

# TC46-25 Polyethylene Copolymer

TC46-25 is a natural high density polyethylene copolymer designed specifically for telecommunications ducting to meet or exceed the material requirements in conduit specifications ASTM F2160, UL 651B and NEMA TC-7. TC46-25 balances stiffness, ESCR and molecular weight to provide required toughness and crush strength without compromising processability.

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

	English Units	Values SI Units	ASTM Method
<b>Resin</b>			
Density	—	0.948 g/cc	D4883
Melt Index 190 C/2.16 kg	—	0.30 g/10 min	D1238
Melt Index 190 C/21.6 kg	—	24.0 g/10 min	D1238
<b>Compression Molded Samples</b>			
<b>Tensile Strength (2 in/min)</b>			<b>D638</b>
@ Yield	3,000 psi	20.7 MPa	
@ Break	4,000 psi	27.6 MPa	
<b>Elongation (2 in/min)</b>			<b>D638</b>
@ Yield	8.0%	8.0%	
@ Break	600%	600%	
<b>Flexural Modulus</b>			<b>D790A</b>
2% Secant Method	130,000 psi	897 MPa	
<b>Notched Izod Impact Strength</b>	3.6 ft-lbf/in	19.1 kJ/m <sup>2</sup>	<b>D256</b>
<b>Hardness</b>			<b>D2240</b>
Shore D	68	68	
<b>Vicat Softening Point</b>	255 F	124 C	<b>D1525</b>
<b>Brittleness Temperature</b>	<-180 F	<-118 C	<b>D746</b>
<b>Heat Deflection Temperature</b>			<b>D648</b>
@ 66 psi (455 kPa)	156 F	59 C	
<b>Environmental Stress Crack Resistance</b>			<b>D1693</b>
Condition B, 100% Igepal, F50 (hrs.)	>1,000	>1,000	
<b>Oxidative Induction Time</b>			<b>D3895</b>
@ 210 C	20 min	20 min	
<b>Cell Classification</b>	435430A	435430A	<b>D3350</b>

<sup>1</sup> Typical properties will vary and are not to be used for specification purposes.

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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](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.

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

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