

# Resin Selection

Delta Composite Structures manufactures molded grating in a variety of resins, each with its own unique performance characteristics. The resin selection is paramount in determining the corrosion resistance of the finished product. Please consult the Delta Chemical Resistance Guide for assistance in selecting the proper resin for your application, or call Delta's toll-free telephone number, 866-361-2100 for technical assistance.

Delta's resin designations are comprised of two components: the resin type and its ASTM E-84 flame spread rating.

**Type VEFR-20** is a premium vinyl ester resin with a flame spread rating of 20 or less. Type VEFR-20 resin provides the most chemical resistant molded product offered in the industry. Designed to withstand the harshest chemical environments over a broad range of acids and caustics, it is primarily used in petrochemical, waste water, mining, and plating applications where the grating is subject to frequent and direct contact with harsh chemicals. **Type VEFR-10** is manufactured with the same high-quality vinyl ester resin but with an enhanced flame spread rating of 10 or less for those applications requiring more flame resistance, such as an offshore platform. The standard color for the VEFR-20 is orange, and the standard color for the VEFR-10 is dark gray.

**Type IFR-25** is a premium isophthalic polyester resin with a flame spread rating of 25 or less. Type IFR-25 provides an intermediate level of chemical resistance and is the correct resin choice for grating subjected to splash and spill contact with harsh chemicals, and is a very good general purpose resin at a reduced cost compared to the premium vinyl ester resin. **Type IFR-10** is the same high quality isophthalic polyester resin but with an enhanced flame spread rating of 10. The standard color for the IFR-25 is green and the IFR-10 grating is dark gray.

**Type FG-30** is DeltaGrate™ High Strength Molded Grating manufactured using a premium food grade polyester resin containing no harmful ingredients and is certified by the resin manufacturer. Each panel is post cured and detergent washed prior to shipping. This grating possesses a flame spread rating of 30 and the standard color is light gray.

**Type CFR-25** is an orthophthalic polyester resin with a flame spread rating of 25 or less providing moderate chemical resistance. Delta's Type CFR-25 grating is perfect for use in water/wastewater applications, light industrial applications, and in the wavezone areas of offshore platforms where the environment is moderate. Although Type CFR-25 is the least chemical resistant resin, it still offers superior performance to traditional flooring products such as steel, aluminum and wood, and is the most economical resin available. The standard colors for the CFR-25 gratings are yellow and dark gray. Type CFR-10, an orthophthalic polyester resin with a flame spread rating of 10 is available upon request.

**Type MP-4** is Delta's molded phenolic grating where fire resistance, low smoke, and low toxic fumes are critical. Tested in accordance with ASTM E-84-97a, Type MP-4 resin has a flame spread rating of 4 and smoke density rating of only 1. Our Type MP-4 molded phenolic grating is typically used in confined spaces, subways, offshore and other applications where fire resistance and low smoke generation is absolutely necessary. The standard color in which the Type MP-4 is available is chocolate brown, however phenolic painting of the grating can be performed to obtain a light gray finish.

**Conductive Top Grating:** All of Delta's DeltaGrate™ High Strength Molded Grating products can be provided with a specially formulated carbon black surface, eliminating hazardous static electricity when properly grounded. Available with all of the above resins, DeltaGrate™ High Strength Conductive Gratings are primarily used in the high-tech electronic industries, munitions and arsenal manufacturing plants and other sparking sensitive environments where sophisticated equipment may be damaged due to static electricity. The surface electric resistance of DeltaGrate™ High Strength Conductive Grating is  $1 \times 10^5$  ohms to  $5 \times 10^5$  ohms. For grounding requirements, please consult our engineering staff by calling our toll free number, 866-361-2100.