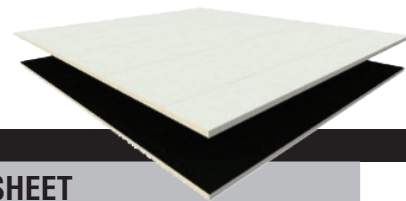




# Poly ISO 1-DWD

## Coated Glass Roof Insulation



### PRODUCT DATA SHEET

#### DESCRIPTION

MuleHide Poly ISO 1-DWD is a rigid roof insulation panel composed of a closed cell polyisocyanurate foam core manufactured on-line to a premium performance coated glass facer on both sides (CGF). Manufactured using premium performance coated glass facer with a light and dark side, allowing the installer to choose which side to install up to control flash-off times in fully adhered applications. Available in 20 psi and 25 psi.

#### BENEFITS AND SUPPLEMENTAL STATEMENTS

- Achieves a UL Class A combustible deck assembly rating without the use of a fire rated slip sheet or gypsum cover board when applied at a thickness of 1" or greater. Insulation joints must be staggered a minimum of 12" from the combustible deck joints. Maximum roof slope = ½":12"
- Specified for Single-Ply membranes (Ballasted, Mechanically Attached and Fully Adhered), BUR, Modified Bitumen, Coal-Tar
- Constructions requiring UL Class A ratings
- To achieve optimal thermal performance, MuleHide recommends installation of a multi-layered system with staggered joints

#### PANEL CHARACTERISTICS

- MuleHide Poly ISO 1-DWD is manufactured with NexGen Chemistry: Contains no CFCs, HCFCs, is Zero ODP, EPA Compliant and has virtually no GWP
- Available as 4' x 4' or 4' x 8' panels in Thicknesses range from 1" to 4.5"
- ASTM C1289 Type II, Class 2 Grade 2 (20 psi) or Grade 3 (25 psi)
- Manufactured with a light and dark side that allows for faster or slower adhesive flash-off times
- Provides improved dimensional stability, fire performance and resistance to mold growth. Passed (10) Resistance to mod test ASTM D3273

#### PACKAGING

Factory applied packaging is only intended for protection during transit. When stored outside or at the job site, the insulation must be stored at least 4" above ground level and completely covered with a weatherproof covering such as a tarpaulin. **Warning - Do Not Leave Exposed:** This product will burn if exposed to an ignition source of sufficient heat and intensity, or an open flame.

#### CODE APPROVALS/COMPLIANCE

Poly ISO 1-DWD complies with the requirements of the following specifications, test and code requirements when properly installed:

- Federal Specification HH-I-1972/GEN and HH-I-1972/2, Class 1
- ASTM C 1289-05a Type II, Class 1, Grade 2 (20 psi), Grade 3 (25 psi)
- FM Standard 4450/4470 Approval, Class 1
- UL Standard 1256 Classification
- UL Standard 790 Classification
- UL Standard 263 Fire Resistance Classification

#### TYPICAL PHYSICAL PROPERTIES

| Property                 | Test Method | Typical Result                    |
|--------------------------|-------------|-----------------------------------|
| Dimensional Stability    | ASTM D2126  | 2% Linear Change (7 days)         |
| Compressive Strength     | ASTM D1621  | 20 PSI (Grade 2) 25 PSI (Grade 3) |
| Water Absorption         | ASTM D209   | < 1% By Volume                    |
| Water Vapor Transmission | ASTM E96    | < One (1) Perm                    |
| Service Temperature      | --          | -100°F to 250°F Max               |
| Flame Spread (Foam Core) | ASTM E84    | < 75*                             |
| Smoke Development        | ASTM E84    | < 450*                            |

The physical properties above are presented as typical average values as determined by accepted ASTM test methods and are subject to change. All information can be confirmed by contacting MuleHide Products.

\*The numerical ratings are determined by ASTM Test Method E-84 are not intended to reflect hazards presented by this or any other material under actual fire conditions. A flame spread index of 75 or less and smoke development of 450 or less meet code requirements regarding flame spread and smoke development for foam plastic roof insulation. However, the codes exempt foam plastic insulation when used in roof deck constructions that comply as an assembly with FM 4450 or UL 1256 (see IBC, NBC, UBC and SBS Sections on Foam Plastic Insulation (Chapter 26). Smoke development does not apply to roofing.

#### TYPICAL PHYSICAL PROPERTIES (CONTINUED)

| Nominal Thickness* | (mm) | LTTR R-Value | C-Value | Metal Deck Max. Flute |
|--------------------|------|--------------|---------|-----------------------|
| 1.0                | 25   | 5.7          | .175    | 2-5/8                 |
| 1.5                | 38   | 8.6          | .116    | 4-3/8                 |
| 1.8                | 46   | 10.3         | .097    | 4-3/8                 |
| 2.0                | 51   | 11.4         | .088    | 4-3/8                 |
| 2.5                | 64   | 14.4         | .069    | 4-3/8                 |
| 2.6                | 66   | 15.0         | .067    | 4-3/8                 |
| 3.0                | 76   | 17.4         | .057    | 4-3/8                 |
| 3.5                | 89   | 20.5         | .049    | 4-3/8                 |
| 3.8                | 97   | 22.3         | .045    | 4-3/8                 |
| 4.0                | 102  | 23.6         | .042    | 4-3/8                 |
| 4.3                | 109  | 25.5         | .039    | 4-3/8                 |
| 4.5                | 114  | 26.8         | .037    | 4-3/8                 |

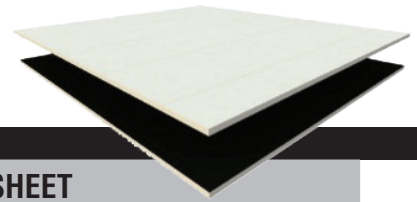
Long Term Thermal Resistance Values are based on ASTM C1289 (revised Jan-2014) and CAN/ULC S770 which provides for a 15-year time weighted average.

\*Other thicknesses available upon special request.



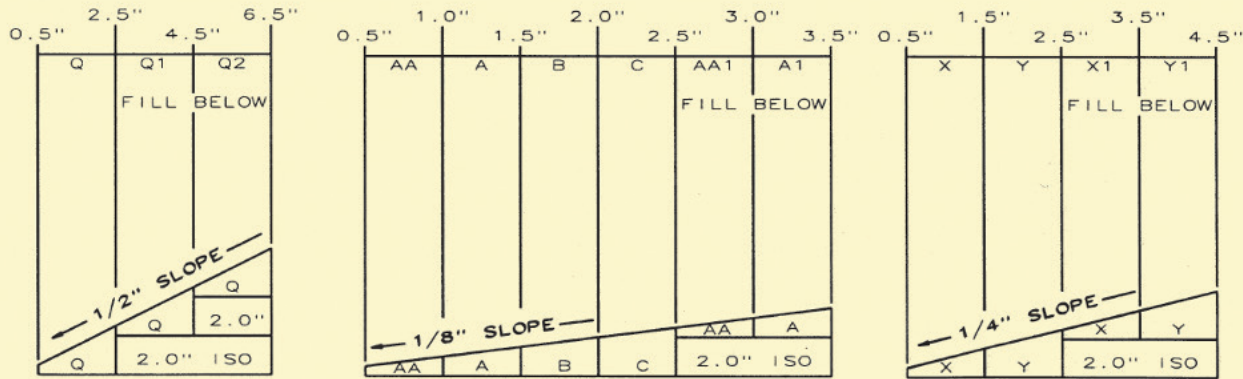
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### PRODUCT DATA SHEET

#### PROFILES



#### INSTALLATION INSTRUCTIONS

**Ballasted Single-Ply Membrane Systems** - MuleHide Poly ISO 1-DWD does not require attachment to the deck in this system. All boards must be tightly fitted together to prevent movement, separation or damage during the installation of the membrane system. All gaps greater than 1/4" must be filled. After the membrane is installed, sufficient amounts of ballast must be applied to prevent membrane and insulation movement. Refer to the Mule-Hide Manual and FM Loss Prevention Data Sheet 1-29 for information regarding ballasting guidelines.

**Mechanically Attached Single-Ply Membrane Systems** - MuleHide Poly ISO 1-DWD should be attached with MuleHide fasteners and insulation plates (or FM Approved fasteners) using a minimum of 4 fasteners per 4'x 4' board (1 fastener per 4 square feet) and a minimum of 6 fasteners per 4'x 8' board (1 fastener per 5.33 square feet). Refer to the MuleHide Manual for proper fastener placement.

**Fully Adhered Single-Ply Membrane Systems** - MuleHide Poly ISO 1-DWD should be installed with the perforated side down. Insulation attachment will vary depending upon insulation thickness and job requirements. If the top layer is less than 2" thick, install a minimum of 8 fasteners per 4'x 4' board (1 fastener per 2 square feet) and a minimum of 16 fasteners per 4'x 8' board (1 fastener per 2 square feet). If the top layer is 2" thick or thicker, install 4 fasteners per 4' x 4' or 8 fasteners per 4' x 8' insulation board. Refer to the MuleHide Manual for proper fastener density and placement. Additional fastening may be required for certain job conditions. In some instances hot steep asphalt or insulation adhesive may be used to attach the MuleHide Poly ISO 1-DWD to approved concrete decks. Only 4'x 4' boards may be used. Contact MuleHide's Technical Department for specific requirements and procedures.

#### PROTECTION & SAFETY

MuleHide maintains Safety Data Sheets on all of its non-exempt products. Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees and customers. MuleHide's Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using MuleHide products in your facilities.

#### ADDITIONAL INFORMATION

The information given on this PDS is subject to change without notice. Always check the MuleHide website at [www.mulehide.com](http://www.mulehide.com) for the latest information, changes and updates or contact MuleHide at 800-786-1492.

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