

Code Compliance Research Report CCRR-0255

Issue Date: 06-15-2017 Renewal Date: 06-15-2018 Revision Date: 06-29-2017

DIVISION: 07 00 00 - THERMAL AND MOISTURE

PROTECTION

Section: 07 25 00 - Water-Resistive Barriers

Section 07 27 00 - Air Barriers Section: 07 65 00 - Flexible Flashing

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REPORT SUBJECT:

MaxFlash™ Flexible Flashing

1.0 SCOPE OF EVALUATION

- **1.1.** This research report addresses compliance with the following Codes:
- 2015 International Building Code® (IBC)
- 2015 International Residential Code® (IRC)
- 2015 International Energy Conservation Code® (IECC)
- **1.2.** *MaxFlash*[™] *Flexible Flashing* has been evaluated for the following properties (see Table 1):
- Physical Properties
- Water-Resistance
- Air Barrier
- · Surface Burning Characteristics
- Noncombustibility
- **1.3.** MaxFlash[™] Flexible Flashing has been evaluated for the following uses (see Table 1):
- **1.3.1.** Flashing in accordance with IRC Section R703.4 and as an alternative to IBC Section 1405.4;
- **1.3.2.** Joint treatment for use with substrates identified in Section 5.2 that are used as alternatives to the water-resistive barrier requirements of IBC Section 1404.2 and IRC Section R703.2:

- **1.3.3.** Joint treatment for use with substrates identified in Section 5.2 that are used as an alternative to the water-resistive barrier required in the Exception to IBC Section 2510.6 and IRC Section R703.7.3;
- **1.3.4.** Joint treatment for use with substrates identified in Section 5.2 that are used as air barrier materials complying with IECC Section C402.5.1.2.1 and air barrier assemblies complying with IECC Section C402.5.1.2.2; and that are used to meet the air leakage requirements of IECC Section R402.4 and IRC Section N1102.4:
- **1.3.5.** Sealant for fastener heads or other small penetration of exterior walls;
- **1.3.6.** Joint treatment and flashing for fenestration in fire-resistance-rated construction;
- **1.3.7.** Joint treatment and flashing for fenestration in Types I, II, III, IV and V construction as permitted in IBC Section 1403.5.

2.0 STATEMENT OF COMPLIANCE

2.1. MaxFlash™ Flexible Flashing complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in section 6.

3.0 DESCRIPTION

3.1. *MaxFlash*[™] *Flexible Flashing* is a liquid-applied elastomeric material. The material is dark grey in color and packaged in 20 oz propack. *MaxFlash*[™] has a shelf life of 1 year when stored in cool, dry conditions away from heat and sunlight.

4.0 PERFORMANCE CHARACTERISTICS

4.1 The flashing material has a flame spread index of 25 or less and smoke-developed index of 450 or less when tested at a maximum thickness of 30 mils in accordance with ASTM E84.







- 4.2 The flashing material has an air permeance not exceeding 0.02 L/s⋅m² at 75 Pa when tested in accordance with ASTM E2178.
- 4.3 The flashing system described in Section 3 has an air leakage not exceeding 0.2 L/s·m² at 75 Pa when tested in accordance with ASTM E2357.
- 4.4 *MaxFlash*[™] has a water vapor transmission of 19.8 perms at 12 mils and 7.19 perms at 30 mils when tested in accordance with ASTM E96, water method.

5.0 INSTALLATION

MaxFlash™ Flexible Flashing must be installed in accordance with the manufacturer's published installation instructions, the applicable Code and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation and are located at:

https://www.basf.com/us/en/products-and-industries/General-Business-Topics/basf-eifs-stucco-specialty-finishes/maxflash.html

5.1. General

- **5.1.1.** Apply $MaxFlash^{TM}$ Flexible Flashing to clean surfaces free of frost, debris, contamination and materials that may inhibit bonding. $MaxFlash^{TM}$ can be applied to damp substrates that are free from ponding water. Substrate shall be structurally sound and free of voids or protrusions that will affect application.
- **5.1.2.** *MaxFlash*™ typically skins in 25 to 40 minutes and cures in 4-6 hours at 75°F and 50% relative humidity. Differing environmental conditions will alter skinning and curing times.
- **5.1.3.** *MaxFlash*[™] may be applied to frost-free, dry substrates above 25°F with curing initiation above 32°F.
- **5.1.4.** MaxFlash[™] may not be used to bridge gaps greater than 1/2 inch.
- **5.2.** $MaxFlash^{TM}$ is recognized in this report for use with the following substrates:
- **5.2.1.** BASF Senershield-R, Finestop RA and Acrostop R Air and Water-Resistive Barriers and Flexible Flashing (ESR-2986).
- **5.2.2.** Georgia-Pacific DensElement™ Barrier System Panels (ESR-3786).

- **5.2.3.** Gypsum board in accordance with ASTM C1177.
- **5.2.4.** Plywood, OSB, Anodized Aluminum, PVC, Galvanized Steel, Cement Masonry Units, concrete and mortar.
- **5.3.** MaxFlash[™] is recognized in this report as for use as flashing for exterior wall openings:
- **5.3.1.** Apply to rough openings by applying a bead of $MaxFlash^{TM}$ in each corner of the rough opening ensuring that corners are fully sealed. Where wood bucks are used, apply a bead of $MaxFlash^{TM}$ into gaps between bucks and between the buck and building structure.
- **5.3.2.** Apply additional *MaxFlash*[™] in a zigzag pattern onto head, sill, jambs, and exterior substrate. Spread MaxFlash [™] evenly across the rough opening to create a uniform, void-free, and continuous membrane of 12-20 mil thickness.
- **5.3.3.** *MaxFlash*[™] must extend a minimum of 4 inches onto the exterior wall maintaining the 12 to 20 mil thickness.
- **5.3.4.** Allow $MaxFlash^{TM}$ to skin prior to application of fluid-applied air/water-resistive barrier to sheathing. Lap the air/water-resistive barrier a minimum of 2 inches onto $MaxFlash^{TM}$ to create a continuous air/water-resistive barrier membrane.
- **5.3.5.** Allow *MaxFlash*™ to fully cure prior to the installation of windows, doors, and other wall assemblies.

5.4. Joint Treatment:

- **5.4.1.** Apply a thick bead of $MaxFlash^{TM}$ to sheathing joints and spread evenly to a minimum of 1 inch beyond the joint on either side. Apply 20 mils of $MaxFlash^{TM}$ across the sheathing joint.
- **5.4.2.** Spot fastener heads with *MaxFlash*[™] or BASF fluid-applied air/water-resistive barrier.
- **5.4.3.** Allow *MaxFlash*[™] to skin prior to applying fluidapplied air/water-resistive barrier to sheathing.
 - 5.5. Inside and Outside Corners:
- **5.5.1.** Apply a bead of $MaxFlash^{TM}$ vertically into the joint. Apply additional $MaxFlash^{TM}$ in a zigzag pattern







onto the joint. Spread $MaxFlash^{TM}$ evenly a minimum of 1 inch beyond the joint on either size to form a uniform, continuous and void-free membrane.

5.5.2. Allow $MaxFlash^{TM}$ to skin prior to application of fluid-applied air/water-resistive barrier to sheathing. Lap the air/water-resistive barrier a minimum of 1 inch onto $MaxFlash^{TM}$ to create a continuous air/water-resistive barrier membrane.

6.0 CONDITIONS OF USE

- **6.1.** Installation must comply with this Research Report, the manufacturer's published installation instructions and the applicable Code. In the event of a conflict, this report governs.
- **6.2.** Under the IBC, where flashings are used with fenestration products, they are permitted to be used on buildings of all construction types.
- **6.3.** *MaxFlash*[™] *Flexible Flashing* is manufactured by BASF Corporation in Brighton, Colorado under a quality control program with inspections by Intertek (AA-676).

7.0 SUPPORTING EVIDENCE

- **7.1.** Manufacturer installation instructions.
- **7.2.** Reports of testing in accordance with the performance requirements of ICC-ES AC148, Acceptance Criteria for Flexible Flashing Materials, revised April 2015.
- **7.3.** Reports of testing in accordance with the performance requirements of ICC-ES AC212, Acceptance Criteria for Water-Resistive Coating Used as Water-Resistive Barriers over Exterior Sheathing, revised February 2015.

- **7.4.** Reports of testing and compliance in accordance with AAMA 714-15, and ASTM E84, E96, E2178, E2357 and E119.
- **7.5.** Priest & Associates Consulting, LLC report of compliance to NFPA 285.

8.0 IDENTIFICATION

MaxFlash™ Flexible Flashing is identified on the product containers with the manufacturer's name (BASF Corporation), address and telephone number, the product name (MaxFlash™ Flexible Flashing) the Intertek Mark as shown below, and the Code Compliance Research Report number (CCRR-0255).



9.0 OTHER CODES

This section is not applicable.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

- **10.1.** Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.
- **10.2.** Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.
- **10.3.** Reference to the Intertek website address: <u>whdirectory.intertek.com</u> is recommended to ascertain the current version and status of this report.

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TABLE 1 – PROPERTIES AND USES EVALUATED

PROPERTY OR USE	IBC SECTION	IRC SECTION	IECC SECTION
	1404.2	R703.2	
Water-Resistive Barrier	1408.4.1.1	R703.7.3	
	2510.6	R703.9.2	
Air Barrier			C402.5.1.2.1
		N1102.4	C402.5.1.2.2
			R402.4.1
Liquid Applied Flashing	1405.4	R703.4	
Surface Burning	1403.5		
Fire Resistance	1403.4	R302	
Type I, II, III, IV, V Construction	1403.5		

