

Globalene TPV 1050D BK PRODUCT DATA SHEET

A high hardness, multi-purpose thermoplastic elastomer featuring excellent compression set and high temperature performance. Globalene TPV 1050D BK can be processed by extrusion or molding for applications such as weatherstrip profile, seals, window gaskets and other soft touch articles.

Attributes:

- Globalene TPV 1000 series is a fully vulcanized Thermoplastic Elastomers containing EPDM and PP.
- It is designed for applications requiring long term sealing performance even at elevated temperatures.
- Suitable for injection molding, profile extrusion or re-compounding for plastics modification.
- Conventional thermoplastic processing equipment can be used.

Applications:

Globalene TPV has quality sealing property, good chemical and weathering resistance and electrical property that is suitable to replace main stream TPV, thermoset EPDM rubber, Styrene based TPEs, flexible PVC and other TPEs. It is an excellent choice for applications requiring flexibility in the following markets: automotive parts, appliance, business machines, construction, consumer products, and electronics.

Property	Typical Value	Unit	Test Method
PHYSICAL			
Hardness: Injection Molded, 15 sec	51	Shore D	ISO 868
Specific Gravity 23°C	0.96	N/A	ISO 1183
Melting Point	160	°C	LCY Method
Compression Set 22 hr @ 70°C 70 hr @ 125°C	66 86	%	ISO 815
Brittle Point	-30	°C	ISO 812
Ozone Resistance 500 hr, 100 pphm O ₃ conc.	Excellent		ASTM D-1149
MECHANICAL			
Tensile Stress @ Break 23°C, 500 mm/min	21	MPa	ISO 37
Tensile Stress @ 100% 23°C, 500 mm/min	11	MPa	ISO 37
Tensile Strain @ Break 23°C, 500 mm/min	600	%	ISO 37
Tear Strength 23°C, 500 mm/min	88	kN/m	ISO 34-1

PROCESSING & HANDLING GUIDE

Globalene TPV 1000 series is a Polypropylene-EPDM based elastomer, which can be processed on conventional thermoplastic equipment by injection molding and extrusion. This product has a wide processing window in most applications with melt temperatures ranged from 180°C to 220°C. Pre-drying is recommended for 3-4 hours at 80-90°C before processing.

INJECTION MOLDING CONDITIONS

Melt Temperature	200-220°C
Barrel Temperatures - Rear	180-190°C
Middle	200-220°C
Front	200-220°C
Nozzle	200-220°C
Injection Pressure	: 700-1000 psi (4.8-6.9 MPa)
Holding Pressure	: 300-600 psi (2.1-4.1 MPa)
Holding Time	: 4-10 seconds
Cooling Time	: 15-30 seconds
Mold Temperature	30-55°C
Screw Speed	100-200 RPM
Vent Depth	0.001 inch
Back Pressure	10-150 psi

EXTRUSION CONDITIONS

Melt Temperature	180-220°C
Barrel Temperatures - Zone 1 (Feed)	180°C
Zone 2	190°C
Zone 3 (Transition)	200°C
Zone 4 (Metering)	210°C
Zone 5 (Front)	210°C
Die	210-220°C
Roll Temperature	20-50°C
Screen Pack	20 to 60 mesh
Screw	General Purpose 3:1 Compression ratio ≥ 24:1 L/D ratio

Purging

Recommended to purge thoroughly before and after use of this product with fractional MFR polypropylene.

Recycling & Regrinding

This product can be reprocessed with physical properties not degraded in general. Dry regrind prior to reprocessing required.

Coloring

The use of polyolefin (PP or PE) based color concentrates is recommended when require for Natural TPV grades only. Apply back pressure in injection molding to disperse color.

Storage & Handling

Globalene TPV series is available in 25 kg with Laminated aluminum foil bags (up to 750 kg per pallet). It has a storage life of 3 years from production date with proper storage at normal temperature away from direct sunlight. Please refer to the Material Safety Data Sheet for this material prior to first time handling or contact LCY representative for further information.

Disclaimer

The values quoted here are typical of the grade and obtained from LCY lab. However, it is important to recognize that some variation around these values is to be expected as a result of uncertainties associated with measurement of the specific property and due to the normal variations encountered during the manufacturing process. We hope above information is sufficient. Because of possible changes in the law and in the regulations, we recommend that customers continuing to use our products verify status every year from this date. We cannot anticipate all conditions under which this information and our products or the products of other manufacturers in combination with our products may be used. We accept no responsibility for the results obtained by the application of this information or the safety and suitability of our products alone or in combination with other products. Before using a LCY product, customers and other users should make their own independent determination that the product is suitable for the intended use. They should also ensure that they can use the LCY product safely and legally. This document does not constitute a warranty, express or implied, including a warranty of merchantability or fitness for a particular purpose. No one is authorized to make such warranties or assume any liabilities on behalf of LCY except in writing signed by an authorized LCY employee. In no event shall LCY be liable for special, consequential, incidental, punitive, or exemplary damages.