



**Asphalt Roofing Manufacturers Association**

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October 1, 2010

Re: [ENERGYSTARVerificationProgram@energystar.gov](mailto:ENERGYSTARVerificationProgram@energystar.gov)

Via: email

Dear Sir or Madame;

The Asphalt Roofing Manufacturers Association (ARMA) is the North American trade association representing the manufacturers and suppliers of bituminous-based residential and commercial fiberglass and organic asphalt shingle roofing products, roll roofing, built-up (BUR) roofing systems, and modified bitumen roofing systems.

ARMA appreciates the opportunity to provide comments on the EPA Draft Partnership Agreement. ARMA members have reviewed the document and have several comments/suggestions/issues with specific items found within the EPA ENERGY STAR Draft Partnership Agreement (Version 2.2). Each item is listed below with the text from the document shown first and then ARMA's comment directly following it:

There is a grammatical error Section 1.2.K. in the definition for roof coatings. The second sentence should read:

“Roof coatings may include ~~be~~ bituminous, polymeric, polymer modified, epoxy based, or other formulations.”

Section 2.1 refers to “Section 2.B.” and Section 2.2 refers to “Section 2.A.” which do not exist in the current document.

### 2.1 Scope

**Included Products:** Products that meet the definition of a Roofing Product as specified herein are eligible for ENERGY STAR qualification, with the exception of products listed in Section 2.B. To qualify for ENERGY STAR, roof products shall be:

- a) Tested through the Cool Roof Rating Council (CRRC) Product Rating Program, or<sup>9</sup>
- b) Evaluated using the test methods referenced in Table 3 in Section 4, below.

Section 3.1.1 requires rounding of calculated results to the nearest significant digit. Section 3.1.2 requires “using exact values without any benefit from rounding.” These requirements are mutually exclusive. Significant figures should be relied upon for determinations of compliance. Section 3.1: Does this all mean that if the average SR is 24.61, that rounds to 24.6, and not 25.0? Or would rounding to 25 be acceptable?

### 3.1 Significant Digits and Rounding

3.1.1. All calculations shall be carried out with actual measured or observed values. Only the final result of a calculation shall be rounded. Calculated results shall be rounded to the nearest significant digit as expressed in the corresponding specification limit.

3.1.2. Unless otherwise specified, compliance with specification limits shall be evaluated using exact values without any benefit from rounding.

Section 4 is titled “Test Requirements,” it includes no requirements for three-year aged values. Three-year aged values are included in Tables 1 and 2, but no test requirements for determining aged values are included in section 4. ARMA and its members believe that 3-year aging values can be calculated for all products as defined by the calculation approved by the California Energy Commission (CEC) which was developed Lawrence Berkeley National Laboratories and approved by Oak Ridge National Laboratories. The equation:

$$\text{Solar Reflectance}_{\text{Aged}} = 0.7 \times (\text{Solar Reflectance}_{\text{Initial}} - 0.2) + .2$$

provides a conservative estimate of the three-year aged solar reflectance of a product based off the initial solar reflection. ARMA believes that initial values can be used to calculate three year aged values for initial qualification while manufacturers age products for the three year period to garner actual data. ARMA and many other EPA ENERGY STAR Roofing Partners agree that this equation would help provide a fair and balanced playing field for products qualified under this program. Once the 3-year data is achieved then ENERGY STAR can validate the calculated values with the three year values to ensure the integrity of the listed product.

Section 4.1.1: The text *appears* to allow products that are “equivalent” to the evaluated product to be Energy-Star qualified. ARMA believes that ENERGY STAR Staff should used the more recent version of CRRC-1 Program Manual that includes equivalent products that are considered to be “Compound Rated”. Thus, Energy-Star would provide qualification for “radiatively-equivalent” products that, which are not *literally* identical (E.g., may have different product weight), but which have equivalent radiative properties (per CRRC criteria). Product Color Families imply a range of colors, while Compound Rated implies essentially equal color and SR/TE values. This distinction makes Energy-Star qualification of Compound-Rated products a very rational approach. See Foot Note 10-- As found in Cool Roof Rating Council’s Product Rating Program Manual CRRC-1, 2009.

Section 4.6: The first sentence refers to the “re-testing aged solar reflectance on uncleaned samples is not required.” Then the second sentence indicates that “these” which would refer to the “uncleaned samples,” would be denoted, “as having been tested on clean samples.”

Submitted 10/01/2010

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Page 3 of 4

ARMA members believe that Section 4.6 is poorly worded and confusing and ARMA is unsure what EPA ENERGY STAR is trying to communicate here.

Section 5 indicates that “The ENERGY STAR Roof Products Specification shall take effect on August 13, 2009. ARMA members would substantiate that the program shall not take effect retroactively and that ENERGY STAR Staff revise the date of the program.

Additionally, ARMA members have provided several corrections/modifications that should be made to the EPA ENERGY STAR: Test Method: Maintenance of Solar Reflectance. These included:

Subparagraph d) under “Steep Sloped Roof Products – Test Procedure” in the Test Methods section of the Maintenance of Solar Reflectance document includes an allowance to offset measurement location so it is outside a birdbath. This is not necessary for steep-sloped roofing.

Although the slope ranges for exposure of low-slope and steep-slope roofing products expressed in Subparagraphs f) and g) of the “Test Procedure” section of the Maintenance of Solar Reflectance document include the specific slopes that are used for exposure under CRRC-1, the recommended slopes appear to be substantially different.

Lastly, ARMA member believe that there are significant issues in the EPA Roofing Partner Agreement. Section 11 (Training and Consumer Education) which requires Energy Star partners provide specific information to end users about products that bear the Energy Star label (details are contained in 11.1). The non-specific nature of 11.1 encourages reliance on 11.2 to satisfy this partner commitment. Unfortunately, use of the provided statement in 11.2 could be deemed as fraud and may be a violation of the FTC Green Guides. The statement requires the manufacturer to assert that the product bearing the Energy Star label WILL help reduce ENERGY costs. The reality is that reflective roofing products MAY help reduce COOLING costs during certain seasons in certain climates for some buildings, and could result in increased heating costs in other seasons.

ARMA members would suggest revising this statement to the following: “When installed properly, this product ~~may will~~ help reduce cooling 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.”

Should you have any questions regarding our comments and/or to coordinate a time for a face-to-face meeting with the staff drafting the CB Requirements for the ENERGY STAR Roofing Program, please call me at 202-207-1114 or email [jbaker@kellencompany.com](mailto:jbaker@kellencompany.com).

Thank you,

Submitted 10/01/2010

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Page 4 of 4

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