

# INEOS HDPE K38-20-188

Medium Density Polyethylene  
INEOS Olefins & Polymers USA

Message:

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.

General Information			
Additive	UV Stabilizer		
Features	Copolymer		
	Good UV Resistance		
	High ESCR (Stress Crack Resist.)		
	Medium Density		
Uses	Natural Gas Distribution		
	Piping		
	Tubing		
Agency Ratings	ASTM D 2513		
	CSA B137.4		
	EC 1907/2006 (REACH)		
RoHS Compliance	Contact Manufacturer		
Appearance	Natural Color		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Density	0.940	g/cm <sup>3</sup>	ASTM D4883
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.20	g/10 min	
190°C/21.6 kg	20	g/10 min	
Environmental Stress-Cracking Resistance			
10% Igepal, F50	> 5000	hr	ASTM D1693B
100% Igepal, F50	> 5000	hr	ASTM D1693C
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	62		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>1</sup>			ASTM D638
Yield	19.3	MPa	
Break	32.8	MPa	

Tensile Elongation <sup>2</sup>			ASTM D638
Yield	12	%	
Break	> 800	%	
Flexural Modulus - 2% Secant	621	MPa	ASTM D790A
Hydrostatic Design Basis			ASTM D2837
23°C	8.62	MPa	
60°C	6.89	MPa	
Oxidation Induction Time (210°C)	> 20	min	ASTM D3895
Thermal Stability	> 240	°C	ASTM D3350
Cell Classification	234370D		ASTM D3350
PENT - Notch Tensile	> 500	hr	ASTM F1473
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	370	J/m	ASTM D256
Notched Izod Impact (Area) (23°C)	37.0	kJ/m <sup>2</sup>	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -118	°C	ASTM D746
Vicat Softening Temperature	120	°C	ASTM D1525
NOTE			
1.	51 mm/min		
2.	51 mm/min		

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#### Recommended distributors for this material

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