



VALUPRENE TPV 45A BK

PRODUCT DATA SHEET

A low hardness, black color, multi-purpose thermoplastic elastomer featuring good compression set and moderate temperature performance. VALUPRENE 45A BK can be processed by extrusion for applications such as weatherstrip profile, seals, and window gaskets.

Attributes:

- VALUPRENE TPV is designed for applications requiring sealing performance at moderate temperatures.
- Suitable for profile extrusion.
- Conventional thermoplastic processing equipment can be used.

Applications:

VALUPRENE TPV has good sealing property, chemical, weathering resistance and electrical property that is suitable for TPV, thermoset EPDM rubber, Styrene based TPE, flexible PVC and other TPE applications. It is a good choice for applications requiring flexibility in the following markets: automotive parts, appliance, construction, consumer products, and electronics.

<u>Property</u>	<u>Typical Value</u>	<u>Unit</u>	<u>Test Method</u>
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 @ 23°C 22 hr @ 70°C	14 34	%	ISO 815
MECHANICAL			
Tensile Strength 23°C, 500 mm/min	6.0	MPa	ISO 37
Tensile Modulus @ 100% 23°C, 500 mm/min	1.5	MPa	ISO 37
Ultimate Elongation 23°C, 500 mm/min	700	%	ISO 37
Tear Strength 23°C, 500 mm/min	17	kN/m	ISO 34-1



PROCESSING & HANDLING GUIDE

VALUPRENE TPV series can be processed on conventional thermoplastic equipment by extrusion. This product has a wide processing window in most applications with melt temperatures ranged from 170°C to 210°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; regrind percentage and number of regrind are subject to end use requirement. Pre-drying should be according to above stated drying condition.

Handling & Storage

VALUPRENE 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 & storage or contact LCY representative for further information.