

WHAT IS SMC? WHAT IS DMC?

SMC (Sheet Moulding Compound) and DMC (Dough Moulding Compound) are glass fibre reinforced composite materials that primarily consist of thermoset resins, catalyst and glass fibre.

Glass fibres in SMC are usually chopped to a length of 25mm or 50mm, DMC usually contains fibres of 6mm or 12mm lengths. This can vary from 20% to 60% by weight.

Fibreglass reinforcement guarantees superior mechanical properties. Additional additives such as low-profile components, fillers, release agents, catalysts and process additives, are used to enhance the performance or processing of the material.

As with any material system, be it metallic or plastic, SMC can be formulated to meet specific performance requirements such as high tensile strength, high dimensional stability and high heat resistance. SMC/DMC outperform typical thermoplastic materials in all aspects, making them true engineering materials.

Please see the chart below showing the typical performance characteristics of SMC.

CHARACTERISTIC VALUE	STANDARD	VALUE
Impact Strength	ISO 179	> 60 kJ/m ²
Tensile Strength	ISO 527	> 64 MPa
Tensile Modulus	ISO 527	> 8,000 MPa
Flexural Strength	ISO 178	> 160 MPa
Flexural Modulus	ISO 178	> 8,500 MPa
Heat Distortion Temperature	ISO 75	> 200 degrees C
Temperature Range		-50 degrees C to +150 degrees C
Water Absorption	ISO 62	< 45 mg
Light Fastness	DIN 53 388	7 - 8
Tropical & Moisture Resistance	IEC 68-2-5	No reduction in the mechanical and electrical properties
Fire Resistance	UL 94	V-0 3.0mm
Dielectric Strength	IEC 243-1	> 18Kv/mm
Surface Resistance	IEC 93	> 10/12 O