Re-Grid Open Mesh Grating

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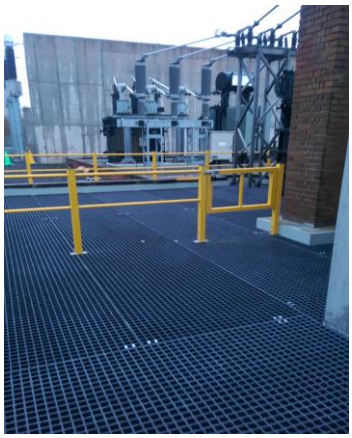
RE-GRID GRP grating is designed to provide safe, robust GRP open mesh flooring access for pedestrians on industrial walkways, catwalks, and over channels. The square mesh structure of the **RE-GRID** GRP grating provides bi-directional strength, surpassing the uni-directional characteristics of steel metal gratings.

Relinea's **RE-GRID** fibreglass grating is manufactured using an Embedded Grit finish. This ensures that the anti-slip grit does not chip or peel away from the grating and further does not compromise the slip resistance.

The **RE-GRID** open mesh GRP grating can be easily installed. Due to the bi-directional strength of **RE-GRID**, end banding and additional support around pipe opes can be eliminated. Additionally, **RE-GRID** GRP grating is 1/3rd the weight of equivalent steel grating.

Type	Depth (mm)	Mesh Size Base (mm)	Standard Panel Size (mm)	Open Area %	Approx Weight (kg/m^2)	Standard Surface	Standard Colours
Re-Grid 2538	25	38 x38	3000 x 1000 3660 x 1220	70	13.5	Meniscus, Grit	Light Grey
Re-Grid 3038	30	38 x 38	3000 x 1000 4038 x 1000 3660 x 1220	70	15.5	Meniscus, Grit	Light Grey, Charcoal
Re-Grid 3838	38	38 x 38	3000 x 1000 4038 x 1000 3660 x 1220	70	18.5	Meniscus, Grit	Light Grey, Charcoal
Re-Grid 5050	50	50 x 50	3660 x 1220	78	21.2	Grit	Light Grey

Other Mesh sizes, colours and finishes are available upon request. Please note that if a grit finish is required please add approximately 2mm to the nominal depth



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Registered number: NI053745. VAT number: GB 854 0334 42.

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Re-Grid Open Mesh Grating Load Table

Clean Span (mm)	Type	Panel Depth (mm)	Firm Concentrated Line Load (kg/305mm) *L/100	Standard Concentrated Line Load (kg/305mm) *L/100	Firm Uniform Loading (kg/m^2) *L/200	Standard Uniform Loading (kg/m^2) *L/100
300	Re-Grid 2538	25	250	435	3433	7260
	Re-Grid 3038	30	352	684	3650	8200
	Re-Grid 3838	38	720	1122	7260	14270
	Re-Grid 5050	50	900	1582	14500	28940
500	Re-Grid 2538	25	110	210	968	2320
	Re-Grid 3038	30	172	312	1120	3000
	Re-Grid 3838	38	242	580	2270	4594
	Re-Grid 5050	50	484	968	4235	9680
750	Re-Grid 2538	25	38	85	260	524
	Re-Grid 3038	30	105	250	690	1450
	Re-Grid 3838	38	120	352	780	1600
	Re-Grid 5050	50	242	484	1552	3120
1000	Re-Grid 2538	25	23	45	120	250
	Re-Grid 3038	30	50	82	210	359
	Re-Grid 3838	38	69	121	305	605
1200	Re-Grid 3838	38	48	97	194	460
	Re-Grid 5050	50	95	195	460	860
1500	Re-Grid 5050	50	62	110	180	375

- *L = clear span
- *L/200 = 0.5% deflection (L= 1000mm then deflection = 5mm)
- *L/100 = 1% deflection (L= 1000mm then deflection = 5mm)

British Standard BS5395 Part 3 states that the deflection should not exceed 10mm or L/200 of the span. Data is provided as a guide only as different resins and temperatures can produce variations of ±20%

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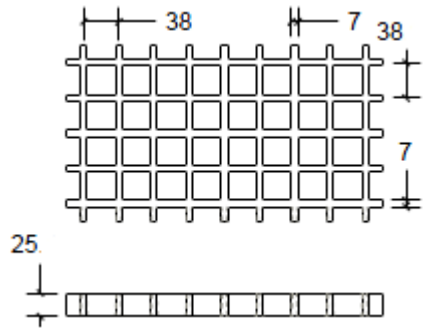
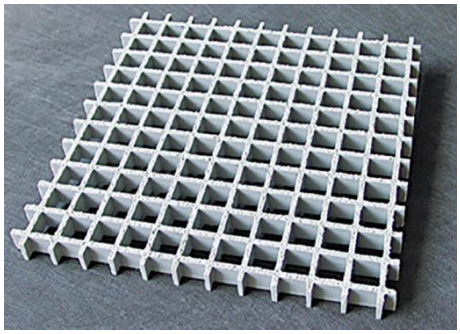
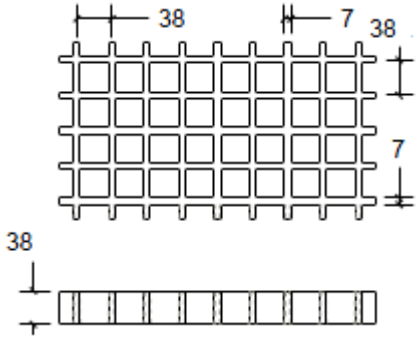
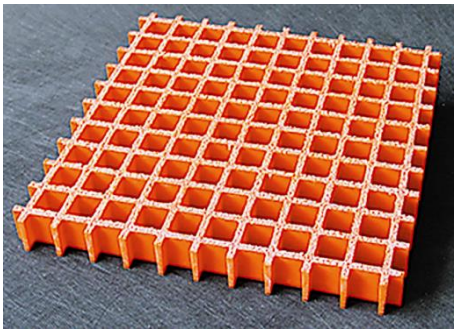
Re-Grid Open Mesh Grating
Grating Details

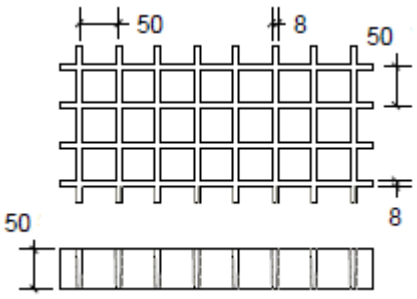
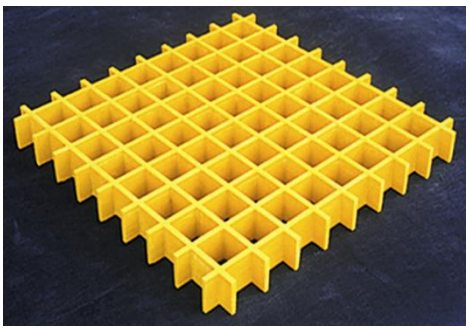
Type RE-GRID2538

		Dimensional Drawing	Actual Photo
Mesh Size 38 x 38 mm	**Open Area %** 70		
Depth 25 mm	**Weight (kg/m²)** 13.5		
Panel Size (L*W) 3000 x 1000 mm 3660 x 1220 mm	**Std. Surfaces** Meniscus / Grit		
	Std. Colours Light Grey		

Type RE-GRID3838

		Dimensional Drawing	Actual Photo
Mesh Size 38 x 38 mm	**Open Area %** 70		
Depth 38 mm	**Weight (kg/m²)** 18.5		
Panel Size (L*W) 3000 x 1000 mm 4038 x 1000 mm 3660 x 1220 mm	**Std. Surfaces** Meniscus / Grit		
	Std. Colours Light Grey Charcoal Grey		

Type RE-GRID5050

		Dimensional Drawing	Actual Photo
Mesh Size 50 x 50 mm	**Open Area %** 78		
Depth 50 mm	**Weight (kg/m²)** 21.2		
Panel Size (L*W) 3660 x 1220 mm	**Std. Surfaces** Grit		
	Std. Colours Light Grey		

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Manufacturing Methodology

Molded grating is manufactured in an open, heated mold that resembles a large waffle iron. Continuous glass fibres are placed in the mold in alternating layers and thoroughly wetted out with resin. This continuous process produces an integral, one-piece construction, which offers bi-directional strength.

The high percentage of resin at 65% ensures Relinea's GRP moulded grating offer superior chemical resistance and exceptional impact resistance.

Our standard gratings are made with Isopthalic, Class 1 Fire Rated to BS476 part 7 and come with Relinea's unique embedded integral grit finish that will not chip or peel away. Post manufacture all panels are visually inspected and checked against specification for weight, dimension and flatness. 10% of panels are load tested to ensure compliance with specification.

Relinea can supply all our gratings in a range of resin system to suit any chemical environment. Please see our chemical resistance chart for moulded products.

Typical Material Properties

Property	Fibreglass	Resin	Re-Grid
Tensile Strength (MPa)	201	69	240
Tensile Modulus (GPa)	3.5	17	
Flexural Strength (GPa)	182	107	240
Compressive Strength (MPa)	19	146	200
Inter Laminar Shear	9	--	
Barcol Hardness	45	38	50
Water Absorption (% Max.)	2100	1200	0.57
Density (kg/m3)	2100	1200	1700
Coefficient of Thermal Expansion ($10^{-6}/^{0}C$)			4
Flammability	BS476 Part 7		Class 1
Flammability Extinguishing	ASTM D635	--	Self-Extinguishing
Anti-slip	BS4592-0:2006	CoF	0.9 (Dry)
			0.72 (Wet)

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Re-Grid Open Mesh Grating
Slip Testing and Fixings

Slip Testing

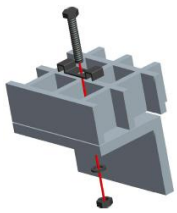
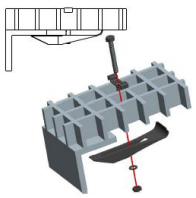
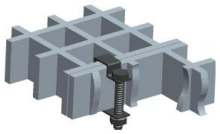
Relinea's products have been slip tested by the Highway Engineering Research Group at the University of Ulster and were assessed for their dry and wet slip resistance properties using a pendulum test as specified in BS7976-2. The results are shown in the table below

Summary of slip resistance data

Sample Ref	Slip resistance value using TRL rubber		Slip resistance value using 4S rubber	
	Dry	Wet	Dry	Wet
Medium Grit	90	72	75	67

As per BS 4592-0:2006 'Industrial type flooring and stair treads' the Coefficient of Friction (CoF) would be 0.72 in wet conditions which would be classified as '**enhanced slip resistance'**

Fixings

Clip	Application	Image
Stainless Steel 316 M Clip with M8 x 25/50 bolt , nut & washer.	• When the beams can be drilled. • Requires access to underneath panel.	
Stainless Steel 316 M Clip with M8 x 25/50 bolt , nut & washer includes a base clamp.	• When the beams can not be drilled. • Requires access to underneath panel.	
Stainless Steel 316 C Clip with M8 x 30/50 bolt , nut & washer.	• Used to join two panels together.	

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Re-Grid Open Mesh Grating Data Sheet

Section 1 – Product & Company Identification	
Emergency Phone Number	+44 (0) 28 944 70010
Product	RE-GRID in standard Polyester, Isophthalic, and Vinyl Ester fire retardant resin.
PPE	Refer to MSDS Section 8, Control Measures
Section 2 – Chemical Ingredients	
Chemical Component:	**Percentage**
Glass Reinforced Plastic	N/A
Polymerized Resin	50-55
Fibreglass Strand	35-55
Silica Sand	10-15
Section 3 – Physical & Chemical Properties	
Property	**Measurement**
Boiling Point	N/A
Vapour Pressure	N/A
Vapour Density	N/A
Melting Point	N/A
Evaporation Rate	N/A
Solubility in Water	None
Appearance and Odour	Various coloured meshes and solid shapes. Low to no odour
Section 4 – Fire and Explosion Data	
Flash Point	N/A
Flammable limits	N/A
Extinguishing Media	Water , Foam Type A, B or C extinguishers
Special Firefighting Procedures	Use Self-Contained Breathing Apparatus (SCBA) with full face operated in pressure mode
Unusual fire & explosion hazards	Burning FRP creates a complex mixture of solid, liquid, particulate and gases. Carbon Monoxide and other organic compounds may be given off.
	N/A
LEL	N/A
UEL	
Section 5 – Reactivity Data	
Stability	Stable
Conditions to Avoid	Sources of ignition, sparks or flames, extremely high temperatures
Incompatibility	Strong oxidising acid
Hazardous Decomposition or By-products	N/A
Hazardous Polymerization	Will not occur

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Section 6 – Health Hazard Data	
Routes to Entry	Inhalation – X Skin – X Ingestion – X
Health Hazards	Dust from cutting may act as a mechanical irritant to skin, eyes and upper respiratory system. Vapours or products of thermal degradation generated by cutting or grinding may aggravate or cause respiratory conditions.
Carcinogenicity	NTP – N/A IARC Monographs – N/A OSHA – N/A
Signs & Symptoms of Exposure	Temporary Irritation and itching to skin or eyes. Scratchiness or burning of the nose and/or throat if exposed to large amounts of airborne dust from cutting or machining.
Medical Conditions Generally Aggravated by Exposure	Chronic Dermatitis or respiratory conditions
Emergency and First Aid Procedures	Wash skin well without rubbing. For eyes, use a sterile solution and flood the eye area. Change clothing after exposure. Apply antiseptic to any abraded skin area.
Section 7 – Spill or Leak Procedures	
Steps to be taken in case material is released or spilled	No material is released in the product's solid form. However, when cutting, grinding or machining, if airborne dust is generated, the wearing of respirators is recommended. Control and collect any dust. Place in sturdy containers for proper disposal.
Water Disposal Method	Control and collect any dust generated in sturdy containers to prevent dispersal. Dispose of in accordance with all local and government regulations. Generally the dust is not considered a hazardous waste.
Other Precautions	Do not allow dust to go uncontrolled
Section 8 – Control Measures	
Respiratory Protection	Approved for dusts and mists not less than 00.1mg/m^3
Ventilation	Mechanical dust collector with local exhaust recommended at point of generation of any dust due to cutting or grinding.
Protective Gloves	Wear gloves when handling product to prevent cuts, scratches or abrasions.
Eye Protection	Wear protective eye wear with side shields or ventilated goggles when cutting or grinding.
Other Protective Equipment	Long sleeve shirts with closed collars, long trousers or protective clothing may be worn to prevent dust exposure when cutting or grinding product.
Work Hygenic Practices	Use personal protection equipment to minimize skin, respiratory and eye exposure to dust and fumes when cutting or grinding product. Wash all exposed skin areas thoroughly after cutting or grinding. Launder clothing separately and frequently to prevent skin exposure.

We believe that the above information is valid and reliable. The information, however, is provided without any representation of warranty, express or implied regarding the accuracy of correctness. The conditions of methods of handling, storage, use, cutting, grinding, disposal, or any other use of the product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use, cutting, grinding, disposal or any other use of this product.