



# Fiberglass Reinforced Polymer Panels

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## Technical Data

### Product Description Factory Mutual Approved RFM 17, 14, 11

#### RFM FACTORY MUTUAL APPROVED PANELS

In the industrial and corrosion market, Resolite and Fire Snuf - FS25A are names synonymous with fiberglass reinforced polymer panels. Resolite started production in 1951 and in 1964 developed and produced the first fire-retardant FRP panel.

Over 45 years of production and development experience has gone into Resolite's RFM panels. These panels were tested at Factory Mutual Research Center and have passed both the Factory Mutual 25' and 50' foot Corner Test. Both tests were conducted on minimum 6'0" spans to simulate real world conditions.



In accordance with FM Standard 4880, Resolite RFM panels have been approved for unrestricted use as a wall, roof or ceiling without height limitations or sprinkler protection.

Resolite RFM panels also achieved I-90 Wind Uplift Classification and passed the Factory Mutual tough hail damage tests. In addition, Resolite RFM 11, 14 and 17 panels have passed ASTM E 108 and achieved a Class B rating with a maximum 3 in 12 roof slope.

The Resolite RFM insulated panel system was also tested and meets the FMRC Class 4453/4420 approval requirements.

RFM fiberglass reinforced polymer panels are formulated using the same halogenated isophthalic resin system as used in Tred-Safe and CRFS25A. All FM approved FRP panels must use additives to retard burning; these additives, however, reduce corrosion and weather resistance. When an FM label is not required, Resolite's FS25A, CRFS25A and Tred-Safe would be the superior choice for utmost corrosion and weather resistance. These panels carry a UL25 flame spread rating and are produced with our unfilled isophthalic resin system.

#### RFM FEATURES

- **Factory Mutual Approved** - meets the criteria for approval as a Class 1, fire rated plastic building panel without height or area limitations and without sprinkler protection.
- **FM Wind Uplift Classification** - RFM panels have achieved FM I-90 Wind Uplift Classification.
- **Corrosion resistant** - produced with a high quality isophthalic halogenated polyester resin system.
- **Embossed exterior surface** - the exterior surface is embossed creating a resin rich surface for improved performance. The interior surface is smooth.
- **C/W Barrier protection** - a protective barrier on the exterior surface of RFM panels that is fused into the resin/fiberglass matrix to give the panel even greater protection against degradation.
- **Multiple glass reinforcements** - RFM panels utilize a high strength combination of glass reinforcement including bidirectional continuous strand woven and chopped strand glass.
- **Three types available** - 17 ( 17 oz.), 14 (14 oz.) and 11 (11 oz.)
- **Three standard colors** - available in three standard opaque colors - Stone White, Gray and Beige. Consult Standard Color Guide for more information.
- **Two standard profiles** - 7.2 x 1.5" and 4.2 x 1-1/16"; Two optional profiles - 7.2D x 1.75", 7 x 1.5".
- **Outstanding performance** - backed by over 45 years of case history in the corrosion and industrial market.
- **Load/Span data** - based on full scale tests to simulate actual field conditions.
- **Meets ASTM D 3841** - Standard Specification for Glass-Fiber-Reinforced Polyester Plastic Panels.

# Product Description

## Factory Mutual Approved

### RFM 17, 14, 11

(continued)

#### PHYSICAL PROPERTIES

|                          |        |        |        |
|--------------------------|--------|--------|--------|
| Types Available          | 17     | 14     | 11     |
| Nominal Wt., oz./sq.ft.  | 17 oz. | 14 oz. | 11 oz. |
| Nominal Thickness, in.** | .105   | .090   | .075   |
| Nominal Glass Content    | 25%    | 25%    | 25%    |

|  |                      |
|--|----------------------|
| Hardness, Barcol<br>ASTM D 2583                      | 45                   |
| Flexural Strength, psi<br>ASTM D 790                 | 21,000               |
| Flexural Modulus, psi<br>ASTM D 790                  | $1.2 \times 10^6$    |
| Tensile Strength, psi<br>ASTM D 638                  | 14,000               |
| Coefficient of Expansion<br>(in/in/°F)ASTM D 696     | $3.2 \times 10^{-5}$ |
| Conductivity (K Factor)<br>ASTM C 177                | 2.50                 |
| Dielectric Strength RMS V.<br>@ 60 cycles ASTM D 149 | 403 V/Mil.           |
| Fire Resistance Ignition Point<br>ASTM D 1929        | 875° F -<br>925° F   |
| Flame Spread Classification ASTM E 84                | 15*                  |
| Smoke Classification                                 | 250                  |

#### Flammability ASTM D 635

Average Time of Burning less than 5 seconds  
 Average extent of Burning less than 15 mm  
 Building Code Classification CC1 or C1

| Factory Mutual Wind Uplift Classification |            |       |      |
|---|------------|-------|------|
| Profile                                   | Panel Type | Class | Span |
| 7.2 x 1.5"<br>7.2D x 1.75"<br>7 x 1.5"    | RFM 17, 14 | I-90  | 6'6" |
| 7.2 x 1.5"<br>7.2D x 1.75"<br>7 x 1.5"    | RFM 11     | I-90  | 5'0" |
| 4.2 x 1-1/16"                             | RFM 17, 14 | I-90  | 5'3" |

#### SPECIFICATION (Short Form)

- Fiberglass reinforced polymer wall and/or roof panels shall be Resolite RFM 17 / RFM 14 / RFM 11, Factory Mutual Approved, as manufactured by Resolite, a United Dominion Company, Zelienople, PA.
- Glass reinforcement shall be composed of bidirectional continuous strand woven and chopped strand glass and shall be approximately 25% by weight. Exterior surface shall have a CW barrier.
- Resin shall be high quality isophthalic, neopentyl glycol, halogenated polyester with acrylic modification and UV stabilizer.
- Finish shall be embossed exterior/smooth interior.
- Panel weight shall be nominal 17 oz. (RFM 17), 14 oz. (RFM 14), 11 oz. (RFM 11) per square foot in order to comply with the maximum loads and spans recommended by Resolite.
- Color shall be opaque, No. \_\_\_\_\_ (133 Stone White, 197 Gray, or 175 Beige).
- Profile shall be \_\_\_\_\_ (Standard: 7.2 x 1.5" or 4.2 x 1-1/16") (Optional: 7.2D x 1.75" or 7 x 1.5") Length shall be \_\_\_\_\_.
- Panels shall be Factory Mutual approved for use without height or area limitations and without sprinkler protection. **ALL PANELS SHALL HAVE THE FM LABEL.**
- Panels shall have a flame spread classification of 15\* or less and a smoke classification of less than 250 per ASTM E 84.

\* Resolite advises that the numerical flame spread classification is not intended to reflect hazards presented by this or any other material under actual fire conditions.

\*\* All thickness based on flat material. Nominal thickness varies with profile.