OPTIM® P-408 Speciality Polymers

TECHNICAL DATA SHEET

OPTIM® P-408 is a maleic anhydride modified homopolymer polypropylene. The grafting operation of the polypropylene backbone is achieved using a new technology that allows high grafting efficiency and low polymer scission.

Applications

- Chemical coupling agent for fillers like mica talc, calcium carbonate, wood flour in PP compound.
- Coupling agent for glass fibres in PP compounds.
- Compatibilizers for blends such as PP/PA and PP/EVOH.

Key Properties

General	Typical Value (SI)	Test Method
MFI (190 °C/2.16 Kg)	50 g/10min	ASTM D1238
Density	0.908 g/cm3	ASTM D792
Bulk Density	0.51 g/ml	PLUSS® method
Bonded Maleic Anhydride	Very High (%)	PLUSS® method

Mechanical	Typical Value (SI)	Test Method
Tensile Strength	34 MPa	ASTM D638/2010
Percentage Elongation	9 %	ASTM D638/2010
Tensile Modulus	750 MPa	ASTM D638/2010
Flexural Modulus	1750 MPa	ASTM D790/2010
Flexural Strength	50 MPa	ASTM D790/2010

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Hardness	Typical Value (SI)	Test Method
Durometer Hardness		
Shore D	75	ASTM D2240/2004

Thermal	Typical Value (SI)	Test Method
Melting Temperature	162 °C	DSC
Vicat Softening Temperature	153 °C	ASTM 1525/2010

Storage and Handling Procedures

OPTIM® P-408 is mildly hygroscopic and should be stored in a dry and cool area. It is recommended that prior to processing; the requisite quantity of material to be used should be dried in a hopper dryer or oven at 80-95 °C for about 2 hours for obtaining best results. Loss of anhydride functionality may occur due to conversion to acid groups by reaction with atmospheric moisture.

Read and understand Material Safety Data Sheet (MSDS) for more detailed information on the safe handling and disposal of these speciailty polymers.

Processing Conditions

A slight pungent odour is normal during processing of OPTIM® P-408. During processing, the compounding parameters that can lead to optimized performance include extruder type, screw design, barrel temperature, screw speed, throughput, residence time and material feeding sequence. Maximum processing temperature should not generally exceed 280 °C.

Packaging

OPTIM® specialty polymers are supplied in pre-dried form in 25 Kg (55 lbs) PE lined, HD woven sack-laminated paper bags and 750 Kg (1650 lbs) FIBC's. Depending upon customer's requirement, the bags can be further palletized for dispatch. They should be stored in cool and dry place.