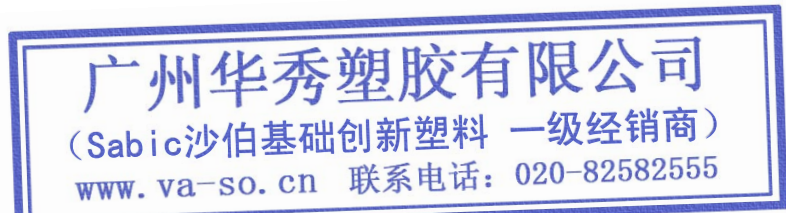




**NORYL™ Resin FM3020V**  
**Asia Pacific: COMMERCIAL**

30% filled FR high modulus foam grade

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yield	760	kgf/cm <sup>2</sup>	SABIC - Japan Method
Tensile Strain, break	6	%	SABIC - Japan Method
Flexural Stress	1160	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus	64900	kgf/cm <sup>2</sup>	ASTM D 790
<b>THERMAL</b>			
HDT, 1.82 MPa, 6.4 mm, unannealed	116	°C	ASTM D 648
CTE, -30°C to 30°C	2.4E-05 - 3.5E-05	1/°C	TMA
<b>PHYSICAL</b>			
Specific Gravity	1.09	-	ASTM D 792
Water Absorption, 24 hours	0.08	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	2.5 - 3	%	SABIC Method
Melt Flow Rate, 300°C/5.0 kgf	19.2	g/10 min	ASTM D 1238



(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Source GMD, last updated:

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**Asia Pacific: COMMERCIAL**

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