

# CARLISLE'S DESIGN SERVICES ADVISORY BULLETIN

February 6<sup>th</sup>, 2012

**To: Representatives, Distributors, and Authorized Applicators**

**RE: Advisory Bulletin – 2012 Specification & Detail Update**

With the increase in Carlisle products and warranty offerings, this specification update not only addresses the inclusion of new products and their warranty requirements, but also streamlines and consolidates the number of documents to allow easy access to pertinent information. In addition, various design enhancements have been compiled and added in a designated section for quick reference.

The change in format of the specifications and details is significant enough that it warrants some explanation. The new specifications have been grouped into four CSI Sections, with each section representing a product line: EPDM, Thermoplastic, FleeceBACK and AFX.

- **EPDM** Specification now includes Adhered, Ballasted and Mechanically Fastened roofing systems.
- **Thermoplastic** Specification has both TPO and PVC Adhered and Mechanically Fastened applications with a separate attachment for the RhinoBond securement method.
- **FleeceBACK** Specification includes all standard FleeceBACK membranes (Non-AFX) EPDM, TPO, and PVC where urethane adhesive is used in either full spray or beads. A separate attachment has been added for the FleeceBACK membrane as a mechanically fastened option.
- Similarly, the **AFX** Specification encompasses both EPDM and TPO AFX membranes as hot mopped or when using cold applied adhesives. A separate attachment was added for a mechanically fastened option for both AFX membranes

These four Specification Sections are followed by their own installation details. Eliminating the Universal Details has resulted in an overall reduction of 53% of details. The Universal Details have now been integrated with each of the different product lines. The details are color coded, some with isometrics added for clarification.

An important feature of this update is the inclusion of various warranty tables which provide quick reference to warranty options available and the specific warranty requirements (i.e. Number of perimeter sheets, field membrane widths and fastening density for mechanically fastened systems AND acceptable underlayments, fastening density or adhesive bead spacing for adhered membrane systems). These tables can be found in the warranty section (Part I) of each CSI (3-part) format Specification.

**Key changes to each of the specification sections are highlighted on the enclosed attachment.**

In addition to the four sections noted above, two new sections have been added to facilitate the finding of information with less repetition.

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## Continued 2012 Specification & Detail Update

1. One section includes fifteen **Specification Supplements** which have been added to focus on topics varying from Construction Generated Moisture, Flashing Consideration, Walkway Installations, Daily Seal to Heat-Welding Equipment and Splicing Procedures as well as FAST Adhesive Equipment and several Insulation Attachment details.
2. A second section includes the addition of eight **Design References**. These documents contain information varying from Code Analysis, Increased Fastening Pattern, Wood Nailer Attachment, Consideration for Hail Design, LEED Information and Criteria for Prefabricated or Shop Fabricated Metals etc.

Aside from the above update, **other specifications** pertaining to Garden Roofs, Metal Retrofit, and coating systems were not revised at this time and will be updated at a later date. The "**Guide Specs**" currently used for submittal purposes, will continue to be available for each individual system and by the different product offerings.

Please direct any questions or concerns to the Carlisle Design Services team or the Project Review group at 1-800-479-6832.

Sincerely,



Samir K. Ibrahim  
Director, Design Services & Project Review

# 2012 Specification Update

## Key Changes

### EPDM Specification/Details

- Projects with 25-year warranties or those using 90-mil membrane (regardless of warranty), two options have been provided for field membrane splices:

**Option 1:** Use a minimum 3" wide Factory Applied Tape (FAT) and overlay the entire field splice with a continuous 6" wide Pressure-Sensitive Overlayment Strip

**Option 2:** Use a minimum 6" wide Factory Applied Tape (FAT) and all splice intersections must be overlaid with two layers of Pressure-Sensitive Elastoform flashing.

- Regardless of warranty duration, Adhered Systems, with warranty wind speed coverage greater than 90 mph, RUSS or angle securement shall not exceed 6" o.c.
- When 725TR is utilized, refer to Spec Supplement G-08-11 for Application Procedures when insulation is set in adhesive and the membrane base securement is vertical.
- Reduced the number of perimeter sheets on projects with warranties up to 20 years (For Example - a 60' high building – 1 perimeter sheet for wind zones up to 110 mph, 2 perimeter sheets in 110-120 mph wind zone, and 3 perimeter sheets per 120 mph wind zone.) Refer to Table III in the Warranty Section for requirement for higher building or extended wind speed.
- Extended the use of 10' wide field sheets with fasteners at 12" o.c. on projects with warranties up to 20 years and wind speed up to 80 mph. Refer to Table III in the warranty Section for requirement for higher building or extended wind speed.
- Adhered Membrane Systems with 30 year warranties and wind speed coverage up to 80 mph, can now be directly installed over SecurShield (25-psi) Polyisocyanurate, (No cover board required).

**NOTE:** For 30 year warranted projects with standard wind speed coverage, 25-psi Polyisocyanurate is still allowed for direct application.

### Thermoplastic Specification/Details

- The number of perimeter sheets have been reduced. Projects up to 60' in height, with warranties up to 20 years, 1 perimeter sheet required in wind zones up to 110 mph, 2 for wind zones between 110-120 mph, and 3 for wind zones greater than 120 mph. Refer to Table II (TPO) and Table III (PVC) in the Warranty Section for requirement for higher building or extended wind speed.
- Extended the use of 10' wide field sheets (Fasteners at 12" o.c.) on projects with warranties up to 20 years and wind speed up to 80 mph (steel decks up to 100' in height). Refer to Table II (TPO) and Table III (PVC) in the warranty Section for requirement for higher building or extended wind speed.

**NOTE:** 10' wide field sheets (Fastened at 12" o.c.) can also be used on 15/32" 5-Ply Plywood.

- Requirements for wood decks, circulated but not published in the previous specification, have been included in this update.
- When 725TR is utilized, refer to Spec Supplement G-08-11 for Application Procedures when insulation is set in adhesive and the membrane base securement is vertical.
- Regardless of warranty duration, Adhered Systems, with warranty wind speed coverage greater than 90 mph, RUSS or angle securement shall not exceed 6" o.c.
- Adhered Membrane Systems with 30 year warranties and wind speed coverage up to 80 mph, can now be directly installed over SecurShield (25-psi) Polyisocyanurate, (No cover board required).

**NOTE:** For 30 year warranted projects with standard wind speed coverage, 25-psi Polyisocyanurate is still allowed for direct application.

# 2012 Specification Update

## Key Changes

### FleeceBACK Specification/Details

- Base securement at parapet walls/expansion joints and angle changes is now required when any one of the following may occur:
  - a. Specified warranties greater than 20 years.
  - b. Warranty wind speeds greater than 90mph, regardless of warranty duration.
  - c. Movement is expected at parapet, due to construction/control joints.
  - d. Aqua Base is utilized, regardless of warranty duration or wind speed.
- EPDM/TPO/PVC FleeceBACK (FAST Adhesive, Aqua Base) details have been combined.
- Refer to Spec Supplement G-08-11 for 725TR Application Procedures when insulation is adhered.

### AFX (Hot Mopped) Specification/Details

- EPDM/TPO AFX (hot asphalt, cold applied) details have been combined.
- New products were added and older products, no longer used, were removed.
- Additional Tables have been added to the warranty section for warranty requirements for direct application and for assemblies where a 25 year warranty may be required.

### Installation Details

All the Details have been categorized by the four primary Product Lines (EPDM, Thermoplastic (TPO/PVC), FleeceBACK (Thermoset/Thermoplastic), AFX (EPDM/TPO)).

- The numbering sequence has been maintained (i.e. U-1 are edging, U-6 are drains, U-9 are termination, etc.) except for the deletion of U-14 "Field Fabricated Pipe Flashing" which has now been integrated as part of the U-8 Detail "Factory and Field Fabricated Pipe Flashing".
- Insulation Fastening and Bead Spacing Details, to avoid repetition, have been included in Spec Supplement G-09-11 "Insulation Attachment and Details" for minimum warranty requirements.
- Details for Enhanced Fastening, beyond the minimum warranty, have been added and now included in Design Reference DR-05-11 "Insulation Fastening Patterns".
- Details for extended warranty coverage (25/30 Year) have been integrated into individual specifications where applicable.

### Spec Supplements

Fifteen new specification supplements have been added addressing various topics with an alphanumeric system designation as follows: G- General applies to all specs, P- Products applies to products, T- Thermoplastic applicable for both TPO and PVC and E- EPDM applies to EPDM specifications.

- **G-01-11 "Construction Generated Moisture"** addresses construction moisture and methods by which air leakage could be prevented.
- **G-02-11 "FAST Adhesive Equipment, Catalyzing Instructions and Equipment Set-Up"** contains information on polyurethane adhesive, catalyzation and equipment set-up.
- **G-03-11 "FAST Adhesive Application / Coverage Rates"** contains information on polyurethane adhesive and coverage rates.
- **G-04-11 "Adhered Application Over Lightweight Insulating Concrete"** addresses application of adhered systems directly over lightweight insulating concrete, applicable for all adhered systems.
- **G-05-11 "Flashing Considerations / Metal Work"** includes general considerations for various flashing details and applicable to EPDM or Thermoplastic materials.

## 2012 Specification Update Key Changes

- **G-06-11 “Roof Walkway Installations”** contains requirements for walkways and includes installation requirements for EPDM, Sure-Weld and Sure-Flex membrane systems.
- **G-07-11 “Daily Seal / Clean-Up”** contains procedures for daily seal and cleanup procedures.
- **G-08-11 “Application procedures for 725TR Air and Vapor Barrier”** contains application procedures for the 725TR Air and Vapor Barrier and various accessory products, also includes installation details for securement required at angle changes when insulation is adhered in place. (FleeceBACK or conventional adhered systems with vertical base securement.)
- **G-09-11 “Insulation Attachment and Details”** this supplement contains various fastening patterns required for the issuance of a warranty for various Carlisle insulation and underlayments. Adhesive pattern has also been included for bead spacing.
- **G-10-11 “Aqua Base 120 Bonding Adhesive”** contains information on Aqua Base Adhesive and Warranty Criteria Table.
- **G-11-11 “Metal Edging”** includes pre-fabricated product information as well as recommendations and guidance for shop fabricated metal edging.
- **P-01-11 “Related Products”** contains product information for all roof systems and additional roof accessories such as skylights, adhesives and edgings.
- **T-01-11 “Heat Welding Equipment”** includes information regarding automatic and hand held heat welders including temperature settings, seam probing and welding repairs.
- **E-01-11 “Sure-Seal Polyepichlorohydrin (ECO/CO) Membrane Installation Procedure”** contains installation, physical properties and details for the ECO/CO membrane.
- **E-02-11 “EPDM Membrane Splicing and Splice Repairs”** includes information regarding splicing for adhered, ballasted and hot mopped systems for various warranty coverages.

### Design References

Eight new design references have been added addressing various topics used for roof design, building codes and other information needed for roof system selection.

- **DR-01-11 “Basic Wind Speed Map”** contains wind speed maps for the United States (including Hawaii, Puerto Rico, Guam and American Samoa) used for calculating wind uplift.
- **DR-02-11 “Codes and Wind Speed”** includes information for external and internal fire test criteria, testing for FM Approval, and determining proper wind uplift resistance (FM and ASCE 7).
- **DR-05-11 “Insulation Fastening Patterns”** contains drawings for various insulation and underlayment fastening patterns, including increased fastening densities for FM perimeter or corner enhancement or required by Carlisle for issuance of extended wind speed warranties.
- **DR-06-11 “Withdrawal Resistance Requirements”** includes the minimum pullout and fastener penetration requirements for membrane/insulation securement. Also includes procedures required for performing pullout testing.
- **DR-07-11 “CRR/LEED Information”** contains information about various roofing membranes, including SRI, manufacturing location and thermal emittance used by Energy Star, CRR and the LEED Rating System.
- **DR-08-11 “Wood Nailers and Securement Criteria”** includes details and criteria for wood nailers and the securement to masonry walls and roof decks.
- **DR-09-11 “Considerations for Hail Design”** contains information to be used for hail design and various warranty hail coverages for FleeceBACK membranes.
- **DR-12-11 “Metal Edging”** includes design information for selection of pre-fabricated or shop fabricated metal edging and ANSI/SPRI ES-1 wind design standard.

END OF DOCUMENT