



## Technical Data Sheet

### **DOW™ HDPE 08452N-1 High Density Polyethylene Resin**

#### **Description**

DOW™ HDPE 08452N-1 High Density Polyethylene Resin (HDPE) is a narrow molecular weight distribution copolymer designed to offer excellent impact strength and toughness combined with good stiffness. This resin has good processability over a wide range of molding conditions. It is intended for use in injection molding applications such as pails, industrial parts and other shipping containers; it can also be used for structural foamed parts.

#### **Main Characteristics**

- Excellent impact strength and toughness
- Good stiffness
- Excellent ESCR
- For injection molded pails, industrial parts, shipping containers and structural foamed parts.

#### **Complies with**

- U.S. FDA, CFR 177.1520(c) 3.2a
- EU, No 10/2011
- Canadian HPFB No Objection

Consult the regulations for complete details.

#### **Additive**

- Antiblock: No
- Slip: No
- Processing Aid: No

#### **Properties<sup>1</sup>**

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method <sup>2</sup>
Density	0.952	g/cm <sup>3</sup>	0.952	g/cm <sup>3</sup>	ASTM D792
Base Density <sup>3</sup>	0.952	g/cm <sup>3</sup>	0.952	g/cm <sup>3</sup>	Internal Method
Melt Index (190°C/2.16 kg)	6.5	g/10 min	6.5	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) <sup>4</sup> 122°F (50°C), 100% Igepal, F50	12.0	hr	12.0	hr	ASTM D1693
<b>Films</b>					
Tensile Strength					ASTM D638
Yield	3900	psi	26.9	MPa	
Break	3400	psi	23.4	MPa	

1. Typical properties: these are not to be construed as specifications. Users should confirm the results by their own tests.
2. ASTM: American Society for Testing and Materials.
3. Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm<sup>3</sup>. Base density is the estimated density of the polymer if it did not contain any antiblock.
4. Molded and tested in accordance with ASTM D4976.



## Properties (Cont.)

Films	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Tensile Elongation					ASTM D638
Yield	7.0	%	7.0	%	
Break	1100	%	1100	%	
Flexural Modulus - Secant	155000	psi	1070	MPa	ASTM D790B
<b>Impact</b>					
Tensile Impact Strength <sup>5</sup>	40.0	ft·lb/in <sup>2</sup>	84.1	kJ/m <sup>2</sup>	ASTM D1822
<b>Thermal</b>					
Brittleness Temperature	< -105	°F	< -76.1	°C	ASTM D746
Vicat Softening Temperature	262	°F	128	°C	ASTM D1525
Melting Temperature (DSC)	268	°F	131	°C	Internal Method
Peak Crystallization Temperature (DSC)	244	°F	118	°C	Internal Method

