

BATCH MIX ALUMINUM ROOF COATING

■ **Description**

VFI-2828 is a high solids, two component, aromatic polyurea hybrid moisture cure elastomer. It is easily batch mixed at a 9 ISO to 1 Poly ratio, and with its fast curing properties can be applied in relatively thick films, 35-45 mils without blistering. VFI-2828 may be distinguished from other single component moisture curing products by its rapid cure rate and excellent waterproofing and ponding water abilities.

VFI-2828 also has a slower Tg and is less prone to long term hydrolytic damage and hardening than other similar products.

■ **Usage**

For a Radiant energy reflective waterproofing membrane for most roofing substrates and as a roof repair elastomer.

■ **Color**

Aluminum flake.

Physical Properties

■ **Chemical Resistance**

Good resistance to water/hydrolytic damage.
Good resistance to ponding water.

■ **Tensile**

ASTM D-412	
Tensile Strength:	603 psi
Elongation:	190%
Yield Strength:	168 psi
Elastic Modulus:	1390 psi

■ **Solid Material Density**

65.75 PCF

■ **Cold Temperature Flexibility**

Passed @ 0.25 inch mandrel @ 2°F

■ **Hardness**

ASTM D-2240	
Shore A:	76-78A

■ **Tear Resistance**

ASTM D-624:	101pli
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Weather & Environmental Performance

■ **Service Temperature**

-50°F to 180°F

■ **Weatherability QUV Test Data**

ASTM G-53
15 years with no visible deterioration or change in physical properties.

■ **Fire Resistance**

This material is formulated to pass UL-790 class A. This classification is self certified only, contact your VFI representative if your application requires independent laboratory verification. The FR formula is formulated to exceed the fire resistance required by the UL-790 test if needed.

■ **Hydrolytic Properties**

■ **Water absorption**

ASTM D-471
24 hours at room temp. 70°F 1.16% max

■ **Water Vapor Permeability**

ASTM E-96
0% R.H. @ 73°F 28 mil film: 0.73 perms

■ **Chemical Resistance**

Good hydrolytic stability to 180°F. Good resistance to inorganic bases, acids and hydrocarbon solvents. Fair resistance to oxygenated and chlorinated solvents.

Liquid Component Properties

■ **Solids**

Weight:	79.71%
Volume:	70.01%

■ **Density**

Poly Component:	9.7 lbs/gal
Iso Component:	10.1 lbs/gal

■ **Viscosity**

Poly (B) Side:	1480 cps @ 72°F
ISO (A) Side:	3500-4500 cps @ 72°F
Mixed viscosity:	TBD

■ **VOC's**

2.12 lbs/gal or 254 g/l

■ **Flash Point**

ASTM D-56 (TCC)	Greater than 79°F
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- **Toxicity**
Iso component contains polymeric Isocyanate requiring fresh air supply respirator, gloves and protective clothing during application.
- **Storage Stability**
6-12 months in **unopened** containers @ 50-90°F
- **Mix Ratio**
9 ISO (pigmented) to 1 Poly (catalyst) by volume

Application

- **Surface Preparation**
Surfaces shall be clean and free of contaminants (and properly primed, if necessary). Contact your VFI representative for specific primer recommendations.
- **Material Preparation**
Mix the A side, checking to make sure all Aluminum is off the bottom of the pail before adding the B side to it. Contact your VFI representative for mixer recommendations.
- **Equipment**
Solvent resistant rollers, squeegee or high pressure (3000 psi) airless equipment. Contact your VFI representative for equipment information.
- **Installation**
VFI-2828 should be applied using the following procedure:
 1. Plan to coat on a day when the temperature exceeds 60°F and 30% humidity. Optimum conditions are 80°F or higher and high humidity. If the minimum conditions are not met, the cure may be slower than reported on this data bulletin. Also plan for 6 hours without precipitation.
 2. 10-45 mils of coating may be applied in one pass. Application technique, film thickness and ambient conditions largely determine the cure rate; however at 70°F /50% humidity ½ hour per 10 mils film thickness is sufficient for

Cure Properties

- **Pot Life:** >4 hours (skins rapidly, leave skin intact if spraying)
- **Cure Time:** < 3 hours @ 80°F/ 50% RH
- **Recoat Time:** 48 Hours

light traffic movement. For example, a 45 mil coat will take approximately 3 hours to cure before handling foot traffic. Note that at temperatures above 80°F and higher humidity the cure rate will be less than one hour.

3. If multiple coats are applied, the underlying coat should be fully cured. Next day recoat is possible. Most desirable would be two coats on the same day separated by 4 hours.
4. Single layers over 50 mils are not recommended and may lead to blistering on nonporous substrates.
5. Full cure is expected in 2-4 days. Avoid contact with precipitation until cure (3-6 hours).

Note: For best properties it is recommended that 24 hours elapse after application before direct contact with water.

Clean up

Xylene, MEK; and for reduced fire hazard use glycol ethers or environmentally acceptable chlorinated solvents.

If spraying, VFI-2828 must be cleaned out of the equipment as soon as you are finished for the day. Xylene can be used to flush out the equipment. Continue to flush until the solvent has cleaned the system

Thinning

Not needed under normal circumstances, but can be thinned with Xylene up to 10% but this will decrease the amount that can be sprayed in one pass.

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