PP MOSTEN® NB 108

TECHNICAL DATASHEET

HOMOPOLYMER FOR FIBRE AND INJECTION MOULDING **MFR (230/2,16): 8 g/10 min**

MOSTEN NB 108 is a polypropylene produced by Unipetrol RPA using INNOVENE™ PP gas-phase technology.

CHARACTERISTICS

- AGF
- phthalates free
- meets European Pharmacopoeia 9 (Ph. Eur. 9, 3.1.3)

INTERNATIONAL DESIGNATION

- ISO 19069-PP-H,,Y,16-02-006

APPLICATION

- multifilament and staple fibre
- household articles
- technical parts

MATERIAL PROPERTIES (typical values, do not represent a specification of given grade)

PARAMETER	TEST METHOD	UNIT	VALUE
RHEOLOGICAL PROPERTIES			
Melt Mass Flow Rate (230 °C/2,16 kg)	ISO 1133-1	g/10 min	8
Moulding Shrinkage Parallel	ISO 294-3,4	%	1,83
Moulding Shrinkage Normal			1,95
MECHANICAL PROPERTIES			
Flexural Modulus	ISO 178	MPa	1700
Tensile Modulus	ISO 527-1,2		1600
Yield Stress			35
Yield Strain		%	9
Elongation at Break			150
Charpy Notched Impact Strength at 23 °C	ISO 179-1	kJ/m^2	3
THERMAL PROPERTIES			
Melting Temperature (DSC)	ISO 11357-1,3	°C	168 - 172
Vicat Softening Temperature (VST)	ISO 306		154
HDT (1,8 MPa)	ISO 75-1,2		56
OTHER PROPERTIES			
Shore D Hardness	ISO 868	-	65

PROCESSING CONDITIONS

PARAMETER	RECOMMENDED VALUE	UNIT
Melt Temperature	200 - 260	°C
Stretch ratio	1:2 - 1:4	-
Screw Length	≥ 25 d*	-

* Screw Diameter

Issued by: Product Intelligence - Polyolefins
Phone: +420 476 162 912
Replaced edition: 11/2019
Issued: 02/2021

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APPEARANCE PROPERTIES

PP MOSTEN is delivered in the form of natural stabilized pellets. Typical pellet length is (2 - 7) mm, typical bulk density of PP pellets is (450 - 600) kg/m^3.

THERMAL PROPERTIES

PP MOSTEN exhibits good thermal-isolation properties. With decreasing temperature, the toughness of the material decreases and below -20 °C, the materials becomes substantially brittle. In the area of low temperatures, it is more suitable to use copolymers, which have generally their glass transition temperature Tg shifted towards lower temperatures compared to homopolymers. In the area of high temperatures, PP MOSTEN can permanently be used up to 100 °C, grades with heat stabilization (LTHS) can be used up to 105 °C. The level of temperature stability of all PP Mosten grades is such that during common processing method, no material degradation occurs.

PHYSICAL-CHEMICAL PROPERTIES

PP MOSTEN exhibits high chemical resistance at both normal and raised temperatures, due to its non-polar character. Within a broad range of temperatures and concentrations it resists to majority of acids, bases and salt solutions. It dissolves only in some solvents at raised temperature (e.g. in aromatic and halogenated hydrocarbons); furthermore, it doesn't resist to strongly oxidizing agents (e.g. nitric acid, oleum, halogens). PP MOSTEN has practically no hygroscopicity, so it can be used in environments with variable relative humidity, without any risk of dimensional changes or changes of mechanical properties of the products. During processing, problems may be caused by moisture condensation during transfer of the material from a cooler to a warmer environment. At storage temperatures below 20 °C it is recommended to condition the material about 24 hours prior to processing in the production hall.

HYGIENIC APPROVAL

PP MOSTEN meets the requirements of the following regulations (as amended):

- Decree of the Ministry of health No. 38/2001 of the Journal of Laws;
- Regulation of the European Parliament and the Council No. 1935/2004;
- Commission Regulation (EU) No. 10/2011;
- Regulation of EP and the Council (ES) No. 1907/2006 (REACH) – for production of the PP Mosten grade, no phthalates have been used.

FIRE & SAFETY CHARACTERISTICS

PP MOSTEN is not classified as a dangerous substance in accordance with the Regulation (EC) 1272/2008 (CLP), nor does it satisfy any of the other conditions set out in Article 31 of the Regulation (EC) 1907/2006 (REACH). Therefore, the producer is not obliged to provide a Material Safety Datasheet. Necessary information according to Article 32 of the Regulation (EC) 1907/2006 (REACH) and further details are provided in "Announcement", available on www.unipetrolrpa.cz or upon request.

PACKAGING, STORAGE, TRANSPORTATION AND DELIVERY

PP MOSTEN is delivered in PE-LD (>PE-LD<) bags, mass 25 kg. 55 pieces of these bags are deposited on one pallet, fixed by a shrinkable PE-LD (>PE-LD<) film, protecting the product from damage and extending its lifetime. The pallets are intended for stocking into two, exceptionally into three layers. PP Mosten can be alternatively delivered bulk loaded in car tanks. Alternative packaging or transportation is possible based on agreement with the customer.

PP MOSTEN is stored in dry, ventilated, roofed storing facility, the premises of which are protected against direct sunlight. Recommended range of storage temperatures is -20 °C to +50 °C. The product distance from any source of heat shall be at least 1 m. The recommended storage time for PP MOSTEN in closed (sealed) bags at defined storage conditions is one year. At longer storage time, it is recommended to check the material properties prior to processing.

PACKAGES

The packages used by producer for packaging of PP MOSTEN grades are designed and manufactured in compliance with technical regulations for weight and volume of the product. Material of the packages does not contain any classified hazardous substances. The total amount of heavy metals (Pb, Cd, Hg and Cr^{VI}) does not exceed the limiting value of 100 ppm. Recommended methods of waste utilization are material utilization, energy utilization.

INSTRUCTIONS FOR WASTE DISPOSAL FROM PE PROCESSING

Products and non-contaminated waste during PP MOSTEN processing can be recycled and further processed into products. Material designation >PP< is used in compliance with ISO 11469. Material designation on products enables material identification during collecting, classification, utilization or disposal of consumer waste. PP MOSTEN does not contain any lead, cadmium, mercury or hexavalent chromium, i.e. total amount of these heavy metals does not exceed 100 ppm. The PP waste is classified by the waste producer in accordance with the valid legal regulations. Recommended methods of waste utilization are material utilization and energy utilization.

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