Lupolen 2420 H

Polyethylene, Low Density

Product Description

Lupolen 2420 H is a non-additivated, low density polyethylene. It is delivered in pellet form.

Foodlaw compliance information about this product can be found in separate product documentation.

This product is not intended for use in medical and pharmaceutical applications.

Product Characteristics

Status	Commercial: Active
Test Method used	ISO
Availability	Europe, Asia-Pacific, Africa-Middle East
Processing Methods	Blown Film, Cast Film
Features	Good Heat Seal, Opticals, Good Processability
Typical Customer Applications	Bags & Pouches, Blown Film, Cast Film, Film, Shrink Film

Typical Properties	Method	Value	Unit
Physical			
Density	ISO 1183	0.924	g/cm³
Melt flow rate (MFR) (190°C/2.16kg)	ISO 1133	1.9	g/10 min
Mechanical			
Dart drop impact (50µm, Blown Film)	ASTM D 1709	110	g
Tensile Modulus	ISO 527-1, -2	260	MPa
Tensile Stress at Yield	ISO 527-1, -2	11.0	MPa
Tensile Strength	ISO 527-1, -3		
Note: MD		25.0	MPa
Note: TD		21.0	MPa
Tensile Strain at Break	ISO 527-1, -3		
Note: MD		250	%
Note: TD		600	%
Thermal			
Vicat softening temperature (A50 (50°C/h 10N))	ISO 306	94.0	°C
Melting Temperature	ISO 3146	111	°C
Optical			
Haze (50µm)	ASTM D 1003	<8	%
Gloss	ASTM D 2457		
(20°, 50µm)		>50	
(60°, 50µm)		>100	
Film			

Melt Temperature	160 to 200 °C

Additional Properties

Film properties tested using 50 µm thickness blown film extruded at a melt temperature of 180°C and a blow-up ratio of 1:2.5.
Failure Energy, DIN 53373, 50µm: 4 J/mm
Coefficient of Friction, ISO 8295: >80%
Recommended Thickness: 20 to 100 µm.

Notes

Typical properties; not to be construed as specifications.

Further Information

Lupolen 2420 H

Conveying:
Conveying equipment should be designed to prevent production and accumulation of fines and dust particles that are contained in polymer resins. These particles can under certain conditions pose an explosion hazard. We recommend the conveying system used is equipped with adequate filters, is operated and maintained that no leak develops and adequate grounding exists at all times.

Health and Safety:
The resin is manufactured to the highest standards but, special requirements apply to certain applications such as food end-use contact and direct medical use. For specific information on regulatory compliance contact your local representative.

Workers should be protected from the possibility of skin or eye contact with molten polymer. Safety glasses are suggested as a minimal precaution to prevent mechanical or thermal injury to the eyes.

Molten polymer may be degraded if it is exposed to air during any of the processing and off-line operations. The products of degradation have an unpleasant odour. In higher concentrations they may cause irritation of the mucus membranes. Fabrication areas should be ventilated to carry away fumes or vapours. Legislation on the control of emissions and pollution prevention must be observed. If the principles of sound manufacturing practice are adhered to and the place of work is well ventilated, no health hazards are involved in processing the resin.

The resin will burn when supplied with excess heat and oxygen. It should be handled and stored away from contact with direct flames and/or ignition sources. In burning the resin contributes high heat and may generate a dense black smoke. Starting fires can be extinguished by water; developed fires should be extinguished by heavy foams forming an aqueous or polymeric film. For further information about safety in handling and processing please refer to the Material Safety Data Sheet.

Storage:
The resin is packed in 25 kg bags or in bulk containers protecting it from contamination. If it is stored under adverse conditions, i. e. if there are large fluctuations in ambient temperature and the atmospheric humidity is high, moisture may condense inside the packaging. Under these circumstances, it is recommended to dry the resin before use. Unfavourable storage conditions may also intensify the resin's slight characteristic odour.

The resin is subjected to degradation by ultra-violet radiations or by high storage temperatures. Therefore the resin must be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. The resin can be stored over a period of more than 6 months without significant changes in the specified properties, appropriate storage conditions provided. Higher storage temperatures reduce the storage time.