High density polyethylene for Injection moulding

Description. is especially developed for the high demanding dustbin market. It is an excellent UV stabilized HDPE copolymer grade. It shows an ideal combination of processability, consistency and product properties. It provides optimized high stiffness/cold impact-balance, surface quality and weatherability properties.

Typical applications. is especially recommended for the manufacture of injection molded dustbins (waste containers on wheels and household containers). The grade is also very suited for high demanding production of crates & boxes (pallet boxes, pallets, boxes applied at very low temperatures) and pails & container applications (industrial, shipping).

Processing conditions. Typical moulding conditions for are:
Melt temperature: 232 - 260 °C (450 - 500 °F)
Mould temperature: 20 - 40 °C (70 - 104 °F)
Injection pressure: 93 - 103 MPa (13500 - 15000 PSI)

The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical/ medical applications.

Typical data.

Properties		Units SI	Values	Test methods
Polymer properties				
Melt flow rate (MFR)				ISO 1133
at 190 °C and 2.16 kg		g/10 min	**4.0**	
at 190 °C and 5 kg		g/10 min	**10.5**	
Melt volume rate (MVR)				ISO 1133
at 190 °C and 2.16 kg		ml/10 min	**5.3**	
at 190 °C and 5 kg		ml/10 min	**14**	
Density	1)	kg/m³	**953**	ISO 1183
Mechanical properties	1) 2)			
Tensile test	3) 4)			ISO 527-2
stress at yield		MPa	**26**	
stress at break		MPa	**31**	
strain at break		%	**> 200**	
tensile modulus		MPa	**1100**	
Creep modulus	5) 6)			ISO 899
after 1 hour		MPa	**500**	
after 1000 hours		MPa	**225**	
Izod impact notched				ISO 180/A
at 23 °C		kJ/m²	**5**	
at -30 °C		kJ/m²	**5**	
Hardness Shore D		-	**61**	ISO 868
ESCR	7)	h	**65**	method
Thermal properties				
Heat deflection temperature	1) 2)			ISO 75-2
at 0.45 MPa (HDT/B)		°C	**81**	
Vicat softening temperature	1) 2)			ISO 306
at 10 N (VST/A)		°C	**124**	
DSC test				DIN 53765
melting point		°C	**132**	
enthalpy change		J/g	**203**	