



versalis

Technical Data Sheet

PHARMALENE[®]

LDPE

MP 31 PH

Low density polyethylene

Pharmalene MP 31 PH is a medium fluidity low density polyethylene resin (LDPE) additivated with slip agent and anti-block obtained by high pressure autoclave process.

It is produced according to good manufacturing practices (GMP). Parts made by Pharmalene MP 31 PH are characterized by a medium rigidity.

Main Application

The main use is in the pharmaceutical sector.

Pharmalene MP 31 PH is designed for injection moulding and compound.

Pharmalene MP 31 PH is recommended for syringes, caps, stoppers, closures and medium thickness articles.

Main Properties

Resin Properties

	Value	Unit	Test Method
Melt Flow Rate (190 °C/2.16 kg)	8	g/10min	ISO 1133
Melt Flow Rate (190 °C/5 kg)	-	g/10min	ISO 1133
Melt Flow Rate (190 °C/21.6 kg)	-	g/10min	ISO 1133
Density	0.924	g/cm ³	ISO 1183
Melting point	112	°C	Metodo interno
Brittleness temperature	<- 65	°C	ASTM D 746
Vicat softening point (1 kg)	92	°C	ISO 306/A

Mechanical Properties *

	Value	Unit	Test Method
Tensile stress at yield	12	MPa	ISO 527
Tensile stress at break	-	MPa	ISO 527
Elongation at break	-	%	ISO 527
Flexural modulus	180	MPa	ISO 178
Hardness Shore D	50	-	ISO 868 A
Falling Weight	-	J/mm	ISO 6603-2
Izod impact strength, notched	-	J/m	ISO 180/A
ESCR **	-	h	ASTM 1693/B



Processing notes

Processing conditions depend on several parameters: the shape of the part to be manufactured, the localisation of the injection point, the injection moulding machine and the cooling of the mould.

Typical processing conditions:

Temperature profile of the barrel (°C) 160 - 200

Temperature of the mould (°C) 10 - 30

Storage and Handling

Pharmalene MP 31 PH is supplied in pellet form. This material may readily be conveyed and bulk fed through equipment designed for conventional pelletised polyethylene resin, provided the equipment is designed to prevent accumulation of the fines and dust particles that are contained in all polyethylene resins. These fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used be equipped with filters of adequate size, operated and maintained in such a manner to ensure that no leaks develop and earthed adequately. We further recommend that good housekeeping should be practised throughout your facility.

The product should be stored in dry conditions at temperatures below 50°C and protected from sunlight.

Improper storage can initiate degradation which results in odour generation, colour changes and can have negative effects on the physical properties of the product.

Availability

Contact the versalis sales office nearest to you regarding availability and your specific application requirements.

Food Contact and Pharmacopoeia Status

Pharmalene MP 31 PH complies with the European Union (Reg. 10/2011) and the USA (FDA) rules, related to the use of plastic materials intended for contact with foodstuffs.

The composition of our product is conform to the sections of the European Pharmacopoeia (8th ed.) and those of the U.S. Pharmacopoeia (USP 35) indicating the requirements for polyethylene.

