

# GVP MBI 2.0 HFO

## TECHNICAL DATA SHEET



UES Report ER-968

### Product Use and Design:

GVP MBI 2.0 HFO is designed specifically for use as a metal building insulation system. The minimum application method is 2x (two) 0.50" lifts or passes to obtain a 1" application thickness. The maximum single pass thickness should be limited to 1.5".

| PHYSICAL PROPERTIES |   |  |                       |
|---------------------|---|--|-----------------------|
| ASTM D1622          | Density                                     | 2.0 lb/ft <sup>3</sup>   | 8.0 kg/m <sup>3</sup> |
| ASTM C518           | Aged Thermal Resistance (R-value)           | 7.2 ft <sup>2</sup> h°F/BTU per inch @ 1"<br>7.1 ft <sup>2</sup> h°F/BTU per inch @ 3.5" and above |                       |
| ASTM D8485          | VOC Re-entry                                | 1 Hour at 10 ACH   |                       |
| ASTM D8485          | VOC Re-occupancy                            | 1 Hour at 10 ACH   |                       |
| ASTM 6226           | Closed Cell Content                         | >96%   |                       |
| ASTM D2126          | Humid Aging 158°F / 97% RH 168 Hours        | <1.4%  |                       |
| ASTM E283           | Air Permeance                               | <0.0186 L/sec per M <sup>2</sup> @ 1.0"  |                       |
| ASTM E96            | Water Vapor Permeance @ 1.1"                | 0.98 US Perms; 1.08 US Perm Inches   |                       |
| ASTM D1623          | Tensile Adhesion                            | 46 PSI   |                       |
| ASTM D1621          | Compressive Strength                        | >25 LBF/in <sup>2</sup>  |                       |
| ASTM D2842          | Water Absorption                            | 0.54%  |                       |
| ASTM C1338          | Fungal Resistance                           | Pass: no growth present  |                       |
| ASTM C1029-20       | Types I, II, III, IV Standard Specification | Compliant  |                       |

| FIRE TEST RESULTS |                               |  |
|-------------------|-------------------------------|--|
| ASTM E84          | Steiner Tunnel                | FS ≤10; SDI ≤300   |
| NFPA 259          | Cone Calorimeter              | 1,850 BTU/in <sup>2</sup> /in  |
| ASTM E1354        | Cone Calorimeter              | Total 20.8 MJ/M <sup>2</sup> , Peak 60.8 KW/M <sup>2</sup>   |
| ASTM D970         | Floor Calorimeter             | Pass   |
| AC377             | Appendix X                    | Pass: walls 6" ceiling 8"  |
| NFPA 286          | Spray Applied Thermal Barrier | Pass: walls 7" ceiling 10"; IFTI DC315 at 14 wet / 8 dry mils<br>Pass: walls 7" ceiling 10"; No-Burn ThB Spray Seal at 16 wet mils |

| LIQUID COMPONENT PROPERTIES* |                        |                                  |
|------------------------------|------------------------|----------------------------------|
| PROPERTY                     | PMDI                   | GVP MBI 2.0 HFO RESIN            |
| Color                        | Brown                  | Light Golden Brown to Dark Brown |
| Viscosity                    | 180 – 200 cPs @ 25°C   | 450 – 550 cPs @ 25°C             |
| Specific Gravity             | 1.23 g/cm <sup>3</sup> | 1.21 g/cm <sup>3</sup>           |
| Shelf Life (properly stored) | 12 Months              | 6 Months                         |
| Storage Temperature          | 50 – 100°F             | 50 – 90°F                        |
| Mixing Ratio (Volumetric)    | 1:1 by Volume          | 1:1 by Volume                    |

\*See SDS for more information

## REACTIVITY PROFILE

|                          |                        |                              |                           |
|--------------------------|------------------------|------------------------------|---------------------------|
| Cream Time<br>~2 seconds | Gel Time<br>~4 seconds | Tack Free time<br>~6 seconds | End of Rise<br>~7 seconds |
|--------------------------|------------------------|------------------------------|---------------------------|

## RECOMMENDED PROCESSING PARAMETERS

| Parameter                                   | Recommended Starting Point* | Range                                 |
|---|-----------------------------|---------------------------------------|
| Initial Recirculating Setpoint Temperature  | <85°F                       |                                       |
| Initial Primary Heater Setpoint Temperature | 120°F A/B                   | 110°F – 135°F A/B                     |
| Initial Hose Heat Setpoint Temperature      | 120°F                       | 115°F – 125°F                         |
| Moisture Content of Substrate               | <19% moisture content       |                                       |
| Recommended Material Temperatures           |                             | 75°F—90°F                             |
| Maximum Lift Thickness                      |                             | Maximum single pass thickness is 1.5" |

| Product Formulation                   | WINTER       |              | REGULAR / SUMMER |              |
|---------------------------------------|--------------|--------------|------------------|--------------|
| Substrate Temperature                 | 20°F – 40°F  | 40°F – 100°F | 50°F – 70°F      | 70°F – 120°F |
| Initial Setpoint Temperature Hose/A/B | 125°F        | 115°F        | 125°F            | 115°F        |
| Setpoint Temperature Range Hose/A/B   | 130→115°F    | 120→105°F    | 130→115°F        | 125→100°F    |
| Initial Pressure                      | 1100psi      | 1100psi      | 1100psi          | 1100psi      |
| Pressure Range                        | 1000–1200psi | 1000–1200psi | 1000–1200psi     | 1000–1200psi |
| Material Temp in the Drum/Tank        | 75–85°F      | 75–90°F      | 75–90°F          | 75–90°F      |

### General Requirements:

Polyurethane foam systems should be processed through commercially available spray equipment by a qualified professional applicator. Industry standard safety precautions and procedures regarding proper personal protective equipment and ventilation are required. Equipment must be capable of maintaining a 1:1 by volume ratio (+/- 2%) of polymeric isocyanate (PMDI) and polyol resin blend within the recommended processing parameters. Substrates should be clean, dry, and sound. No residue, oil, grease or excess dust should be present on the substrate, and moisture content of the surface should be below 19%.

### Disclaimer:

The information herein is provided to assist customers and contractors in determining whether the product is suitable for their applications. Customers and contractors should test and evaluate the product to determine its fitness of use. All physical properties were determined by lab samples; field samples may vary slightly. This product as produced complies with all of Green Valley Products' quality control standards. Green Valley Products assumes no responsibility for coverage, performance, or injuries resulting from use. Liability if any is limited to the replacement of product proven to be defective. The applicator assumes the responsibility to confirm fitness of use and proper installation. No guarantees or warranties expressed nor implied, statutory by operational law or otherwise, including fitness of use or potential use are issued with this product. The foam product is combustible and must be protected in accordance with applicable codes.