VINPOL™ HD00453R
High Density Polyethylene

| Melt Index: 0.4 | Density: 0.953 |

VINPOL HD00453R is a high density polyethylene exhibiting good stiffness and environmental stress crack resistance. This product contains stearate as a core rod release for the injection-blow molding process. Typical applications include bottles for household chemicals, food and personal care products. The base resin in this product meets the FDA requirements stipulated in 21 CFR 177.1520(a)(3)(i) and (c)3.2a. This product may also contain adjuvant substances that may be safely used in polymers used for the manufacture of articles that come into direct contact with food meeting the requirements of 21 CFR 177.1520(b). This product may only be used in conditions of use B-H and temperatures at or below 212°F, as described in Table 2 or 176.170(c).

Resin Property	Typical Value	Units	Test Method
Melt Index, 2.16 Kg at 190°C	0.4	g/10 min	ASTM D-1238
Density	0.953	g/cc	ASTM D-1505
Environmental Stress Crack Resistance, F_{50} (100% Igepal, Condition B)	25	hrs	ASTM D-1693
Tensile Yield Strength	4000 (27.6)	psi (MPa)	ASTM D-638
Tensile Elongation at Break	>500	**%**	ASTM D-638
Flexural Modulus	176,000 (1,210)	psi (MPa)	ASTM D-790
Tensile Impact Strength	131 (275)	ft-lb/in^2 (kJ/m^2)	ASTM D-1822
Shore Hardness	67	Shore D	ASTM D-2240
Vicat Softening Temperature	261 (127)	°F (°C)	ASTM D-1525
Low Temperature Brittleness, F_{50}	<-105 (<-76)	°F (°C)	ASTM D-746
Deflection Temperature Under Load (66psi, Unannealed)	167 (75)	°F (°C)	ASTM D-648
Additive: Stearate	Medium	Level	Supplier Method