

K38-20-188 Polyethylene Copolymer

K38-20-188 is a natural, UV-stabilized medium density polyethylene pipe and tubing resin designed for natural gas distribution. When blended with an approved INEOS yellow masterbatch, the resulting formulation, known as K38-20-160, is recognized by the Plastics Pipe Institute as a PE2708 resin which exhibits excellent long term strength and outstanding environmental stress crack resistance and is certified to the material requirements of ASTM D2513 and CSA B137.4.

Typical Properties¹

	Values		ASTM Method
	English Units	SI Units	
Resin			
Density	—	0.940 g/cc	D4883
Melt Index 190 °C/2.16 kg	—	0.20 g/10 min	D1238
Melt Index 190 °C/ 21.6 kg	—	20 g/10 min	
Compression Molded Sample			
Tensile Strength (2 in/min)			D638
@ Yield	2,800 psi	19.3 MPa	
@ Break	4,750 psi	32.7 MPa	
Elongation (2 in/min)			D638
@ Yield	11.8 %	11.8 %	
@ Break	>800%	>800%	
Flexural Modulus			D790A
2% Secant Method	90,000 psi	620 MPa	
Notched Izod Impact Strength			D256
@ 23 C	7 ft-lbf/in	37 kJ/m ²	
Hardness (Shore D)	62	62	D2240
Vicat Softening Point	248 F	120 C	D1525
Brittleness Temperature	<-180 F	<-118 C	D746
Environmental Stress Crack Resistance			D1693
Condition B, 10% Igepal, F50 (hrs.)	>5,000	>5,000	
Condition C, 100% Igepal, F50 (hrs.)	>5,000	>5,000	
Hydrostatic Design Basis (HDB)			D2837
@ 23 C	1,250 psi	8.6 MPa	
@ 60 C	1,000 psi	6.9 MPa	
Notch Tensile (PENT) (hrs.)	>500	>500	F1473
Oxidation Induction Time @ 210 C, (min.)	>20	>20	D3895
Thermal Stability	>464 F	>240 C	D3350
Cell Classification	234370D	234370D	D3350
	234373E ²	234375E ²	

¹ Typical properties will vary and are not to be used for specification purposes.

² When properly blended with approved INEOS yellow masterbatch

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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, 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. 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.

For additional information, samples, pricing and availability, please contact:

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