

Marlex® H516HP

High Density Polyethylene
Chevron Phillips Chemical Company LLC

Message:

This high performance PE 4710 HDPE is tailored for the demanding requirements of pressure pipe applications that require:

- Excellent long-term hoop strength
- Superb resistance to slow crack growth
- Exceptional resistance to rapid crack propagation
- Outstanding low-temperature toughness

Additional information:

- Meets ASTM D4976 - PE 235
- NSF 3rd party D2513 certified
- NSF CSA B137.1 and B137.4 certified

Typical applications for H516HP include:

- Gas distribution
- Potable water
- Industrial

When blended with an approved black concentrate, the material meets or exceeds:

- ASTM D3350, class PE445574C and PE445576C
- NSF Standards 14 and 61 for potable water
- PPI designations PE 4710 and PE 100

| General Information | | | |
|-------------------------------------------|---------------------------|-------------------|-------------|
| Features | Good Crack Resistance | | |
| | Good Strength | | |
| | Low Temperature Toughness | | |
| Uses | Industrial Applications | | |
| | Piping | | |
| Agency Ratings | ASTM D 3350 PE445574C | | |
| | ASTM D 3350 PE445576C | | |
| | ASTM D 4976-PE235 | | |
| | CSA B137.1 | | |
| | CSA B137.4 | | |
| | NSF Unspecified Rating | | |
| Processing Method | Pipe Extrusion | | |
| Physical | Nominal Value | Unit | Test Method |
| Density | 0.949 | g/cm ³ | ASTM D1505 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 9.0 | g/10 min | ASTM D1238 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength ¹ (Yield) | 25.5 | MPa | ASTM D638 |
| Tensile Elongation ² (Break) | > 700 | % | ASTM D638 |

| | | | |
|-------------------------------------------------------------------|--------|-----|------------|
| Flexural Modulus - 2% Secant ³ | 965 | MPa | ASTM D790 |
| Hydrostatic Design Basis ⁴ | | | ASTM D2837 |
| 23°C | 11.0 | MPa | |
| 60°C | 6.89 | MPa | |
| Notch Pipe Test - 4.6 MPa (80°C) ⁵ | > 20.8 | day | ISO 13479 |
| Minimum Required Strength ⁶ | 10.0 | MPa | ISO 9080 |
| PENT | > 2000 | hr | ASTM F1473 |
| Rapid Crack Propagation - S4 Critical Pressure (0°C) ⁷ | > 1.20 | MPa | ISO 13477 |

NOTE

1. Type IV, 51 mm/min
2. Type IV, 51 mm/min
3. 13 mm/min
4. blend of H516HP and an approved black concentrate
5. blend of H516HP and an approved black concentrate
6. blend of H516HP and an approved black concentrate
7. 8" SDR 11 Pipe, blend of H516HP and an approved black concentrate

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