

# INEOS HDPE T50-1000-178

High Density Polyethylene Copolymer  
**INEOS Olefins & Polymers USA**

## Technical Data

### Product Description

T50-1000-178 is a narrow molecular weight distribution high density polyethylene copolymer intended for general purpose injection molding and extrusion applications. This material meets the Food and Drug Administration requirements of 21 CFR 177.1520.

### General

Features	<ul style="list-style-type: none"> <li>Copolymer</li> <li>Food Contact Acceptable</li> </ul>	<ul style="list-style-type: none"> <li>General Purpose</li> <li>High Density</li> </ul>	<ul style="list-style-type: none"> <li>Narrow Molecular Weight Distribution</li> </ul>
Uses	<ul style="list-style-type: none"> <li>General Purpose</li> </ul>		
Agency Ratings	<ul style="list-style-type: none"> <li>EC 1907/2006 (REACH)</li> </ul>	<ul style="list-style-type: none"> <li>FDA 21 CFR 177.1520</li> </ul>	
RoHS Compliance	<ul style="list-style-type: none"> <li>Contact Manufacturer</li> </ul>		
Forms	<ul style="list-style-type: none"> <li>Pellets</li> </ul>		
Processing Method	<ul style="list-style-type: none"> <li>Extrusion</li> </ul>	<ul style="list-style-type: none"> <li>Injection Molding</li> </ul>	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.951 g/cm <sup>3</sup>	0.951 g/cm <sup>3</sup>	ASTM D4883
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	11 g/10 min	11 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance 100% Igepal, F50	4.00 hr	4.00 hr	ASTM D1693B

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength <sup>3</sup>			ASTM D638
Yield	4000 psi	27.6 MPa	
Break	1650 psi	11.4 MPa	
Tensile Elongation <sup>3</sup>			ASTM D638
Yield	9.5 %	9.5 %	
Break	> 800 %	> 800 %	
Flexural Modulus - Tangent	173000 psi	1190 MPa	ASTM D790A

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact	0.70 ft·lb/in	37 J/m	ASTM D256
Notched Izod Impact (Area)	1.76 ft·lb/in <sup>2</sup>	3.70 kJ/m <sup>2</sup>	ASTM D256

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	66	66	ASTM D2240

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed	163 °F	72.8 °C	ASTM D648
Brittleness Temperature	< -94.0 °F	< -70.0 °C	ASTM D746
Vicat Softening Temperature	253 °F	123 °C	ASTM D1525