

## HIGH PERFORMANCE COMPOSITE SOLUTIONS



- | Corrosion Resistant
- | High Strength-to-Weight Ratio
- | Long Service Life
- | Fire Retardant
- | Slip & Impact Resistant
- | Nonconductive
- | Superior Ergonomics

# Top Glass

Since 1963, Top Glass has adopted a unique approach to the world of fibre reinforced pultruded composites. During our 45 years history, we have developed an outstanding range of composites solutions calling upon our professionalism and expertise to meet the challenges and opportunities offered by our valued customers. In doing so, we have created an important and viable alternative to profiles that are made using traditional materials.

Today Top Glass operates from two sites close to Milan (Italy), one in Osnago (14.000sqm) and the other in Pioltello (8.000sqm). We have developed a highly impressive production capacity and dynamically undertake all new challenges by designing complex sections and moulds in our own tool shop and choosing the exact material mixes to meet all requirements.

In 2008 Top Glass became part of the Kemrock™ Global Composite Village™.

Kemrock is India's leading composites processor, having manufacturing capability in all the major process techniques, as well as establishing strategic alliances with global leaders in the composites world. Our technical excellence combined with the manufacturing power of Kemrock means that the highest quality products are now available from one of the world's leading composites groups.



## Markets

- Chemical Processing
- Food & Beverage
- Marine
- Oil & Gas
- Power
- Industry
- Buildings
- Construction
- Pharmaceutical
- Metals & Mining
- Pulp & Paper
- Recreation
- Telecommunications
- Shipping
- Transportation
- Water & Waste Treatment
- Architectural

# TopGrid® Pultruded Gratings

Renowned for their high strength, corrosion resistance in the harshest environments, long life and safety, TopGrid® Pultruded Gratings meet the highest international standards. Assembled from interlocking pultruded profiles, TopGrid® is designed to deliver many years of reliable service, outperforming the traditional materials they replace.

TopGrid® Gratings are lightweight, easy to fabricate and install. Their acceptance in many major industries has made them the first choice over steel, not only for their performance but cost competitiveness. Comparable with steel at the installed cost stage, their low maintenance and long life means a significantly lower life cycle cost than that of steel.

A complete range of gratings is available to satisfy general industrial needs and high load requirements ensuring worker safety. TopGrid® satisfies the most demanding applications in a wide range of industrial sectors...

## TopGrid® Resin Systems

### Resin Selection

Selecting TopGrid® Grating is the first step to ensuring a maintenance free flooring solution. Selecting the correct resin ensures the highest performance in the most demanding of circumstances. TopGrid® is available in five standard resin grades to ensure the greatest economic advantage is achieved whilst maintaining the highest levels of technical performance.

### TopGrid® Resin Range

Grade	Description	Fire Performance
IsoFR	Fire retardant isophthalic polyester grade for use where corrosion resistance is important	ASTM E84<25
Iso	Excellent corrosion resistance in acidic environments :	Non fire retardant
VE	Vinyl ester grade for use in the most extreme corrosive environments	ASTM E84 <25
VEFR	Fire retardant vinyl ester grade for use where fire performance combined with chemical resistance is required	ASTM E84 <25
Phenolic	Fire retardant grade for use where fire performance and low smoke and toxicity is of critical importance.	ASTM E84 <10

## Features and Benefits

**Corrosion Resistant** : based on the use of premium grade isophthalic polyester or vinyl ester resins incorporating a synthetic veil to provide optimum performance in the harshest environments.

**Lightweight, robust and easy to install** : less than half the weight of steel grating eliminating the need for heavy lifting equipment when installing or carrying out regular maintenance checks.

**Easy Fabrication** : panels can be easily carried by two men, cut and fabricated on-site with regular hand-tools.

**Maintenance Free** : no de-scaling, sand-blasting or painting, TopGrid®'s inherent corrosion resistance eliminates the need for maintenance.

**Fire retardant** : different levels of fire performance depending upon the requirements of the application

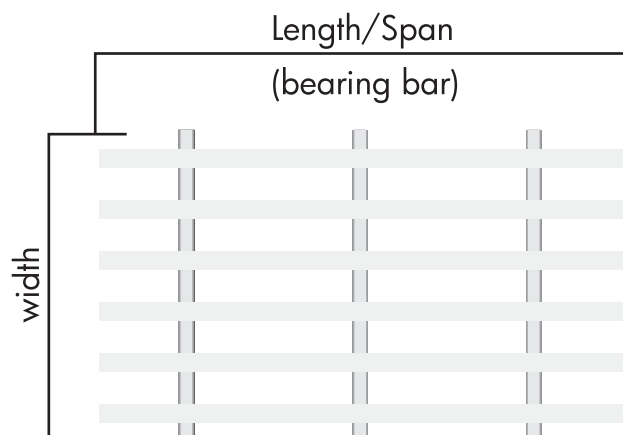
**Slip-resistant** : permanently bonded, epoxy coated grit surface providing a safe, long lasting slip-resistant walking surface

**Electrically and Thermally Non-conductive** : offering greater levels of worker safety in the toughest environments

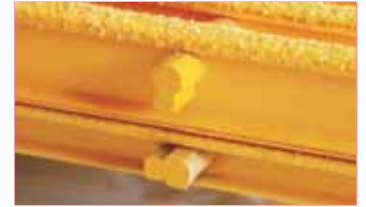
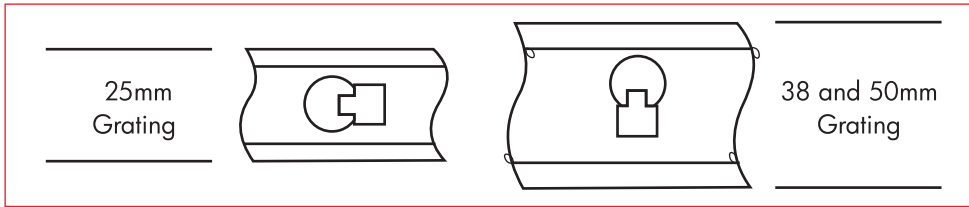
## TopGrid® Industrial Grating Styles

### Bearing Bars and Cross-rod Assemblies

TopGrid® pultruded industrial grating is fabricated from bearing bars and interlocking cross-rod and groove bar assemblies. Unlike TopGrid® moulded grating which has equal strength in both directions, TopGrid® pultruded grating is stronger in the longitudinal direction. Therefore TopGrid® pultruded grating sizes are specified by width (the cross-rod dimension) x length or span (the bearing bar dimension).



The bearing bars used for TopGrid® industrial grating are pultruded I bars and T sections. The I bars are 25mm (1 inch) and 38mm (1 ½ inches) deep. The T section is 50mm (2 inches) deep. For the 25mm (1 inch) deep gratings the cross-rod assembly is used horizontally, whilst for 38mm (1 ½ inches) and 50mm (2 inches) deep products cross-rods are used vertically.



I bar assemblies are available in standard sizes with 40, 50 & 60% open areas. T bar assemblies have 33% and 50% open areas as standard. Nomenclature used to describe each industrial grating style refers to its bearing bar style (I or T), its open area and its metric depth.

### For example ...

- I6038=I bearing bar : 60% open area : 38mm deep
- T3350 = T bearing bar : 33% open area : 50mm deep

## TopGrid® High Load Grating Styles

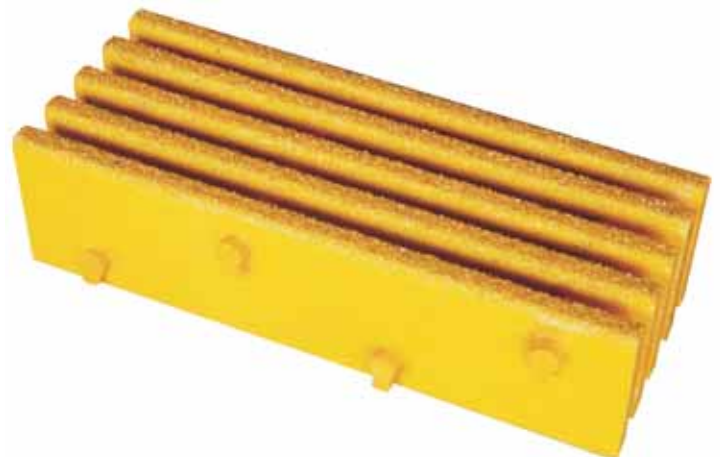
TopGrid® HL is a range of high load carrying pultruded gratings. Intended for use in demanding industrial applications the HL range comprises five different depths of bearing bars (25mm, 38mm, 50mm 63mm & 76mm) in two standard open area arrangements (47% and 58%).

Nomenclature once again is determined by open area and bearing bar depth, so...

- HL4738 = HL bearing bar : 47% open area : 38mm deep
- HL5875 = HL bearing bar : 58% open area : 75mm deep

Offering the same traditional benefits as TopGrid® Industrial Gratings of

- Corrosion Resistance
- Lightweight, robust and easy to install
- Easy to Fabricate
- Maintenance Free
- Fire retardant
- Slip-resistant
- Electrically and Thermally Non-conductive



TopGrid® HL gratings have been designed to carry forklift truck, vehicular and tractor trailer loads that TopGrid® industrial gratings cannot. Further details about the allowable loads and spans is available in our TopGrid® load tables leaflet.

## FineGrit Gratings

Top Glass FineGrit gratings have been designed for use in marinas, water parks, swimming pools, in fact any leisure area, particularly around water. Based on T section bearing bars, and only 12% open area FineGrit gratings are available in 25mm and 38mm depths.



FineGrit's 12% open area and fine grit finish provides a safe and comfortable walking surface for bare foot bathers.

T-1225



T-1238



Type	Bearing Bars per metre width	Bearing Bar Depth	Open Area	Bearing Bar Centres	Weight kg/m <sup>2</sup>
T-1225	23	25mm	12%	43.5mm	12.7
T-1238	23	38mm	12%	43.5mm	17.5

FineGrit is manufactured using the same attention to detail and raw material selection as other grades of TopGrid<sup>®</sup> to ensure a safe, slip resistant, corrosion resistant walking surface that offers long term UV resistance in exposed recreational areas. FineGrit offers a low cost, low maintenance and aesthetically appealing solution for years to come.

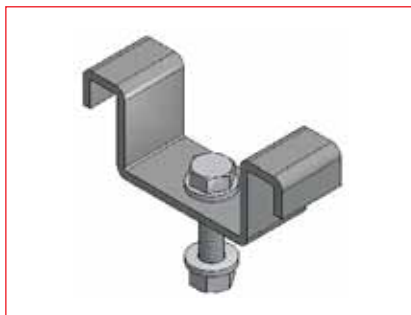
## TopStep Stairs

Fabricated from 25mm, 38mm and 50mm TopGrid® industrial grating, and fitted with end-nosings for improved slip resistance, TopStep stairs are an ideal complement to a TopGrid® walkway.

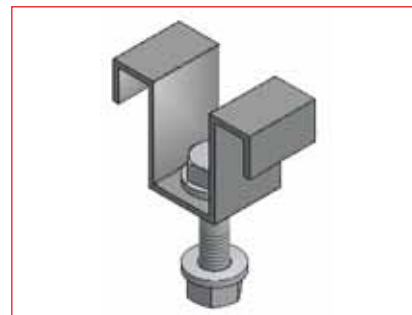


## Accessories for Fixation

A number of different clip assemblies are available. M Type clips are suitable for a wide range including high load installations.



Type M 61



Type M 11

For help with selecting the most suitable Top Glass grating or stair solution.



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