

Globalene TPV 1045A BK PRODUCT DATA SHEET

A low hardness, multi-purpose thermoplastic elastomer featuring excellent compression set and high temperature performance. Globalene TPV 1045A 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 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	48	Shore A	ISO 868
Specific Gravity 23°C	0.94	N/A	ISO 1183
Melting Point	150	°C	LCY Method
Compression Set 22 hr @ 70°C 70 hr @ 125°C	32 63	%	ISO 815
Brittle Point	-65	°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	6.0	MPa	ISO 37
Tensile Stress @ 100% 23°C, 500 mm/min	1.6	MPa	ISO 37
Tensile Strain @ Break 23°C, 500 mm/min	630	%	ISO 37
Tear Strength 23°C, 500 mm/min	17	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 1000 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.