

K50-10-136 Polyethylene Copolymer

K50-10-136 is a high molecular weight, high density polyethylene copolymer for blow molding automotive fuel tanks and under hood reservoirs. It combines excellent processability and outstanding physical performance, particularly environmental stress crack resistance (ESCR) and impact properties.

Typical Properties¹

| Resin | Values | | ASTM Method |
|---------------------------------------|---------------|----------------------|-------------|
| | English Units | SI Units | |
| Density | — | 0.950 g/cc | D4883 |
| Melt Index 190°C/ 21.6 kg | — | 9.0 g/10 min | D1238 |
| Compression Molded Samples | | | |
| Tensile Strength (2 in/min) | | | D638 |
| @ Yield | 3,800 psi | 26.2 MPa | |
| @ Break | 5,400 psi | 37.2 MPa | |
| Elongation (2 in/min) | | | D638 |
| @ Yield | 9.9 % | 9.9 % | |
| @ Break | 850 % | 850 % | |
| Flexural Modulus | | | D790A |
| Tangent Method | 179,000 psi | 1230 MPa | |
| 2% Secant Method | 133,000 psi | 917 MPa | |
| Notched Izod Impact Strength | 8.4 ft-lbf/in | 44 kJ/m ² | D256 |
| Hardness (Shore D) | 63 | 63 | D2240 |
| Vicat Softening Point | 259 F | 126 C | D1525 |
| Brittleness Temperature | <-103 F | <-75 C | D746 |
| Heat Deflection Temperature | | | D648 |
| @ 66 psi (455 kPa) | 158 F | 70 C | |
| @ 264 psi (1,820 kPa) | 118 F | 48 C | |
| Instrumented Impact | | | D3763 |
| @ 23 C | Ductile | Ductile | |
| @ -30 C | Ductile | Ductile | |
| Environmental Stress Crack Resistance | | | D1693 |
| Condition A, 10% Igepal, F50 (hrs.) | 430 | 430 | |
| Condition A, 100% Igepal, F50 (hrs.) | >1,000 | >1,000 | |
| Condition B, 10% Igepal F50 (hrs.) | 340 | 340 | |
| Condition B, 100% Igepal F50 (hrs.) | >1,000 | >1,000 | |

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