ELECTROPLAST® UNIVERSAL COMPOUNDING LLP

TECHNICAL DATA SHEET (TPE-01 / EM4)

Description:

Thermoplastic elastomer (TPE/TPR) is defined in the ASTM D1566 standard as "a group of rubber-like materials that, unlike vulcanized conventional rubber materials, can be processed and recycled like thermoplastic materials." Thermoplastic Elastomer do not require curing or vulcanization during processing and can be processed with traditional thermoplastic techniques such as injection molding, extrusion, and blow molding.

Specifications:

TPE-01 conforms to BS EN 50363-1 (EM4), IS 6380 (SE 1) and SAEJ1127 (SGT/SGR).

Typical Properties:

Properties	Unit	Typical Value	Test Method
Density of Compound	gm / cm^3	0.95 – 0.98	ASTM D-792
Hardness	Shore A	62 - 65	ASTM-D-2240
Melt flow index @ 190°C / 2.16 kg load	gm / 10 min	3.5 – 4.0	ASTM D–1238
Oxidation Induction Time	Minutes	> 45	ASTM-D-3895
Volume Resistivity @27^0C	Ohm - cm	≥ $1x10^{15}$	ASTM-D-257
Tensile Strength at break	MPa	8.0 – 9.0	ASTM-D-638
Elongation at Break	%	> 500	ASTM-D-638
Oven ageing at 100 °C, 10 Days Variation in Tensile Strength Variation in Elongation at Break	% %	+ 20 + 20	IEC 60811-401 IEC 60811-401
Flame retardancy (self-extinguishing)	Sec.	< 20	IEC 60332-1

All properties have been determined from compression molded plaques after 24 hours conditioning.

Processing Guidelines:

Suitable for conventional PE/PVC wire and cable extrusion line.

The recommended melt extrusion temperature is 140°C – 170°C. The actual processing condition has to be determined by trial on specific extruder as this may vary depending on the extruder / head and tooling used.

Pre-Drying: TPE Compounds absorb moisture, which is undesirable to get smooth surface. It is therefore recommended that the compound SI 117 should be thoroughly dried (preferably by dehumidified hot air) at 70°C – 80°C for 50 – 60 minutes prior to changing in extruder feed.

Shelf Life/Storage:

TPE-01 can be stored for 12 months from date of manufacturing, without significant deterioration of the quality of material. However, it is recommended to be consumed as soon as possible.

TPE-01 is recommended to be stored at in a cool, dry & clean environment in unopened original packaging.

Packaging:

25 Kg packed in Moisture Barrier Multi-layer liner with PP Woven bag.

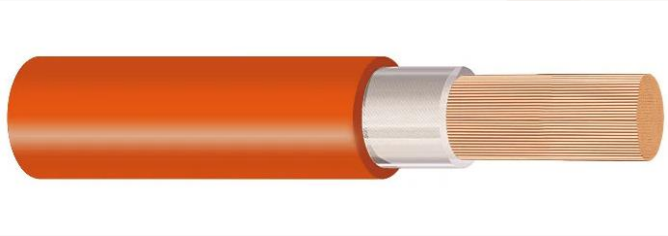
Safety:

TPE-01 is not classified as dangerous preparation.

The products are supplied in the form of free-flowing granules of approx. 2-3 mm size and can be readily handled with commercially available equipment. Handling and transport of the products may generate some dust and fines, which constitute a potential hazard for dust explosion. All metal parts in the system should therefore be properly grounded. Properly designed equipment and good housekeeping will reduce the risk. Inhalation of any type of dust should be avoided as it may cause irritation of the respiratory system. The product is intended for industrial use only. MSDS is available on request.

Disclaimer:

- The specifications given are the guidelines only.
- Above compound is suitable to run on different machines; however, some adjustments may be required on individual machine.
- All properties are tested as per ASTM/IS/IEC standards.
- Any data may change without prior information**.**
- The customers are advised to check the quality, prior to commercial use. There is no guarantee and/or warrantee whatsoever, after processing.



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