


Product Data Sheet

SURPASS® HPs153-A Resin

Octene Copolymer HDPE Resin for Blown and MDO Films

Property	ASTM (1)	Typical Values(2)	
Melt Index ⁽³⁾	D 1238	1.1 g/10 min	
Density	D 792	0.954 g/cm³	
Vicat Softening Point	D 1525	127 °C	261 °F
		METRIC UNITS	ENGLISH UNITS
Blown Film Properties⁽⁴⁾			
Thickness		38 µm	1.5 mil
Tear Strength	MD D 1922	30 g	
	TD	58 g	
Dart Drop Impact, F ₅₀	D 1709/A	47 g	
Low Friction Puncture ⁽⁵⁾		27 J/mm	6 in-lb/mil
Tensile Strength	MD D 882	40 MPa	5,800 psi
	TD	32 MPa	4,600 psi
Yield Strength	MD D 882	26 MPa	3,800 psi
	TD	30 MPa	4,400 psi
Elongation	MD D 882	910 %	
	TD	980 %	
1% Secant Modulus	MD D 882	690 MPa	100,100 psi
	TD	800 MPa	116,000 psi
OTR ⁽⁶⁾	D 3985	1,643 cm³/m²/day	106 cm³/100in²/day
MVTR ⁽⁷⁾	F 1249	4.03 g/m²/day	0.26 g/100 in²/day
Haze	D 1003	59 %	
Gloss @ 45°	D 2457	10	

Melt Index 1.1

Density 0.954

Features

- Excellent heat resistance and optics in MDO films made of 100% HDPE
- Outstanding stretching performance for MDO films
- Very high stiffness
- Low gel

Additives

- Processing antioxidant

Applications

- MDO films
- Co-extrusion
- Dry food packaging

(1) Properties designated have been determined using methods which are in accordance with, or substantially in accordance with, the specified testing standards.

(2) Typical Values represent average laboratory values and are intended as guides only, not as specifications.

(3) Condition 190°C/2.16 kg.

(4) Film properties are typical of blown film extruded on a 2.5" extruder with 4" die and 35-mil die gap at a blow up ratio of 2.5:1, but are dependent upon operating conditions.

(5) NOVA Chemicals test method.

(6) Oxygen Transmission Rate, 23°C (74°F), 0% RH, atmospheric pressure.

(7) Moisture Vapour Transmission Rate, 38°C (100°F), 100% RH, atmospheric pressure, thickness 1.5 mil.



SURPASS HPs153-A Resin

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Availability

SURPASS HPs153-A polyethylene resins are available in bulk hopper cars, hopper trucks, boxes, sea bulk containers, or bags. The product type and batch number are clearly marked on each container. Contact the NOVA Chemicals sales office nearest you for availability in your area.

Storage/Handling

SURPASS HPs153-A Blown resin should be stored in a clean, dry place at ambient temperatures. Prolonged or improper storage can result in deterioration of product properties. Care should be taken when handling and transferring product to prevent foreign matter contamination. The NOVA Chemicals Safety Data Sheet (SDS) contains important safety information and should be reviewed before using the product.

Processing Conditions

Comprehensive assistance with processing conditions and technology is available from NOVA Chemicals Technical Service at (403) 291-8444.

Food Packaging Status

United States: SURPASS HPs153-A resin complies with the specifications contained in the U.S. Food and Drug Administration (FDA) regulation 21 CFR 177.1520 for olefin polymers, para. (c) 3.2a, and may thus be used in the United States as an article or component of an article intended for use in contact with food, without food-type restrictions, under Conditions of Use A–H (21 CFR 176.170(c) Table 2).

Other Countries: For regulatory compliance information for other countries, please contact your nearest NOVA Chemicals office.

Environmental

NOVA Chemicals polyethylene resins are biologically and chemically inert, but improper disposal may present an ingestion hazard to wildlife. Where recycling of NOVA Chemicals' polyethylene resins is not possible, disposal to landfill or incineration in accordance with all applicable government laws and regulations is recommended. Please contact NOVA Chemicals Technical Service for further information on recycling and disposal of NOVA Chemicals resins.



is the SPI resin code developed for high density polyethylene to identify material type for sorting and recycling purposes.

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