



EPDM Ethylene Propylene Diene Monomer

Description

EPDM-based TPV compounds with excellent elastomeric properties and superior compression set, designed for injection moulding and co-moulding onto polyolefines. They have excellent UV stability and good oil resistance. They have a remarkable range of hardnesses, excellent performance at low temperature and high temperature resistance. The material has an almost white base colour allowing a very wide colour range.

Applications

Car interiors including trims and seals, home furnishings, domestic electrical appliances, pipes, belts, gaskets, footwear.

Types of grade available

Shore A 40 - 80
 Translucent grades with excellent electrometric properties.
 Opaque grades with excellent all-round properties
 Co-moulding high flow grades
 Transparent grades
 High temperature grades
 Hard grades with high modulus

General Processing

Drying Time	2 hours
Drying Temperature	80 Deg C
Type of Drier	N/A
Purging	DYNAPURGE K
Moisture Absorption	Yes
Other Considerations	Easy to process with short moulding cycles

Processing Injection Moulding

Barrel Settings	170°C - 220°C for larger parts 260°C maybe required.
Injection speed	Medium to High
Injection Pressure	350 to 1500 kg/cm ²
Back Pressure	Low to Medium
Screw Speed	25 to 75 rpm
Tool Temperature	35-65 °C
Melt Temperature	175-200C
Processing Stability	Excellent

Gate Considerations	Due to the flexibility of EPDM small gates can be used such as sub gates and pin gates			
Sprue & Runner Considerations	The shorter the land length the better and use full round runners.			
Processing Extrusion				
Barrel Settings	160 - 210°C			
Screw Speed	50- 100 rpm			
Screen Packs	Materials are generally nib free. Breaker plate/screens for higher back pressure and therefore smoother profile surface			
Haul-off / Cooling	Water bath chilled 10c			
Calibration	No, but supporting inner pressure if hollow profiles.			
Physical Properties				
Density	1.04	1.09	1.16	1.08
Shore A	40	70	55	80
Tear strength – KN/m		25		28
Elongation at Break	640%	678%	6000%	680%
Compression set 72 hrs @23c	36%	37%	46	35%
Tensile Strength – MPa	16	7.8	5.0	8.2
Shrinkage	0.7% - 1.2% for medium grades and from 1.0% to 2.2% for very soft unfilled grades			
Flammability				
Flammability Rating	Not Flame Retardant			
Weatherability				
Suitability for outdoor use	YES			
Fillers & Additives				
	Plasticiser into eb phase, Reinforcing polymers, Fillers & and other modifying agents,			
Chemical Resistance				
Resistant to	Alcohol, Detergents, Bases, Acids (except concentrated Nitric Acid), Water			
Not resistant to	Aliphatic Hydrocarbons, Mineral Oils (bit superior to SEBS), Fatty Foods			
Food Contact Status				
	Suitable for food contact			
Colouring				
	Easily coloured using universal masterbatches			

WEEE & ROHS Compliance	Yes
Bonding	Can be bonded using a urethane based adhesive
Welding	Can be welded by hot plate welding or high frequency welding

This information has been provided as a general guide and we suggest that you carry out your own specific tests to be sure that this material is suitable for your application.