symbol, 7, next to the ENERGY STAR name (e.g., ENERGY STAR⁷) each time it appears in a brochure, poster, advertisement, or (b) providing the following statement: "ENERGY STAR is a U.S. registered mark." See EPA Guidelines for Proper Use of the ENERGY STAR Name and International Logo (Attachment A), for more details.

2. Partner agrees not to alter the EPA ENERGY STAR label.

3. Partner understands that participation in the EPA ENERGY STAR Roof Products Program does not constitute EPA endorsement of Partner or its products. In addition, since EPA will not officially approve any individual test reports submitted by Partner, Partner may not include misleading statements in product literature that imply a product is approved or endorsed by EPA, e.g., Partner may not make claims such as "This product is EPA approved," or "This product is endorsed by EPA."

4. It is the responsibility of the Partner to associate EPA, the ENERGY STAR label, the ENERGY STAR name, and the ENERGY STAR Roof Products Program only with those specific models that qualify under the terms and conditions of this MOU. See EPA Guidelines for Proper Use of the ENERGY STAR Name and International Logo (Attachment A) for more details and specific examples.

5. When the EPA ENERGY STAR label is used, Partner agrees that it will be accompanied by the following statement: "As an ENERGY STAR Roof Products Partner, Contact Roofing Systems has determined that this product meets the ENERGY STAR Roof Products Program guidelines for energy efficiency." When the ENERGY STAR label is applied directly to the product packaging, Partner may place this statement in the user's manual.

6. If either EPA or Partner terminates this Agreement, Partner will no longer be entitled to apply the EPA ENERGY STAR label to newly manufactured products, and will no longer make reference to the EPA ENERGY STAR Roof Products Program so as to convey continuing involvement in the program.

H. Employee Education and Training

Partner agrees to provide information about the ENERGY STAR Roof Products Program to all of its employees whose jobs are relevant to the development, marketing, sales, and service of ENERGY STAR-compliant Roof Products. Partner will also provide training materials for its product dealers, distributors, and installers.

Materials will describe the ENERGY STAR Roof Products Program and the Partner's participation in the program, provide information about energy-efficient roof products as well as cost and energy savings, and identify products that comply with the ENERGY STAR Roof Products specifications. Materials may include specification sheets, point of purchase displays, informational fact sheets, demonstration models, etc. EPA will prepare, and provide upon request, standard materials such as generic specification sheets for use by Partners.

I. Customer Education

1. Identification of Qualifying Products in the Marketplace

To achieve the goals of this MOU, it is important that consumers have a quick and easy method of determining which products are ENERGY STAR compliant. To provide this information to consumers, Partner agrees to place the ENERGY STAR label on packaging and product-related materials such as brochures, manuals, and advertisements for **qualified roof products only**. (See Sections IV. F. and IV. G. and Attachment A of this MOU)

Whenever the label is used on qualified products or product packaging, the following statement must be in close proximity: AWhen installed properly, this product will help reduce energy costs. Actual savings will vary based on geographic location and individual building characteristics. Consult your product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937) for more information.≡ Materials supplied to Partner for reproduction of the ENERGY STAR label will include label graphics and the above statement.

2. Consumer Awareness Through Product Literature

Partner may determine the best manner through which to disseminate the following information to users. Examples of acceptable approaches include: special brochures provided with qualified models, sales literature, point of purchase displays, information in specification sheets, maintenance information, savings comparisons, etc. Brochures and advertisements will be worded to avoid misleading interpretations and must follow the Guidelines for Proper Use of the ENERGY STAR Name and International Logo (See Section IV. F. and IV. G. and Attachment A of this MOU).

a. Partner will provide general information to end users regarding the benefits of energy efficiency and energy-efficient roof products. This information may include a description of the ENERGY STAR Roof Products Program and a discussion of the potential energy savings associated with the product after it is installed.

b. Partner will provide general information to end users regarding the variables that influence the amount of energy savings that can be realized when an ENERGY STAR Roof Product is installed on a home or building. These variables include climate, building function, roof surface to building volume ratio, amount of ceiling or roof insulation, air conditioning duct location, efficiency of the current air conditioning system, and the original solar reflectance of the roof surface.

A statement similar to the following will be included in promotional materials: "Energy savings from the installation of an ENERGY STAR⁷ Roof Product are climate specific and may vary significantly from building to building. The greatest savings will occur in buildings located in hot and sunny climates, that have a high roof surface to building volume ratio, and lower levels of attic insulation. For more information about the energy savings you can get from installing an ENERGY STAR⁷ Roof Product on your building contact your roof product manufacturer, roofing contractor, or call 1-888-STAR-YES (1-888-782-7937)."

c. Partner will include in product packaging materials a statement acknowledging that the solar reflectance of any roof products over time may increase or decrease, depending on the product make-up, due to aging and dirt and microbial accumulation. This statement will also acknowledge that average solar reflectance may not be maintained without proper repair or cleaning at targeted intervals during the lifetime of the roofing product.

This statement will be similar to the following: "The solar reflectance of this roofing product may decrease over time. Roofs should be properly examined at regular intervals and maintained or cleaned when necessary and appropriate to assure the maximum solar reflectance."

d. Partner will include information on the proper maintenance procedures required to maximize solar reflectance over the longest period of time possible (e.g. rinsing or power washing each Spring or recoating every 5 years). Partner will specify any maintenance procedures that are not appropriate for their product in order to prevent unnecessary and irreparable damage.

e. Partner will include information on how an end-user should choose an installer to ensure proper installation of the roof product or roof coating which will maximize durability and solar reflectance. Partner may determine the best manner through which to disseminate this information to consumers. Examples of acceptable approaches include: brochures or bulletins included with products and marketing materials such as the National Roofing Contractors Association Consumer Advisory Bulletin "Selecting a Professional Roofing Contractor."

f. Partner will clearly indicate warranty information to consumer in writing. Examples of acceptable ways to convey this information include: packaging materials, specification sheets, and warranty certificates.

J. Claims for Compensation

Partner agrees that the activities it undertakes connected with this MOU are not intended to provide services to the federal government, and that Partner will not submit claims for compensation to any federal agency.

V. **EPA's Responsibilities**

A. Appointment of Liaison

EPA agrees to designate a single liaison point for the EPA ENERGY STAR Roof Products Program (i.e., ENERGY STAR Program Manager) and to notify Partner within one month of any change in liaison designation. Please send the signed MOU and other correspondence to this person. (See Attachment B).

B. Product Testing

EPA agrees to accept certification by the Partner, whether it is self-determined or determined by an independent third party, that their qualifying products satisfy the specifications set forth in this MOU. While this is a self-certifying process, EPA reserves the right to conduct tests on products bearing the EPA ENERGY STAR label from either the open market or other available sources, or voluntarily received from Partner. Partner may submit information to EPA on compliant products on a voluntary basis. However, EPA will not officially approve any individual test reports voluntarily submitted by Partner.

C. Consumer Acceptance

EPA agrees to make an effort to encourage consumer acceptance of products introduced under this agreement and bearing the EPA ENERGY STAR label. EPA will keep a product listing of compliant products and provide it to the public upon request in hard copy, on disk, and electronically on the World Wide Web.

D. Public Recognition

EPA agrees to provide Partner with recognition for its public service in protecting the environment by performing analyses about the pollution prevented by participants, and providing this and other program information to appropriate news media sources for publication.

E. Consumer Education

EPA agrees to promote energy-efficient products, and to inform consumers about the EPA ENERGY STAR Roof Products Program and EPA ENERGY STAR label by writing articles and/or cooperating with the news media by sharing information, where appropriate.

F. Public Service Announcements

EPA agrees to work with Partner independently and/or in conjunction with other Partners to coordinate the placement of advertisements to promote energy-efficient products, educate consumers about the EPA ENERGY STAR Roof Products Program and label, and recognize Partner for its public service in protecting the environment.

G. ENERGY STAR Materials

EPA agrees to loan Partner, at no charge, materials from which Partner can reproduce the ENERGY STAR label. EPA agrees to prepare and provide upon request, standard materials such as generic specification sheets to Partners for their use.

VI. Conflict Resolution

A. Good Faith Principle

Each party agrees to exercise good faith as a general principle for resolving conflicts under the EPA ENERGY STAR Roof Products Program.

B. Notification of Problems

Both parties agree to informally notify each other if any problems or issues arise and to work together to provide maximum public confidence in the program.

C. Procedure for Addressing Noncompliant Products

1. If EPA receives information that one or more products certified by Partner as ENERGY STAR compliant may not meet all of the conditions of this MOU, then EPA will immediately notify Partner and attempt to address and resolve the problem informally.
2. If these informal discussions do not produce a mutually agreeable resolution, EPA will notify Partner in writing that Partner will be terminated from the program unless it undertakes the specific corrective actions sought by EPA. Partner agrees to reply to EPA in writing within 20 business days of receiving EPA's letter. At that time, Partner will agree to do one of the following: (a) undertake in a timely and effective manner the corrective actions sought by EPA; or (b) voluntarily terminate this agreement. If Partner does not respond to EPA's letter within 20 business days, or does not agree to either (a) or (b), then this agreement is terminated.

D. Notification in Writing

If Partner believes that EPA is not meeting all of its commitments, Partner agrees to formally notify EPA in writing. EPA agrees to respond in writing within 20 business days of receiving Partner's letter. At that time, EPA will do one of the following: (a) undertake the corrective actions sought by Partner, or (b) explain why such corrective actions cannot be undertaken.

VII. Freedom of Information Act and Confidential Business Information

Both parties understand that information provided by Partner to EPA will be treated in accordance with EPA's public information regulations under 40 Code of Federal Regulations, Part Two.

* * * * *

The undersigned hereby execute this Memorandum of Understanding on behalf of their parties. The signer of this agreement affirms that he/she has the authority to commit Partner to participation in the ENERGY STAR Roof Products Program.

For the U.S. Environmental Protection Agency (EPA):

Signature: _____ Date: _____

Name: Paul M. Stolpman

Title: Director, Office of Atmospheric Programs

For Contact Roofing Systems:

Signature: _____ Date: _____

Name: _____

Title: _____

ATTACHMENT B

Please complete and return with the signed Memorandum of Understanding.

EPA Contact:

Rachel S. Schmeltz, Program Manager
ENERGY STAR Roof Products Program
US EPA (MC: 6202N)
401 M Street, SW
Washington, DC 20460

Overnight Delivery Address:

Rachel S. Schmeltz, Program Manager
ENERGY STAR Roof Products Program
800 N. Capitol Street, Suite 580
Washington, DC 20002
(202) 564 - 9124

Contact Roofing Systems 's Contacts:

Primary Contact (To receive all materials):

Name:
Title:
Address:
City, State, ZIP:
Telephone Number:
Fax Number:
E-mail Address:
Location of US Headquarters (if applicable):

Marketing/PR Contact (To receive marketing and communications materials):

Name:
Title:
Address:
City, State, ZIP:
Telephone Number:
Fax Number:
E-mail Address:
Location of US Headquarters (if applicable):

Switchboard or main sales phone number (To be given to the public for further information on your products): _____

Telephone number:
Fax Number: