

MARPOL® HDP 580

High Density Polyethylene Copolymer

Marco Polo International, Inc.

Message:

MARPOL® HDP 580 is a high performance copolymer that is designed for the most demanding requirements of pressure pipe applications. It has good long-term hoop strength performance, very high melt strength, and outstanding toughness even at low temperatures.

Recommended Applications: Containers for potable water, oil, and gas. Distribution and gathering; chemical, industrial, mining, and sewer.

| General Information | |
|---------------------|---------------------------|
| Features | Copolymer |
| | Good Melt Strength |
| | Good Strength |
| | Good Toughness |
| | Low Temperature Toughness |

| | |
|------|----------------------------|
| Uses | Containers |
| | Industrial Applications |
| | Industrial Containers |
| | Mining Applications |
| | Piping |
| | Potable Water Applications |

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|-------------------|-------------|
| Density | 0.944 | g/cm ³ | ASTM D1505 |
| Melt Mass-Flow Rate (MFR) | | | ASTM D1238 |
| 190°C/2.16 kg | 0.060 | g/10 min | |
| 190°C/21.6 kg | 8.0 | g/10 min | |
| Environmental Stress-Cracking Resistance (100% Igepal, F50) | > 1000 | hr | ASTM D1693 |

| Mechanical | Nominal Value | Unit | Test Method |
|---|---------------|------|-------------|
| Tensile Strength | | | ASTM D638 |
| Yield | 22.1 | MPa | |
| Break | 34.5 | MPa | |
| Tensile Elongation ¹ (Break) | > 500 | % | ASTM D638 |
| Flexural Modulus | | | |
| -- | 758 | MPa | ASTM D3350 |
| -- | 965 | MPa | ASTM D790 |

| Thermal | Nominal Value | Unit | Test Method |
|-------------------------|---------------|------|-------------|
| Brittleness Temperature | < -90.0 | °C | ASTM D746 |

| NOTE | |
|------|--|
|------|--|

1. 50 mm/min

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519
Phone: +86 13424755533
Email: sales@su-jiao.com
No. 215, Lianhe North Road, Fengxian District, Shanghai, China

