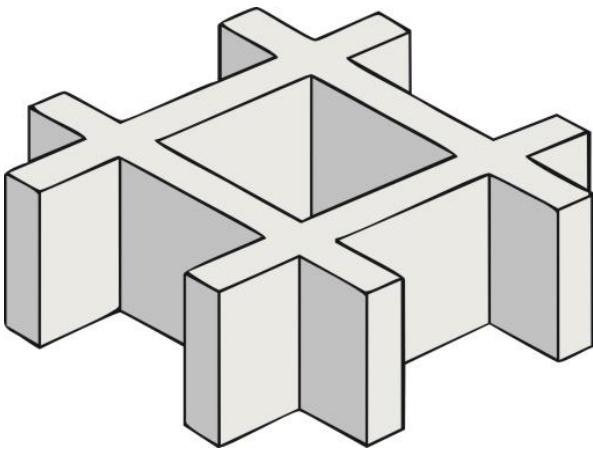


SLAVIA GRATINGS® TATRAGRATE®



Molded Gratings

1. COMPOSITE GRATING STRUCTURE

- Resin types
- Fibreglass types
- Colour pigment

2. STANDARD SERIES AND COLOUR

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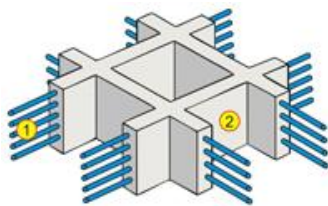
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1 COMPOSITE GRATING STRUCTURE



The grating consists of three main components:

Resin (2)

Fibreglass (1)

Colour pigment (part of resin – 2).

Resin-to-fibreglass ratio: **70% to 30%**.

Resin and fibreglass system

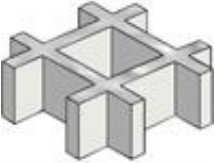
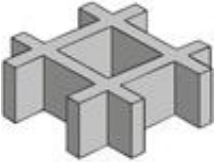
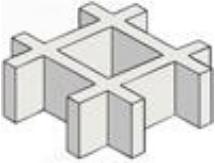
Resin type	Description	Application
Vinyl ester	Fire retardant, self-extinguishing. Enhanced chemical resistance. Operating temp. –60 °C / +110 °C.	Facilities requiring high strength and chemical resistance.
Vinyl ester – high fire resistance	Fire retardant, self-extinguishing. Enhanced chemical and fire resistance. Operating temp. –60 °C / +110 °C.	Facilities requiring high chemical and fire resistance.
Isophthalic polyester	Fire retardant, self-extinguishing. Chemically resistant. Operating temp. –60 °C / +110 °C.	Facilities exposed to inorganic acids, alkali solutions, salts, etc.
Food-grade polyester	Fire retardant, self-extinguishing. Chemically resistant. Operating temp. –60 °C / +110 °C.	Recommended for food-processing facilities.
Orthophthalic polyester	Fire retardant, self-extinguishing. Chemically resistant. Operating temp. –60 °C / +110 °C.	Industrial and civil construction, agriculture, shipbuilding, port facilities, road construction, woodworking, metalworking, urban infrastructure, architectural and landscape design. Medium chemical resistance. Most economical resin type.
Phenolic	High fire resistance, self-extinguishing. Chemically resistant. Very low smoke generation (near zero). Operating temp. –60 °C / +180 °C.	Facilities requiring high fire resistance and low smoke generation (e.g. offshore installations).

Fibreglass type	Description	Application
E-glass	Excellent moisture barrier. Ensures high adhesion between resin and fibreglass; outstanding mechanical and anti-corrosion properties.	Facilities requiring high chemical resistance.
C-glass	Excellent moisture barrier. Ensures high adhesion between resin and fibreglass; outstanding mechanical and anti-corrosion properties.	Facilities not exposed to alkaline environments.

Colour pigment

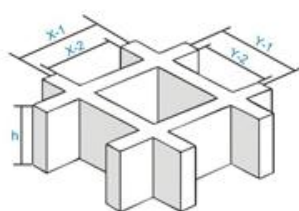
Moulded gratings are pigmented by mixing colour pigment directly into the resin — not by surface coating. The colour range corresponds to the RAL colour system.

2 STANDARD SERIES AND COLOUR

SERIES	Standard colour	Description
 RAL 9006 Grey	ECONOM STANDARD	Orthophthalic polyester resin. Resistant to mildly aggressive environments.
 RAL 7040 Grey	ECONOM NON FIRE	Orthophthalic polyester resin with non-combustible additive. Fire-retardant properties and resistance to chemical agents.
 RAL 6010 Green	ISO NON FIRE	Isophthalic polyester resin with non-combustible additive for use in aggressive environments.
 RAL 7035 Light grey	FOOD NON FIRE	Isophthalic polyester resin with non-combustible additive for food processing and livestock facilities.
 RAL 2002 Red	VINYL NON FIRE	Vinyl ester resin with non-combustible additive for use in aggressive environments.
 RAL 9004 Black	PHENOL NON FIRE	Phenolic resin with non-combustible additive providing high operating temperature, fire-retardant properties and low smoke generation.

By default each series has a standard RAL colour. If the customer wishes to change the standard colour — for example to a corporate colour — specialists will select the appropriate RAL shade. Lead time for such a special order is approximately one month. For further details, please enquire.

3 CELL DIMENSIONS AND GRATING HEIGHT



Cells are square to provide multi-directional strength. Grating strength is achieved by laying fibreglass in two directions.

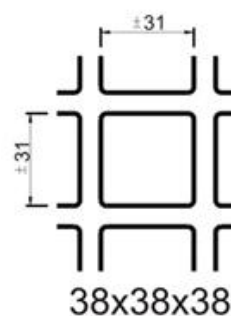
Two concepts are distinguished:

Cell size and Internal cell size.

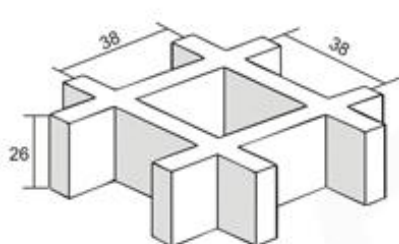
X-1, Y-1 – Cell size

X-2, Y-2 – Internal cell size

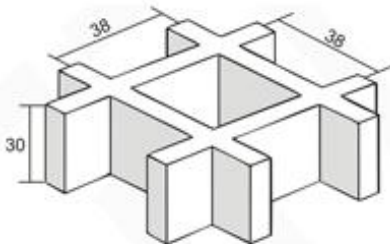
h – Grating height



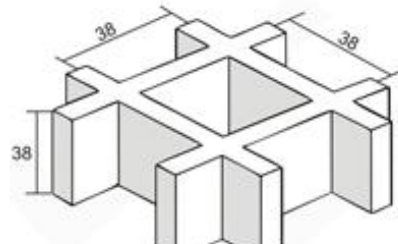
Grating variants by dimension: Height (mm) × Cell size (mm × mm)



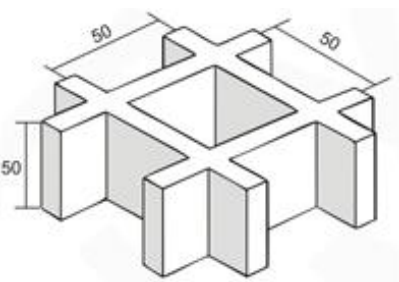
26x38x38



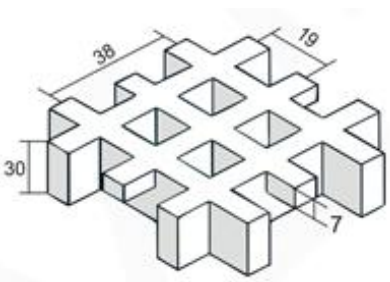
30x38x38



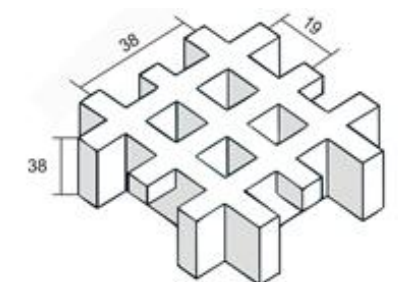
38x38x38



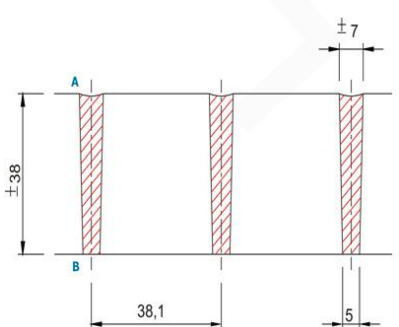
50x50x50



30x19x19



38x19x19



When selecting the grating type, note the concave surface. The internal cell size on side A (concave) is 1–2 mm smaller than on side B (smooth). Rib width also differs by 1–2 mm.

Grating 26×38×38.

Side A: Internal cell 32×32 mm, Rib width 6 mm

Side B: Internal cell 33×33 mm, Rib width 5 mm

Grating 30×38×38.

Side A: Internal cell 32×32 mm, Rib width 7 mm

Side B: Internal cell 33×33 mm, Rib width 5 mm

Grating 38×38×38.

Side A: Internal cell 32×32 mm, Rib width 7 mm

Side B: Internal cell 33×33 mm, Rib width 5 mm

Grating 50×50×50.

Side A: Internal cell 43×43 mm, Rib width 8 mm

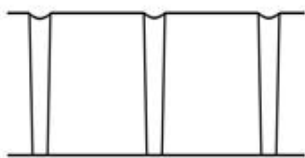
Side B: Internal cell 45×45 mm, Rib width 6 mm

Grating 30×19×19.

Side A: Internal cell 13×13 mm, Rib width 5–6 mm

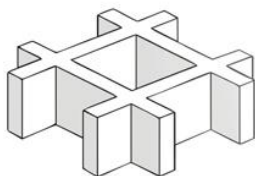
Side B: Internal cell 33×33 mm, Rib width 5 mm

4 ADDITIONAL OPTIONS



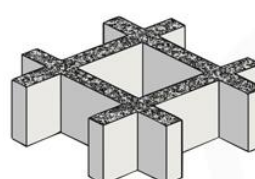
Moulded gratings with concave surface

Used in structures requiring enhanced slip resistance and easy surface cleaning (inter-floor platforms, staircases, service platforms, overpasses, etc.)



Moulded gratings with smooth surface

By default the grating has a concave surface; smooth surface is an additional option. Smooth gratings have the same technical characteristics as standard gratings. They are widely used in architectural design of buildings, roofing elements, equipment enclosures, etc.



Moulded gratings with grit coating

These gratings have a quartz crystal coating (Silicon Dioxide SiO_2) fused into the surface. Particle size 0.6 mm to 1.2 mm. This type provides the highest anti-slip rating, ensuring safe walking.



Moulded gratings with small cells (Mini-mesh)

Mini-mesh gratings have an open area of 12×12 mm. The fine mesh prevents objects up to 15 mm from falling through, in accordance with European standards. The fine mesh facilitates movement of pushchairs, bicycles, wheelchairs, trolleys, etc.



Moulded gratings with closed surface

Can be manufactured on the basis of any standard grating type and size. The closing composite sheet is made from the same materials as the grating, applied after manufacture, standard thickness 3 mm. Ideal for service platforms, covering pits and trenches, inter-floor platforms, transport zones, etc. Weight increases by 7.9 kg/m^2 , height increases by 3 mm. Closed with grit coating: weight increases by 8.9 kg/m^2 , height increases by 6 mm.

Moulded gratings with conductive surface

Standard grating series do not have conductive properties. Conductive-surface gratings have a special carbon coating that dissipates static electricity through an earthing circuit. The conductive surface can be applied to any grating type and size. Such gratings are used where static electricity in building structures is unacceptable. Electrical resistance less than $26 \text{ k}\Omega$ per 300 mm. Top-layer colour — BLACK.

5 STANDARD PANEL SIZES. GRATING WEIGHT

Moulded gratings are produced from fibreglass (reinforcement) and resin cast in a mould. Standard panel sizes are determined by mould dimensions.

#	Height mm	Cell size mm	Panel size mm	Weight kg/m ²
1	26	38 × 38	1220 × 3660	12.5
2	26	38 × 38	4038 × 1000	12.5
3	30	19 × 19	4047 × 1007	19
4	30	38 × 38	4046 × 1525	15
5	30	38 × 38	4038 × 1000	15
6	30	38 × 38	3660 × 1220	15
7	38	19 × 19	4047 × 1247	21.9
8	38	38 × 38	3660 × 1220	19
9	38	38 × 38	4038 × 1000	19
10	38	38 × 38	4046 × 1525	19
11	50	50 × 50	3665 × 1225	22

6 CUTTING

When cutting panels to obtain panels with closed cells, use the dimension tables below.

CLOSED CELL DIMENSIONS

4047 × 1007 × 30 (19 × 19) TG 20

47	527	1007	1487	1966	2486	2966	3446	3926
87	567	1047	1526	2006	2526	3006	3486	3966
127	607	1086	1566	2046	2566	3046	3526	4006
167	647	1126	1606	2106	2606	3086	3566	4046
207	687	1166	1646	2146	2646	3126	3606	
247	727	1206	1686	2206	2686	3166	3646	
287	767	1246	1726	2246	2726	3206	3686	
327	807	1286	1766	2286	2766	3246	3726	
367	847	1327	1806	2326	2806	3286	3766	
407	887	1367	1846	2366	2846	3326	3806	
447	927	1407	1886	2406	2886	3366	3846	
487	967	1447	1926	2446	2926	3406	3886	

4038 × 1000 × 38 (38×38) TG 55

46	84	123	161	199	238	276	315	353	391
429	468	506	545	583	621	660	699	737	775
814	852	890	929	967	1006	1044	1082	1121	1159
1198	1236	1274	1313	1351	1389	1427	1466	1504	1542
1581	1619	1658	1696	1734	1773	1811	1849	1888	1926
1965	2003	2041	2080	2118	2157	2195	2233	2272	2310
2349	2387	2425	2464	2502	2540	2579	2617	2655	2694
2732	2770	2809	2847	2885	2923	2962	3000	3039	3077
3115	3153	3192	3230	3269	3307	3345	3384	3422	3460
3499	3537	3576	3614	3652	3690	3729	3767	3805	3843
3882	3921	3959	3998	4036					

3665 × 1225 × 50 (50×50) TG90

60	111	161	212	263	314	365	416	466	517
567	618	668	720	770	821	872	923	973	1024
1075	1125	1176	1227	1277	1328	1379	1430	1480	1531
1591	1633	1683	1734	1786	1836	1887	1937	1988	2039
2090	2140	2191	2242	2293	2344	2394	2445	2495	2546
2597	2648	2699	2749	2800	2851	2902	2952	3003	3054
3104	3155	3205	3256	3307	3358	3408	3459	3510	3561
3611	3663								

4038 × 1000 × 30 (38×38) TG40

46	84	123	161	199	238	276	314	353	391
429	468	506	544	583	621	659	698	736	774
813	851	889	928	966	1004	1043	1081	1119	1158
1196	1234	1272	1311	1349	1387	1426	1464	1502	1541
1579	1617	1656	1694	1732	1771	1809	1847	1886	1924
1962	2001	2039	2077	2116	2154	2192	2231	2269	2307
2346	2384	2422	2461	2499	2537	2576	2614	2653	2691
2729	2768	2806	2844	2883	2921	2959	2998	3036	3074
3113	3151	3189	3228	3226	3304	3343	3381	3419	3458
3496	3534	3573	3611	3649	3688	3726	3765	3803	3841
3880	3918	3956	3994	4032					

4038 × 1000 × 26 (38×38) TG30

45	83	122	160	198	236	275	313	351	390
428	466	504	543	580	619	658	696	734	772
810	849	888	926	964	1003	1040	1079	1118	1156
1194	1233	1270	1309	1348	1386	1424	1462	1501	1539
1578	1616	1654	1692	1731	1769	1807	1846	1884	1922
1961	1998	2037	2075	2113	2152	2191	2229	2267	2306
2344	2382	2421	2459	2497	2536	2574	2612	2651	2689
2727	2766	2804	2842	2881	2920	2958	2996	3034	3073
3111	3149	3188	3226	3265	3304	3342	3380	3418	3457
3496	3534	3572	3610	3649	3687	3725	3764	3802	3841
3879	3917	3956	3994	4032					

Gratings can be cut or cast to the customer's specification. Cut edges are ground and sealed with resin to preserve the stated technical properties. As part of our service, we are pleased to offer competitive installation rates upon request.

Tolerances**Full panel tolerances:**

+ / – 3 mm in length and width

+ / – 1.5 mm in thickness direction

Flatness tolerance:

Length: 4.5 mm per metre

Width: 2.5 mm

Cutting tolerance:

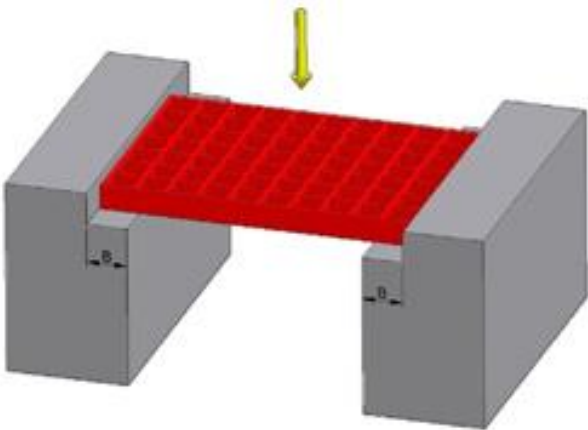
Length: + / – 5 mm Width: + / – 5 mm

Perimeter: + / – 2 mm

7 INSTALLATION. FASTENERS

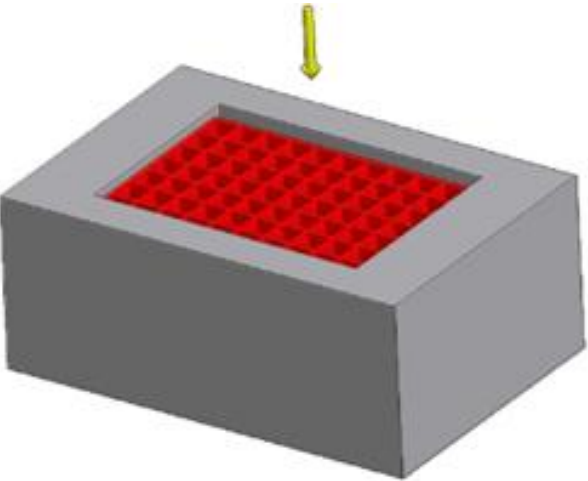
Recommendations for installation of TATRAGRATE grating

Recommended minimum bearing width



Grating height	Bearing width "B"
26 mm	30 mm
30 mm	30 mm
38 mm	40 mm
50 mm	50 mm

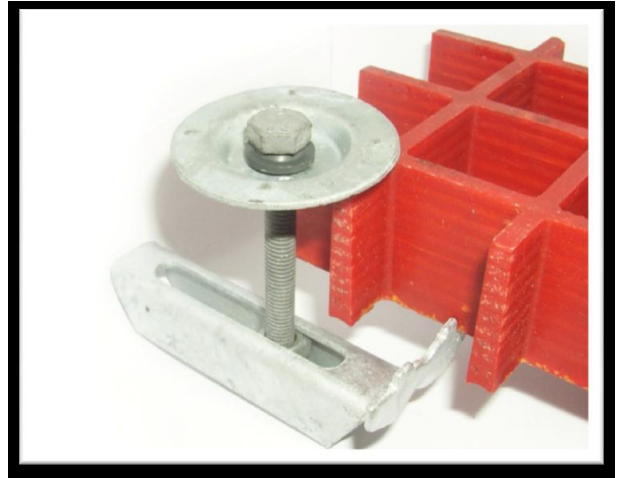
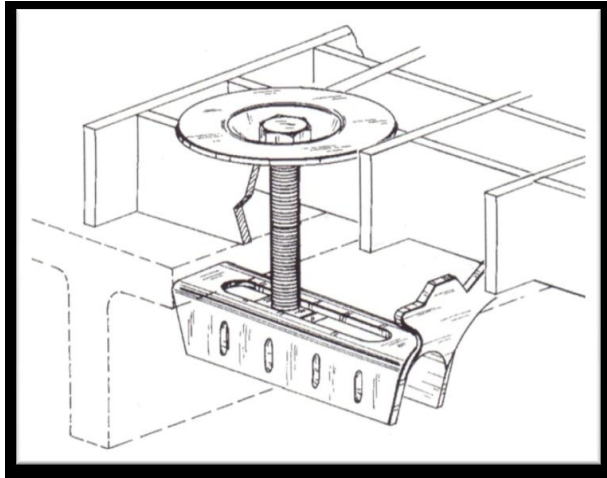
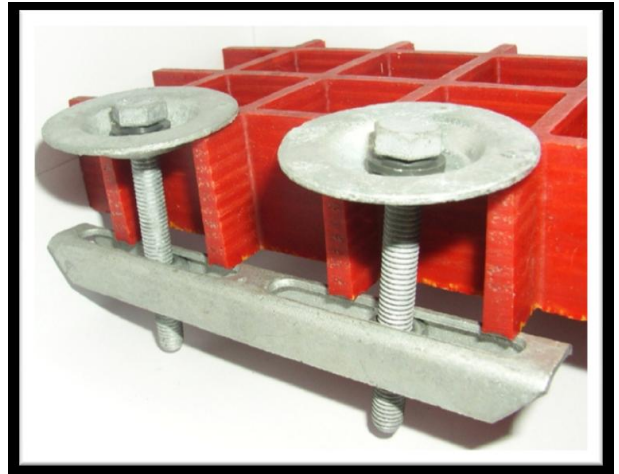
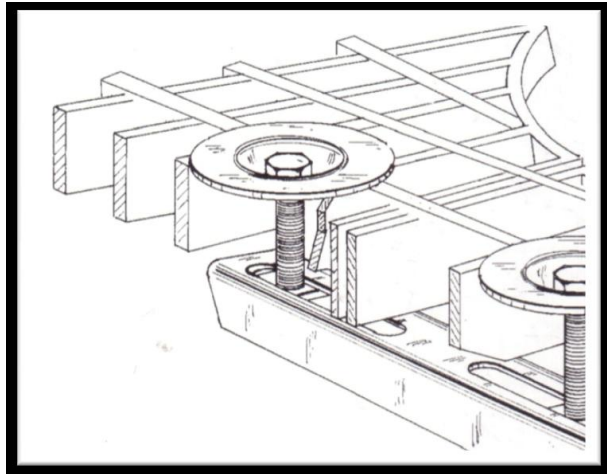
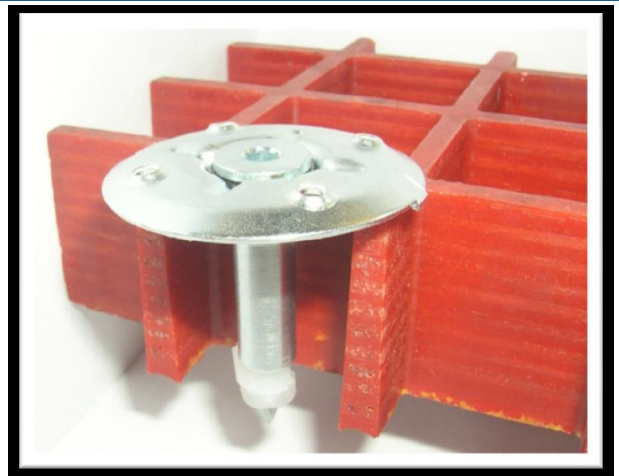
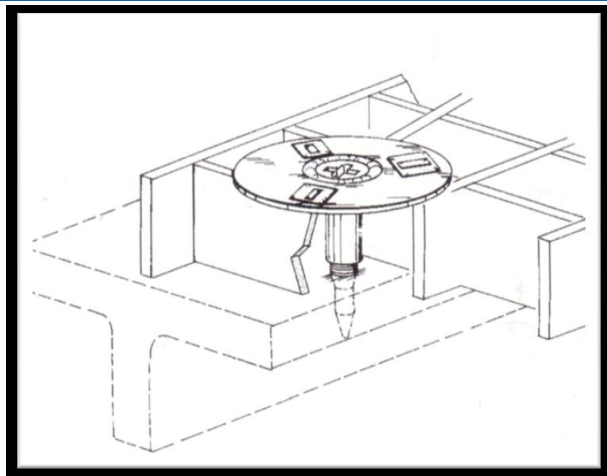
Grating installation in shaft opening

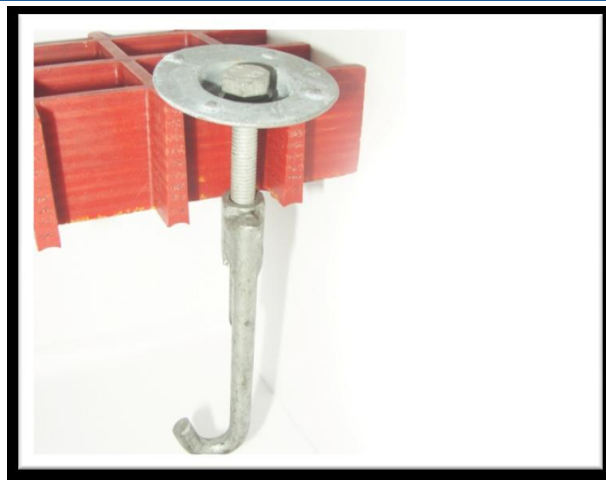
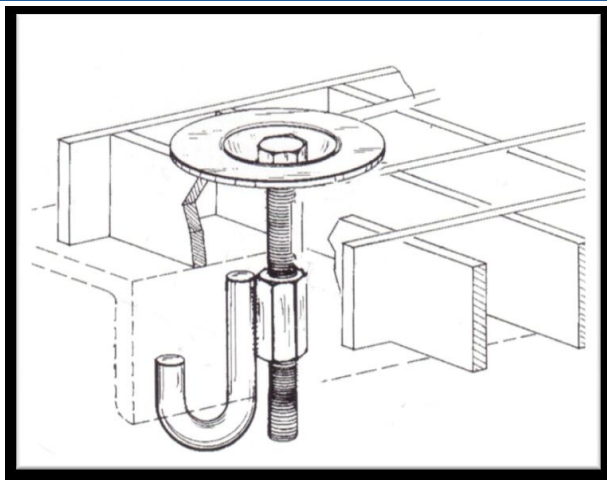
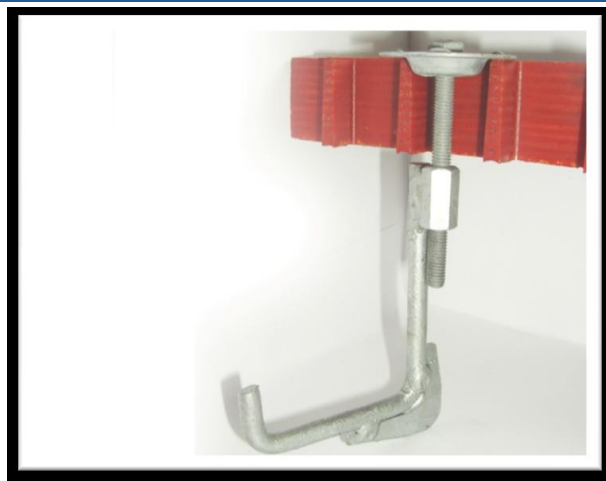
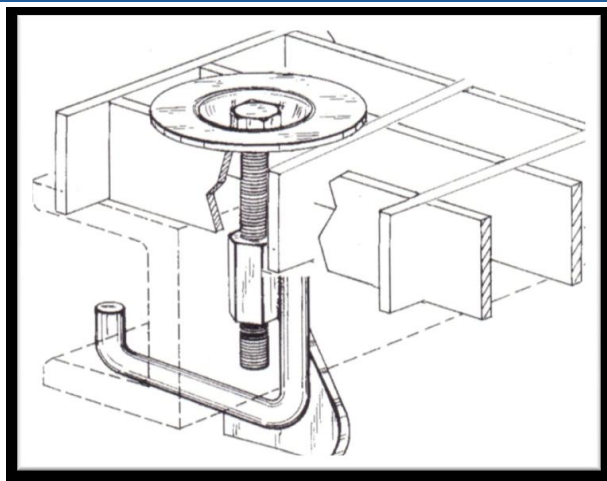


Grating height	Max. opening width
26 mm	600 mm
30 mm	1000 mm
38 mm	1100 mm
50 mm	1400 mm

Fasteners

All fastener types for moulded gratings are manufactured from high-grade A4 stainless steel — a corrosion-resistant grade also known as "acid-proof".

B 132T**B 932T****B 432TE**

B732T**B 832T****8 FROST RESISTANCE. OPERATING TEMPERATURE**

Change in physical-mechanical properties of resin after 100 freeze-thaw cycles (–60 °C to +20 °C)

Resin type	Change in physical-mechanical properties after 100 freeze-thaw cycles (–60 °C to +20 °C)		
	Tensile strength reduction, %, max.	Bending strength reduction, %, max.	Compressive strength reduction, %, max.
FOOD NON FIRE	15	15	15
VINYL NON FIRE	15	15	15
ISO NON FIRE	15	15	15
ECONOM STANDART	15	15	15
ECONOM NON FIRE	15	15	15

Operating temperature

Resin type	Operating temperature, °C
Vinyl ester	–60 °C / +110 °C
Vinyl ester – high fire resistance	–60 °C / +110 °C
Isophthalic polyester	–60 °C / +110 °C
Food-grade polyester	–60 °C / +110 °C
Orthophthalic polyester	–60 °C / +110 °C
Phenolic	–60 °C / +180 °C

9 LOAD DATA

Load data – support on two longitudinal sides. Series: ISO NON FIRE

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
ISO NON FIRE	19×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	6,628.00	2,210.00
			Linear q, kg/lin.m	2,549.00	849.40
			Concentrated P, kg	3,059.10	1,019.70
	19×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	7,137.90	2,378.96
			Linear q, kg/lin.m	3,263.04	1,088.02
			Concentrated P, kg	4,588.65	1,529.55
	38×38×26	2500×1000×26	Uniformly distributed q, kg/m ²	3,059.10	1,325.61
			Linear q, kg/lin.m	1,223.64	509.85
			Concentrated P, kg	2,549.25	849.41
	38×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	5,608.35	1,869.11
			Linear q, kg/lin.m	1,835.46	611.82
			Concentrated P, kg	3,059.10	1,019.70
	38×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	7,137.90	2,378.96
			Linear q, kg/lin.m	3,263.04	1,088.02
			Concentrated P, kg	3,568.95	1,190.00
	51×51×51	2500×1000×51	Uniformly distributed q, kg/m ²	9,687.15	3,229.39
			Linear q, kg/lin.m	5,608.35	1,869.11
			Concentrated P, kg	6,628.05	2,209.69

Load data – support on two longitudinal sides. Series: FOOD NON FIRE

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
FOOD NON FIRE	19×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	5,098.50	1,699.84
			Linear q, kg/lin.m	2,039.40	680.14
			Concentrated P, kg	2,549.25	849.41
	19×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	6,118.20	2,039.40
			Linear q, kg/lin.m	2,753.19	917.73
			Concentrated P, kg	3,568.95	1,190.00
	38×38×26	2500×1000×26	Uniformly distributed q, kg/m ²	2,549.25	849.41
			Linear q, kg/lin.m	101.97	339.56
			Concentrated P, kg	2,039.40	680.14
	38×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	4,588.65	1,529.55
			Linear q, kg/lin.m	1,529.55	509.85
			Concentrated P, kg	2,549.25	849.41
	38×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	5,608.35	1,869.11
			Linear q, kg/lin.m	2,753.19	917.73
			Concentrated P, kg	3,059.10	1,019.70
	51×51×51	2500×1000×51	Uniformly distributed q, kg/m ²	8,157.60	2,719.54
			Linear q, kg/lin.m	4,588.65	1,529.55
			Concentrated P, kg	5,608.35	1,869.11

Load data – support on two longitudinal sides. Series: VINYL NON FIRE

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
VINYL NON FIRE	19×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	13,256.10	4,418.36
			Linear q, kg/lin.m	5,098.50	1,699.84
			Concentrated P, kg	6,118.20	2,039.40
	19×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	13,256.10	4,418.36
			Linear q, kg/lin.m	6,628.05	2,209.69
			Concentrated P, kg	9,177.30	3,059.10
	38×38×26	2500×1000×26	Uniformly distributed q, kg/m ²	6,118.20	2,039.40
			Linear q, kg/lin.m	2,549.25	849.41
			Concentrated P, kg	5,098.50	1,699.84
	38×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	11,726.55	3,908.51
			Linear q, kg/lin.m	3,568.95	1,190.00
			Concentrated P, kg	6,118.20	2,039.40
	38×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	14,275.80	4,758.94
			Linear q, kg/lin.m	6,628.05	2,209.69
			Concentrated P, kg	7,647.75	2,549.25
	51×51×51	2500×1000×51	Uniformly distributed q, kg/m ²	19,374.30	6,457.76
			Linear q, kg/lin.m	10,197.00	3,398.66
			Concentrated P, kg	13,765.95	4,588.00

Load data – support on two longitudinal sides. Series: ECONOM NON FIRE

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
ECONOM NON FIRE	19×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	8,157.60	2,719.54
			Linear q, kg/lin.m	3,059.10	1,019.70
			Concentrated P, kg	3,568.95	1,190.00
	19×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	9,177.30	3,059.10
			Linear q, kg/lin.m	4,078.80	1,359.26
			Concentrated P, kg	6,118.20	2,039.40
	38×38×26	2500×1000×26	Uniformly distributed q, kg/m ²	3,568.95	1,190.00
			Linear q, kg/lin.m	1,631.52	543.50
			Concentrated P, kg	3,059.10	1,019.70
	38×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	7,647.75	2,549.25
			Linear q, kg/lin.m	2,345.31	782.11
			Concentrated P, kg	3,568.95	1,190.00
	38×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	8,667.45	2,888.81
			Linear q, kg/lin.m	4,078.80	1,359.26
			Concentrated P, kg	4,588.65	1,529.55
	51×51×51	2500×1000×51	Uniformly distributed q, kg/m ²	12,746.25	4,249.09
			Linear q, kg/lin.m	6,628.05	2,209.69
			Concentrated P, kg	8,157.60	2,719.54

Load data – support on two longitudinal sides. Series: ECONOM STANDART

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
ECONOM STANDART	19×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	9,177.30	3,059.10
			Linear q, kg/lin.m	3,568.95	1,190.00
			Concentrated P, kg	4,078.80	1,359.26
	19×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	10,197.00	3,398.66
			Linear q, kg/lin.m	4,588.65	1,529.55
			Concentrated P, kg	6,628.05	2,209.69
	38×38×26	2500×1000×26	Uniformly distributed q, kg/m ²	4,078.80	1,359.26
			Linear q, kg/lin.m	1,733.49	917.73
			Concentrated P, kg	3,568.95	1,190.00
	38×38×30	2500×1000×30	Uniformly distributed q, kg/m ²	8,157.60	2,719.54
			Linear q, kg/lin.m	2,651.22	884.08
			Concentrated P, kg	4,078.80	1,359.26
	38×38×38	2500×1000×38	Uniformly distributed q, kg/m ²	9,687.15	3,229.39
			Linear q, kg/lin.m	4,588.65	1,529.55
			Concentrated P, kg	5,098.50	1,699.84
	51×51×51	2500×1000×51	Uniformly distributed q, kg/m ²	13,765.95	4,588.65
			Linear q, kg/lin.m	7,647.75	2,549.25
			Concentrated P, kg	9,687.15	3,229.39

Load data – support on perimeter. Series: ISO NON FIRE

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
ISO NON FIRE	19×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	6,118.20	2,039.40
			Linear q, kg/lin.m	3,059.10	1,019.70
			Concentrated P, kg	3,568.95	1,190.00
	38×38×26	2400×1200×26	Uniformly distributed q, kg/m ²	3,263.04	1,088.02
			Linear q, kg/lin.m	2,039.40	680.14
			Concentrated P, kg	2,447.28	815.76
	38×38×30	2400×1200×30	Uniformly distributed q, kg/m ²	5,608.35	1,869.11
			Linear q, kg/lin.m	2,549.25	849.41
			Concentrated P, kg	3,059.10	1,019.70
	38×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	6,628.05	2,141.37
			Linear q, kg/lin.m	3,568.95	1,190.00
			Concentrated P, kg	3,059.10	1,019.70
	51×51×51	2400×1200×51	Uniformly distributed q, kg/m ²	10,197.00	3,365.01
			Linear q, kg/lin.m	6,628.05	2,209.69
			Concentrated P, kg	7,137.90	2,378.96

Load data – support on perimeter. Series: FOOD NON FIRE

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
FOOD NON FIRE	19×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	5,098.50	1,699.84
			Linear q, kg/lin.m	2,549.25	849.41
			Concentrated P, kg	2,549.25	849.41
	38×38×26	2400×1200×26	Uniformly distributed q, kg/m ²	2,753.19	917.73
			Linear q, kg/lin.m	1,733.49	578.17
			Concentrated P, kg	2,039.40	680.14
	38×38×30	2400×1200×30	Uniformly distributed q, kg/m ²	4,588.65	1,529.55
			Linear q, kg/lin.m	2,243.34	747.44
			Concentrated P, kg	2,549.25	849.41
	38×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	5,608.35	1,869.11
			Linear q, kg/lin.m	2,753.19	917.73
			Concentrated P, kg	2,549.25	849.41
	51×51×51	2400×1200×51	Uniformly distributed q, kg/m ²	8,667.45	2,888.81
			Linear q, kg/lin.m	5,608.35	1,869.11
			Concentrated P, kg	5,608.35	1,869.11

Load data – support on perimeter. Series: VINYL NON FIRE

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
VINYL NON FIRE	19×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	13,256.10	4,418.36
			Linear q, kg/lin.m	6,628.05	2,209.69
			Concentrated P, kg	7,137.90	2,378.96
	38×38×26	2400×1200×26	Uniformly distributed q, kg/m ²	6,628.05	2,209.69
			Linear q, kg/lin.m	4,384.71	1,461.23
			Concentrated P, kg	5,098.50	1,699.84
	38×38×30	2400×1200×30	Uniformly distributed q, kg/m ²	11,216.70	3,739.24
			Linear q, kg/lin.m	5,608.35	1,869.11
			Concentrated P, kg	6,118.20	2,039.40
	38×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	13,256.10	4,418.36
			Linear q, kg/lin.m	7,137.90	2,378.96
			Concentrated P, kg	6,628.05	2,209.69
	51×51×51	2400×1200×51	Uniformly distributed q, kg/m ²	20,394.00	6,798.34
			Linear q, kg/lin.m	13,765.95	4,588.65
			Concentrated P, kg	14,275.80	4,758.94

Load data – support on perimeter. Series: ECONOM NON FIRE

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
ECONOM NON FIRE	19×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	8,157.60	2,719.54
			Linear q, kg/lin.m	4,078.80	1,359.26
			Concentrated P, kg	4,588.65	1,529.55
	38×38×26	2400×1200×26	Uniformly distributed q, kg/m ²	4,078.80	1,359.26
			Linear q, kg/lin.m	2,753.19	917.73
			Concentrated P, kg	3,059.10	1,019.70
	38×38×30	2400×1200×30	Uniformly distributed q, kg/m ²	7,137.90	2,378.96
			Linear q, kg/lin.m	3,568.95	1,190.00
			Concentrated P, kg	3,772.89	1,257.29
	38×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	8,667.45	2,888.81
			Linear q, kg/lin.m	4,588.65	1,529.55
			Concentrated P, kg	4,078.80	1,359.26
	51×51×51	2400×1200×51	Uniformly distributed q, kg/m ²	13,256.10	4,418.36
			Linear q, kg/lin.m	8,667.45	2,888.81
			Concentrated P, kg	9,177.30	3,059.10

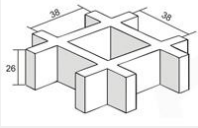
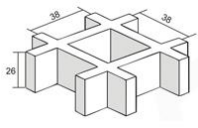
Load data – support on perimeter. Series: ECONOM STANDART

Series	Cell size mm	Panel size mm	Load type	Ultimate load, min.	Standard load
ECONOM STANDART	19×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	9,177.30	3,059.10
			Linear q, kg/lin.m	4,588.65	1,529.55
			Concentrated P, kg	5,098.50	1,699.84
	38×38×26	2400×1200×26	Uniformly distributed q, kg/m ²	4,588.65	1,529.55
			Linear q, kg/lin.m	3,059.10	1,019.70
			Concentrated P, kg	3,568.95	1,190.00
	38×38×30	2400×1200×30	Uniformly distributed q, kg/m ²	8,157.60	2,719.54
			Linear q, kg/lin.m	3,772.89	1,257.29
			Concentrated P, kg	4,282.74	1,427.58
	38×38×38	2400×1200×38	Uniformly distributed q, kg/m ²	9,177.30	3,059.10
			Linear q, kg/lin.m	5,098.50	1,699.84
			Concentrated P, kg	4,588.65	1,529.55
	51×51×51	2400×1200×51	Uniformly distributed q, kg/m ²	15,295.50	5,098.50
			Linear q, kg/lin.m	9,687.15	3,229.39
			Concentrated P, kg	10,197.00	3,398.66

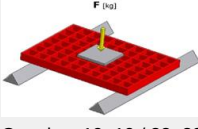
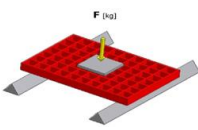
Impact load

Panel type (ISO NON FIRE resin)	Drop of a 32 kg solid body from height at which panel does not fail, m, min.
51×51×51	4.0
38×38×38	3.0
38×38×30	2.5
38×38×26	2.0
19×38×38	3.0
19×38×30	2.5

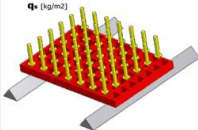
Deflection data for TATRAGRATE moulded gratings, size 38×38×26

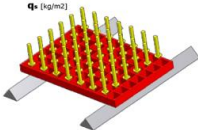
 Opening: 38×38 Thickness: 26	Span [mm]	Conc. load [kg] 1% deflection	Uniform load 1% defl. [kg/m²]	Rec. max (Econom/ISO/ Food) [kg/m²]	Rec. max (Vinyl) [kg/m²]	Ultimate load [kg/m²]	Linear load [kg/305mm] 1% defl.
 Opening: 38×38 Thickness: 26	300	1136	7347	7956	15545	34800	506
	400	738	3214	4478	8746	19744	288
	500	529	1693	2868	5598	12721	186
	600	402	1002	1992	3888	8882	130
	700	319	644	1464	2857	6556	96
	800	261	438	1121	2187	5039	74
	900	219	313	886	1728	3996	59
	1000	187	231	718	1400	3247	48
	1100	162	176	594	1157	2691	40
	1200	141	137	499	972	2267	33
	1300	116	109	425	829	1936	26
	1400	96	88	367	714	1673	–
	1500	81	72	319	622	1461	–

Deflection data for TATRAGRATE moulded gratings, size 19×19×30, 38×38×30

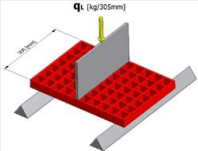
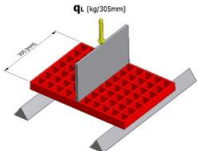
 Opening: 19×19 / 38×38 Thickness: 30	Span [mm]	Conc. load [kg] 1% deflection	Uniform load 1% defl. [kg/m²]	Rec. max (Econom/ISO/ Food) [kg/m²]	Rec. max (Vinyl) [kg/m²]	Ultimate load [kg/m²]	Linear load [kg/305mm] 1% defl.
 Opening: 19×19 / 38×38 Thickness: 30	300	1400	14844	13379	26141	58519	865
	400	998	6664	7989	15602	35223	518
	500	767	3581	5356	10455	23759	348
	600	619	2155	3863	7539	17223	251
	700	517	1403	2931	5717	13121	191
	800	441	968	2307	4499	10366	150
	900	384	697	1868	3642	8421	122
	950	361	600	1695	3306	7655	111
	1000	339	520	1546	3015	6992	101
	1100	303	399	1304	2541	5910	85
	1200	274	313	1115	2174	5069	73
	1300	249	250	966	1883	4401	63
	1400	229	204	846	1649	3862	55

Deflection data for TATRAGRATE moulded gratings, size 38×38×38

 Opening: 38×38 Thickness: 38	Span [mm]	Conc. load [kg] 1% deflection	Uniform load 1% defl. [kg/m²]	Rec. max (Econom/ISO/ Food) [kg/m²]	Rec. max (Vinyl) [kg/m²]	Ultimate load [kg/m²]	Linear load [kg/305mm] 1% defl.

 Opening: 38×38 Thickness: 38	300	2190	26809	14278	38807	61369	1288
	400	1533	10599	8031	21830	37082	758
	500	1162	5163	5139	13971	25088	502
	600	927	2867	3569	9703	18231	359
	700	765	1744	2622	7129	13918	270
	800	648	1135	2007	5458	11016	211
	900	560	776	1586	4312	8963	170
	1000	492	552	1285	3493	7453	140
	1100	437	406	1062	2887	6307	117
	1200	389	305	892	2426	5416	100
	1300	325	217	760	2067	4708	86
	1400	275	182	655	1782	4135	75
	1500	236	146	571	1553	3664	66

Deflection data for TATRAGRATE moulded gratings, size 50×50×50

 Opening: 50×50 Thickness: 50	Span [mm]	Conc. load [kg] 1% deflection	Uniform load 1% defl. [kg/m²]	Rec. max (Econom/ISO/ Food) [kg/m²]	Rec. max (Vinyl) [kg/m²]	Ultimate load [kg/m²]	Linear load [kg/305mm] 1% defl.
 Opening: 50×50 Thickness: 50	300	2734	46840	31583	31583	54419	2618
	400	2077	18922	17766	17766	37886	1593
	500	1677	9371	11371	11371	26722	1084
	600	1409	5278	7897	7897	20091	791
	700	1216	3247	5802	5802	15786	606
	800	1070	2132	4442	4442	12810	481
	900	956	1472	3510	3510	10654	393
	1000	864	1056	2843	2843	9035	328
	1100	789	782	2350	2350	7784	278
	1200	720	590	1974	1974	6793	239
	1300	616	423	1682	1682	5994	208
	1400	533	357	1451	1541	5337	183
	1500	466	287	1264	1264	4791	163

Concentrated load

Data shown are for the concentrated load causing 1% deflection at a given span. Load is applied at the centre of the full panel supported on two sides. Gratings with more than two supports will deflect correspondingly less. Data are valid for full, uncut panels only. For other deflection values, multiply the percentage by the 1% load value.

Uniform load

Data shown for uniform load: 1% deflection at a given span, recommended maximum load, and ultimate load. Data are also valid for cut panels. Deflection is proportional to load.

Linear load

Data shown for concentrated load causing 1% deflection for a 305 mm wide strip. Load applied at centre of strip. For wider gratings, multiply the width by the load ÷ 305 mm. Using special fasteners to join gratings without support reduces deflection values.

10 CHEMICAL RESISTANCE DATA

Chemical	Vinyl ester		Isophthalic		Orthophthalic	
	Conc. %	Temp. F/C	Conc. %	Temp. F/C	Conc. %	Temp. F/C
Acetic Acid	50	180/82	50	125/52	5	77/25
Aluminum Hydroxide	100	180/82	100	160/71	ALL	
Ammonium Chloride	ALL	210/99	ALL	170/77	ALL	
Ammonium Bicarbonate	50	160/70	15	125/52	ALL	–
Ammonium Hydroxide	28	100/38	28	N/R	ALL	N/R
Ammonium Sulfate	ALL	210/99	ALL	170/77	ALL	–
Benzene	100	92/40	ALL	N/R	ALL	N/R
Benzoic Acid	SAT	210/99	SAT	150/66	ALL	77/25
Borax	SAT	210/99	SAT	170/77	SAT	113/45
Calcium Carbide	ALL	180/82	ALL	170/77	ALL	–
Calcium Nitrate	ALL	210/99	ALL	180/82	ALL	–
Carbon Tetrachloride	100	92/40	100	N/R	100	N/R
Chlorine, Dry Gas	–	210/99	–	140/60	–	N/R
Chlorine Water	SAT	200/93	SAT	80/27	SAT	N/R
Chromic Acid	10	150/65	5	70/21	5	N/R
Citric Acid	ALL	210/99	ALL	170/77	ALL	77/25
Calcium Chloride	ALL	210/99	ALL	170/77	ALL	104/40
Copper Cyanide	ALL	210/99	ALL	170/77	ALL	77/25
Copper Nitrate	ALL	210/99	ALL	170/77	ALL	–
Ethanol	10	155/82	50	75/24	10	77/25
Ethylene Glycol	100	200/93	100	90/32	100	104/40
Ferric Chloride	ALL	210/99	ALL	170/77	ALL	104/40
Ferrous Chloride	ALL	210/99	ALL	170/77	ALL	86/30
Formaldehyde	37	140/60	50	75/24	25	86/30
Gasoline	100	180/82	100	75/24	100	95/35
Glucose	100	210/99	100	170/77	ALL	
Glycerine	100	210/99	100	150/66	100	
Hydrobromic Acid	50	150/65	50	120/49	18	
Hydrochloric Acid	37	150/65	37	75/24	10	86/30
Hydrofluoric Acid	10	149/65	–	–		
Hydrogen Peroxide	30	150/65	5	100/38	5	NR
Lactic Acid	ALL	210/99	ALL	170/77	ALL	77/25
Lithium Chloride	SAT	210/99	SAT	150/66	ALL	
Magnesium Chloride	ALL	210/99	ALL	170/77	ALL	104/40
Magnesium Nitrate	ALL	210/99	ALL	140/60	ALL	86/30
Magnesium Sulfate	ALL	210/99	ALL	170/77	ALL	104/40
Mercuric Chloride	100	210/99	100	150/66	100	104/40
Mercurous Chloride	ALL	210/99	ALL	140/60	ALL	104/40
Methacrylic Acid	99	95/35	–	–		
Methanol	10	183/84	N/R	N/R	N/R	N/R
Nickel Chloride	ALL	210/99	ALL	170/77	ALL	104/40

Nickel Sulfate	ALL	210/99	ALL	170/77	ALL	104/40
Nitric Acid	20	130/54	20	70/21	20	N/R
Oxalic Acid	ALL	210/99	ALL	75/24	ALL	N/R
Perchloric Acid	30	100/38	10	N/R	10	N/R
Phosphoric Acid	100	210/99	100	120/49	80	N/R
Potassium Chloride	ALL	210/99	ALL	170/77	ALL	104/40
Potassium Dichromate	ALL	210/99	ALL	170/77	ALL	77/25
Potassium Nitrate	ALL	210/99	ALL	170/77	ALL	104/40
Potassium Sulfate	ALL	210/99	ALL	170/77	ALL	104/40
Propylene Glycol	ALL	210/99	ALL	170/77	ALL	104/40
Sea Water	ALL	210/99	ALL	158/70	ALL	113/45

Chemical	Vinyl ester		Isophthalic		Orthophthalic	
	Conc. %	Temp. F/C	Conc. %	Temp. F/C	Conc. %	Temp. F/C
Sodium Acetate	ALL	210/99	ALL	160/71	ALL	104/40
Sodium Bisulfate	ALL	210/99	ALL	170/77	ALL	
Sodium Bromide	ALL	210/99	ALL	170/77	5	–
Sodium Cyanide	ALL	210/99	ALL	170/77	5	N/R
Sodium Hydroxide	25	180/82	N/R	N/R	N/R	N/R
Sodium Nitrate	ALL	210/99	ALL	170/77	ALL	104/40
Sodium Sulfate	ALL	210/99	ALL	170/77	ALL	104/40
Stannic Chloride	ALL	210/99	ALL	160/71	ALL	104/40
Sulfuric Acid	SO	183/80	25	75/24	10	–
Tartaric Acid	ALL	210/99	ALL	170/77	ALL	–
Vinegar	100	210/99	100	170/77	ALL	–
Water, Distilled	100	180/82	100	170/77	ALL	86/30
Zinc Nitrate	ALL	210/99	ALL	170/77	ALL	104/40
Zinc Sulfate	ALL	210/99	ALL	170/77	ALL	104/40

Legend:

ALL – any concentration

N/R – not recommended

SAT – saturated solutions

– information not available



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