TECHNICAL DATA SHEET (TDS)

Molitan R-80 / RE 80

High-Density Reconstituted (Rebond) Polyurethane Foam (Porolon)

1. PRODUCT DESCRIPTION

Molitan R-80 (also designated as RE 80 or R80) is a high-density reconstituted (rebond) flexible polyurethane foam manufactured from shredded and compressed polyurethane foam offcuts bonded together with a polyurethane adhesive binder. Known regionally as *Molitan* or *Porolon*, this grade provides high load-bearing capacity, structural firmness, and vibration damping.

2. PHYSICAL & MECHANICAL PROPERTIES

Property	Test Standard	Typical Value
Material Composition	—	Reconstituted / Rebond PUR foam (Chip foam)
Apparent Density	EN ISO 845	**80 kg/m³** (± 15%)
Compression Hardness (CLD 40%)	EN ISO 3386-1	**6.5 – 10.0 kPa** (± 3.5 kPa)
Tensile Strength	EN ISO 1798	**≥ 50 kPa**
Elongation at Break	EN ISO 1798	**≥ 50%**
Compression Set (50%, 23 °C, 72 h)	EN ISO 1856	**≤ 8% – 10%**
Appearance / Color	Visual	Multicolored / speckled (varies by scrap batch)
Standard Sheet Dimensions	—	2000 × 900 mm or 2000 × 1000 mm (Thickness: 10–100+ mm)

3. KEY APPLICATIONS

- **Load-Bearing Upholstery & Bedding:** Firm core layers in orthopedic and sandwich mattresses, heavy-duty seating, and commercial furniture.
- **Automotive & Transport:** Motorcycle seats, tractor and truck seating cores, and interior floor acoustic underlays.
- **Acoustic & Vibration Insulation:** Sound-absorbing wall panels, subfloor acoustic decoupling, gym flooring underlays, and machinery damping pads.
- **Industrial Packaging:** Custom die-cut protective inserts for heavy or fragile equipment during transit.

4. PROCESSING, HANDLING & SAFETY NOTES

- **Cutting & Shaping:** Suitable for vertical band knives, horizontal foam splitters, and CNC oscillating knife cutters.
- **Bonding:** Compatible with standard solvent-based and water-based contact adhesives formulated for flexible polyurethane foams.

- **Flammability:** Standard R-80 grade is combustible. For applications requiring fire resistance (such as FMVSS 302 for automotive or EN 1021 for furniture), specify a certified flame-retardant (FR) grade upon ordering.
- **Storage:** Store indoors in a dry, well-ventilated area away from direct UV radiation, open flames, and heat sources.

> **Disclaimer:** The values presented above represent typical industry reference parameters for RE 80 / R-80 rebond polyurethane foam. Because reconstituted foam is produced from recycled polyurethane foam granules, exact mechanical values and color distribution may vary slightly between production batches and manufacturers. Always request a batch-specific Certificate of Analysis (CoA) for regulated engineering applications.
