

Producer: Ineos Olefins &amp; Polymers USA

## HDPE K44-15-122

K44-15-122 is a natural high-density polyethylene copolymer designed specifically for extrusion of pipe. It has NSF Standard 14 certification for potable water applications, complies with ANSI/NSF Standard 61 health effects requirements, and is recognized by the Plastic Pipe Institute as having a pipe material designation code of PE 3608 (formerly PE 3408). 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 K44-15-123 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 listed with the Plastic Pipe Institute as having a PE 3608 (formerly PE3408) and PE80 pipe material designation code.

### Typical Properties<sup>1</sup>

PROPERTY	VALUE		TEST ASTM Method
	Values		
	English Units	SI Units	
Density (Natural)	—	0.944 g/cc	D 4883
Melt Index <sup>2</sup>	—	12.5 g/10 min	D 1238
Tensile Strength			
@ Yield (2 in/min)	3300 psi	22.8 MPa	D 638
@ Break (2 in/min)	4500 psi	31.0 MPa	D 638
Elongation			
@ Break (2 in/min)	>800%	>800%	D 638
Flexural Modulus <sup>3</sup>	120,000 psi	827 MPa	D 790
Notched Izod Impact Strength	6 ft-lbf/in	0.32 kJ/m	D 256
Hardness (Shore D)	68	68	D 2240
Vicat Softening Point	259 °F	126 °C	D 1525
Brittleness Temperature	<-180 °F	<-118 °C	D 746
Hydrostatic Design Basis @ 23 °C	1600 psi	11.0 MPa	D 2837
Environmental Stress Crack Resistance <sup>4</sup>	>2000 hrs	>2000 hrs	D 1693
Environmental Stress Crack Resistance <sup>5</sup>	>5000 hrs	>5000 hrs	D 1693
Notch Tensile (PENT)	>100 hrs	>100 hrs	F 1473
Cell Classification	335464A	335464A	D 3350

<sup>1</sup> Typical properties will vary within specification limits.

<sup>2</sup> 190° C/21,600 g

<sup>3</sup> 2% Secant-Method 1

<sup>4</sup> Condition B, 10%

<sup>5</sup> Condition C

### Regulatory Information

The product and uses described herein may require global product registrations and notifications for chemical inventory listings, or for use in food contact or medical devices. For further information, please refer to the Regulatory Position Statement (RPS) online at [www.ineos-op.com](http://www.ineos-op.com), or call + 1-800-527-5419.

### Health and Safety Information

The product described herein may require precautions in handling and use because of toxicity, flammability, or other consideration. The Material Safety Data Sheet (MSDS) contains the available product health and safety information for this material and can be found at [www.ineos-op.com](http://www.ineos-op.com). Before using any material, a customer is advised to consult the MSDS for the product under consideration for use.

The Material Safety Data Sheet for this product contains shipping descriptions and should be consulted, before transportation, as a reference in determining the proper shipping description. If the material shipped by INEOS is altered or modified, different shipping descriptions may apply and the MSDS of the original material should not be used.