模压 vs 拉挤对比 · Molded vs Pultruded Comparison

Moulded vs Pultruded FRP Grating — Same-Load Selection Guide

NANTONG ZEALL (ZeAllgrate) · founded 2004 · plant 20,000+ m² · 200+ staff · exported to 40+ countries · indicative figures for preliminary design; confirm against project calculation before ordering.

1. Same load, two routes

Both moulded and pultruded grating carry the same nominal uniform load, but they differ in open area, weight, impact behaviour and which span-direction the load runs. The table below picks the cheapest 1 m² option for each load band using the verified site load table (L/200, simply supported single span).

2. Load-to-build-up cross reference (kN/m², L/200)

Build-up	600 mm span	900 mm span	1200 mm span	Weight kg/m²
Moulded 25 mm	12.5	6.0	3.2	12.5
Moulded 38 mm	25	12	6.5	19.5
Moulded 38 mm, 50x50 mesh	22	10	5.5	18.0
Pultruded 38 mm (T/I bar)	35	18	9	11.5-14.5
Pultruded 50 mm	48	26	14	16.5-19
Pultruded 65 mm (HD)	62	35	20	23-26 (I-bar 76 range)

3. Selection guide

If you need...	Pick	Why
High open area (>=70 %), drainage, concave grit	Moulded	Resin-rich surface, anti-slip, corrosion-tough
Long spans > 900 mm between steel supports	Pultruded	Unidirectional rovings carry the span load
Very light walkway over tank	Pultruded T-bar 25/38	7.5-13 kg/m² vs 12.5-19.5 kg/m²
Heavy traffic, fork-lift, point load	Pultruded 50/65 or HD moulded	I-bar depth series
Low cost, cut to any shape without losing strength	Moulded	Bi-directional strength, off-cut friendly
Chemically aggressive (strong acid / solvent)	Vinyl ester resin grade, either process	Resin matrix, not process, drives resistance

4. Quick decision tree

Step 1 — nominal uniform load from the table above. Step 2 — span between supports. Step 3 — if span <= 600 mm and open area matters, choose moulded. Step 4 — if span > 600 mm or weight matters, choose pultruded. Step 5 — pick the resin from the resin selection guide before confirming.

Appendix A — Multilingual glossary (EN / DE / ES / FR)

English	Deutsch (DE)	Español (ES)	Français (FR)
FRP / GRP grating	GFP-Gitterrost / GFK-Gitterrost	Rejilla PRFV	Caillebotis PRV
Fibreglass / fiberglass	Glasfaser / GFK	Fibra de vidrio	Fibre de verre
Moulded grating	Pressguss-Gitterrost	Rejilla moldeada	Caillebotis moulé
Pultruded grating	Pultrusions-Gitterrost	Rejilla pultruida	Caillebotis pultrudé
Resin	Harz	Resina	Résine
Isophthalic polyester	Isophthalsäure-Polyester	Poliéster isoftálico	Polyester isophtalique
Vinyl ester	Vinylester-Harz	Resina viniléster	Résine vinylester
Barcol hardness	Barcol-Härte	Dureza Barcol	Dureté Barcol
Load / deflection	Last / Durchbiegung	Carga / flecha	Charge / flèche
Span	Stützweite	Luz	Portée
Clip / fastener	Klammer / Befestiger	Abrazadera / fijación	Agrafe / fixation
Kick plate / toe board	Riffelblech / Fußleiste	Zócalo	Plinthe
Handrail / guardrail	Handlauf / Schutzgeländer	Pasamanos / barandilla	Garde-corps / main courante

DE = GFK (glasfaserverstärkter Kunststoff) · ES = PRFV (plástico reforzado con fibra de vidrio) · FR = PRV (plastique renforcé de fibres de verre).

Appendix B — How to order

Step	What to send us	What we return
1. Brief	Application, medium, temperature, span, load	Recommended build-up and resin
2. Drawing	Plan view, support layout, cut-outs	Cutting list and panel count
3. Confirm	Resin grade, colour, surface (smooth / concave / grit)	Pi with price and lead time
4. Production	Deposit received	Production, QA, packing
5. Shipment	Balance or LC	FOB Shanghai / CFR / CIF per agreed term

Commercial term	Value
Minimum order (MOQ)	10 m²
Standard lead time	12-36 working days (stock to production)
Exceptional lead time	Oversize, custom colour, new die, special resin — confirmed separately
Standard panel	1220 x 3660 mm; cut-to-size on diamond saw
Density	1.5-2.0 g/cm³ depending on resin and glass content
Barcol hardness	>= 40 on a sound panel
Quality system	GB/T19001-2000 idt ISO9001:2000 · reg. 01708Q11888R0S
Product test report	ASTM F3059 report 211122012SHF-001 (grating only)
Contact	sales@gratingfrp.com · www.gratingfrp.com · Nantong, China

We do not issue SGS load reports, ABS product design assessments, or named-customer case references without a written release. Any figure in this sheet is indicative for preliminary design and must be confirmed by a stamped project calculation before ordering.

Issued 2026-11-16 · www.gratingfrp.com · sales@gratingfrp.com · Figures are indicative and do not replace a project-specific load calculation.