

Resin Pricing Report + Survey

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Sunday, July 24, 2005


DOW HDPE 25455N

Dow Plastics - Polyethylene, High Density

Unit System:

View


Datasheet **Shown Below**

ASTM Data Sheet 

ISO Data Sheet --


CAMPUS® Data Sheet 

Actions

Product Sourcing 

Supplier Portal --

E-mail a Datasheet 

Product Alternatives 

General Information

Product Description

- For housewares, toys, medical applications
 - Good ESCR, gloss and excellent toughness
 - Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a.
- Consult the regulations for complete details.

DOW HDPE 25455N Polyethylene Resin is a narrow molecular weight distribution copolymer designed to offer good ESCR and gloss with excellent toughness. This resin has good processability over a wide range of molding conditions.

General

Material Status	<ul style="list-style-type: none"> ● Commercial: Active
Availability	<ul style="list-style-type: none"> ● Latin America ● North America
Test Standards Available	<ul style="list-style-type: none"> ● ASTM ● ISO 10350
Agency Ratings	<ul style="list-style-type: none"> ● FDA 21 CFR 177.1520(c) 3.2a ¹
Forms	<ul style="list-style-type: none"> ● Pellets
Processing Method	<ul style="list-style-type: none"> ● Injection Molding

ASTM and ISO Properties ²

Physical	Nominal Value	Unit	Test Method
Density - Specific Gravity	0.957	sp gr 23/23°C	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	25.0	g/10 min	ASTM D1238
Enviro. Stress Crack Res	1.00	hr	ASTM D1693
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength @ Yield ³	3700	psi	ASTM D638
Tensile Strength @ Break ³	2000	psi	ASTM D638
Tensile Elongation @ Yld	6.0	%	ASTM D638
Tensile Elongation @ Brk ³	200	%	ASTM D638
Flexural Modulus ⁴	2% Secant: 136000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength	60.0	ft-lb/in ²	ASTM D1822
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness	59		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
DTUL @66psi - Unannealed	153	°F	ASTM D648
Brittle Temperature	-105	°F	ASTM D746
Vicat Softening Point	262	°F	ASTM D1525
Melting Point	264	°F	DSC
Peak Crystallization Temperature (DSC)	241	°F	ASTM D3418

CAMPUS® Properties ⁵

Rheological properties	Nominal Value	Unit	Test Method
Melt volume-flow rate (190°C/2.16 kg)	2.07	in ³ /10min	ISO 1133
Mechanical properties 23°C/50%/r.h.	Nominal Value	Unit	Test Method
Tensile modulus	92800	psi	ISO 527-1, -2
Yield stress	3190	psi	ISO 527-1, -2
Yield strain	9.0	%	ISO 527-1, -2
Nominal strain at break	> 50.0	%	ISO 527-1, -2
Charpy impact strength (+23°C)	No Break	ft-lb/in ²	ISO 179 /1eU
Charpy impact strength (-30°C)	No Break	ft-lb/in ²	ISO 179 /1eU
Charpy notched impact strength (+23°C)	1.43	ft-lb/in ²	ISO 179 /1eA
Charpy notched impact strength (-30°C)	6.66	ft-lb/in ²	ISO 179 /1eA
Thermal properties	Nominal Value	Unit	Test Method
Temp. of deflection under load (1.80 MPa)	109	°F	ISO 75-1, -2
Temp. of deflection under load (0.45 MPa)	145	°F	ISO 75-1, -2
Vicat softening temperature (50°C/h 50N)	147	°F	ISO 306
Coeff. of linear therm. expansion (parallel)	0.000072	in/in/°F	ISO 11359-1, -2
Other properties	Nominal Value	Unit	Test Method
Density	0.0344	lb/in ³	ISO 1183
Test specimen production	Nominal Value	Unit	Test Method
Processing conditions acc. ISO	ISO 1872-2		
Injection Molding, melt temperature	410	°F	ISO 294
Injection Molding, mold temperature	104	°F	ISO 10724
Injection Molding, injection velocity	4	in/sec	ISO 294

Notes

- When used unmodified for the manufacture of food contact articles, DOW HDPE 25455N will comply with Food Additive Regulations FDA 21 CFR 177.1520 (c) 3.2a under the U.S. Food, Drug and Cosmetic Act. Such uses are subject to good manufacturing practices and any other limitations which are part of the statute or regulations. These should be consulted for complete details.
- Typical properties: these are not to be construed as specifications.
- 20 in/min, 0.125 in
- 0.125 in
- Typical properties: these are not to be construed as specifications. Additional CAMPUS® data and disclaimer information may be found on CAMPUS® Data Sheet.



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