



SURPASS[®] HPs153-A Resin

Octene Copolymer HDPE Resin for Blown MDO Films

Property	ASTM (1)	Typical Values(2)	
Melt Index ⁽³⁾	D 1238	1.1 g/10 min	
Density	D 792	0.954 g/cm ³	
Vicat Softening Point	D 1525	127 °C	261 °F
		METRIC UNITS	ENGLISH UNITS

Melt Index 1.1
Density 0.954

Features

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

Additives

- Processing antioxidant

Applications

- Printing
- Metallization
- Packaging
- Moisture barrier films

MDO Film Properties⁽⁴⁾

Thickness		25 µm	1.0 mil
Tear Strength	MD D 1922	71 g	
	TD	160 g	
Dart Drop Impact, F ₅₀	D 1709/A	40 g	
Low Friction Puncture ⁽⁵⁾		5 J/mm	1 in-lb/mil
Tensile Strength	MD D 882	362 MPa	52,500 psi
	TD	32 MPa	4,600 psi
Yield Strength	MD D 882	379 MPa	55,000 psi
	TD	46 MPa	6,700 psi
Elongation	MD D 882	27 %	
	TD	18 %	
1% Secant Modulus	MD D 882	1,620 MPa	235,000 psi
	TD	1,130 MPa	163,900 psi
OTR ⁽⁶⁾	D 3985	1,654 cm ³ /m ² /day	107 cm ³ /100in ² /day
MVTR ⁽⁷⁾	F 1249	4.24 g/m ² /day	0.27 g/100 in ² /day
Haze	D 1003	11 %	
Gloss @ 45°	D 2457	70	

(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 for a film produced on a blown film line (85 mil die gap, BUR 2.2) and then stretched on a MDO unit at a draw ratio of 7:1.

(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.



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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 MDO 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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