

Industrial FRP

Building Systems

Form 6469
Rev. 03 6/05

ISO-TUFF FIRE RATED, HIGH STRENGTH TECHNICAL DATA

Kemlite Company, Inc. was founded in 1954 and is the world's largest manufacturer of fiberglass reinforced plastic (frp) panels.

Since its inception, Kemplite Company has pioneered products into the Commercial, Residential, Transportation, and Recreational Vehicle applications with new technology resulting in patents and consistent leadership.

With constant research for new products and markets, Kemplite Company saw a need in the industrial/corrosion market to produce a value-added, high quality frp product. To keep up with customer demands, Kemplite Company offers Industrial FRP Building Systems - a complete line of high performance translucent and opaque frp panels designed specifically for corrosive environments.

Manufacturers around the world have literally seen the benefits frp panels can add to their facility structures. In many cases, manufacturers replaced failed metal cladding in their structures with corrosion resistant translucent frp panels. By using frp instead of metal, manufacturers can significantly cut down on unnecessary costs in replacing corroded building products.

The **ISO-TUFF Fire Rated, High Strength (IFW)** translucent and opaque frp panel was developed to provide the high strength and quality the marketplace was demanding. Bidirectional continuous woven roving and chopped strand fiberglass combined with isophthalic polyester resin make this panel stronger and more durable without compromising its resiliency. This panel outperforms standard orthophthalic panels in the most challenging of conditions with increased weatherability and greater resistance to corrosion and accelerated chemical deterioration.

ISO-TUFF Fire Rated, High Strength panels are used where corrosion protection, fire resistance, and good weathering characteristics are critical. This panel can be used in such applications as refineries, pulp and paper mills, mining operations, wastewater facilities, fertilizer plants, and many other challenging environments.

Product Features

UL Fire Rated

Flame spread classification of 25*.

Corrosion Resistant

Manufactured with a high quality isophthalic polyester resin, these panels are corrosion resistant as well as shatter resistant and U.V. stabilized.

High Quality

Kemplite has been manufacturing high quality frp products worldwide for over 50 years.

Available Weights

8oz/ft² through 16oz/ft²

Available Glass Reinforcement

High strength combination of bidirectional woven roving and chopped strand fiberglass. Nominal glass content is 40% by weight.

Available Profiles

Three standard profiles are available: 4.2" x 1-1/16", 7.2" x 1-1/2", 5.33" x 1-3/4". Non-standard profiles available: 2.67" x 7/8", 2.5" x 1/2", 7" x 1-1/2", 4" x 1", 13.3" x 1-7/8". Call Kemplite for information on special profiles.

Available Colors

Two standard Translucent colors are available: White (405) and Clear (502). Three standard Opaque colors are available: Stone White (945), Gray (675) and Beige (865).

Embossed Exterior/Smooth Interior Surface

Available in embossed exterior and smooth interior surfaces. Gel-Coat available where higher quality smooth finishes are required.

Improved Weatherability

High quality manufacturing allow these panels to stand up to fluctuating environmental conditions.

Manufacturing Tolerance

Coverage width/length tolerance for all profiles: 1/4".

Meets ASTM D 3841

Standard specifications for Glass-Fiber-Reinforced Polyester Plastic Panels.

ISO-TUFF FIRE RATED, HIGH STRENGTH TECHNICAL DATA

Physical Properties

Property: Barcol Hardness

Nominal: 40

Test: ASTM D2583

Property: Flexural Strength

Nominal: 32,000 psi

Test: ASTM D790

Property: Flexural Modulus

Nominal: 1,000,000 psi

Test: ASTM D790

Property: Tensile Strength

Nominal: 20,000 psi

Test: ASTM D638

Property: Coefficient of Expansion

Nominal: 1.6×10^{-5} in/in/°F

Test: ASTM D696

Property: Conductivity (K Factor)

Nominal: 1.2 BTU/in/hr/ft²/°F

Test: ASTM C177

Property: Flame Spread*

Nominal: 25

Test: ASTM E84

Property: Flammability - Average Time of Burning

Nominal: Less than 5 seconds

Test: ASTM D635

Property: Flammability - Average Extend of Burning

Nominal: Less than 0.5 inches

Test: ASTM D635

Property: Flammability - Building Code Classification

Nominal: CC1 or C1

Test: ASTM D635

Note: Physical properties are based on standard 8oz/ft²

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

Cautions

Fire Resistant Comparisons

References to flammability of Kemlite Industrial FRP Building Systems panels reflect laboratory tests which compare burning characteristics of building products. These references do not imply that the panels will not burn. All fiberglass panels will burn under proper conditions and certainly in a full scale fire. Once ignited, they may burn rapidly, releasing dense smoke. For appropriate precautions, request "Fire Safety Guidelines for Use of FRP Panels", Society of the Plastics Industry.

Safety

DO NOT WALK ON PANELS. Kemlite Industrial FRP Building Systems panels are not intended to support the undistributed weight of workers. Roofing ladders or 1" x 12" planks, or equivalent means of protection must be used during any work on roofs. Observe fire safety.

Storage/Maintenance

Proper storage and maintenance will help maximize performance and longevity of Kemlite Industrial FRP Building Systems panels. Refer to Technical Data #6440 for more information.

Load Span Table

See Form #6660