

INEOS HDPE K44-08-122

High Density Polyethylene Copolymer
INEOS Olefins & Polymers USA

Technical Data

Product Description

K44-08-122 is a natural high density polyethylene copolymer designed specifically for extrusion of potable water, industrial, and mining pipe. It is recognized by the Plastic Pipe Institute as having a pipe material designation code of PE 3608 (formerly PE 3408), NSF Standard 14 certification, and complies with ANSI/NSF Standard 61 for health effects requirements. A pressure rated formulation is also produced when this product is extruded in combination with an Ineos approved black masterbatch. The resulting formulation known as K44-08-123 has NSF Standard 14 certification and complies with ANSI/NSF Standard 61 health effects requirements, is certified to CSA Standard B137.1-05 and B137.4-05, and is also listed with the Plastic Pipe Institute as a PE 3608 (formerly PE 3408).

General

Material Status	• Commercial: Active		
Literature ¹	• Processing - Injection Molding (English) • Technical Datasheet (English)		
Search for UL Yellow Card	• INEOS Olefins & Polymers USA		
Availability	• North America		
Features	• Copolymer	• High Density	
Uses	• Piping		
Agency Ratings	• CSA B137.1-05 • CSA B137.4-05	• NSF 14 • NSF 61	• PPI PE-3608
RoHS Compliance	• Contact Manufacturer		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion	• Pipe Extrusion	

Physical	Nominal Value Unit	Test Method
Density	0.944 g/cm³	ASTM D4883
Melt Mass-Flow Rate (MFR) (190°C/21.6 kg)	9.0 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance	> 5000 hr	ASTM D1693C

Mechanical	Nominal Value Unit	Test Method
Tensile Strength ³		ASTM D638
Yield	22.8 MPa	
Break	31.0 MPa	
Tensile Elongation ³ (Break)	> 800 %	ASTM D638
Flexural Modulus - 2% Secant ⁴	827 MPa	ASTM D790
Hydrostatic Design Basis		ASTM D2837
23°C	11.0 MPa	
60°C	6.89 MPa	

Impact	Nominal Value Unit	Test Method
Notched Izod Impact	320 J/m	ASTM D256

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

Thermal	Nominal Value Unit	Test Method
Brittleness Temperature	< -118 °C	ASTM D746
Vicat Softening Temperature	126 °C	ASTM D1525

Additional Information	Nominal Value Unit	Test Method
Cell Classification	345464A	ASTM D3350
PENT - Notch Tensile	> 100 hr	ASTM F1473