

## Polyintec® AP51100

High Density Polyethylene High Molecular Weight HDPE (HMW)

### Product Description:

Polyintec® AP51100 is a high molecular weight, high density polyethylene copolymer designed for sheet extrusion, thermoforming, and large part blow molding. It offers outstanding physical performance in finished products, providing excellent strength, durability, and chemical resistance.

### Suggested Applications:

55 Gallon Shipping Containers, Agriculture Chemical Tanks, Fuel Containers.

### Nominal Physical Properties:

PROPERTY	ASTM TEST METHOD	UNIT	VALUE
<b>Typical Resin Properties</b>			
Melt Index (190 C/21.6 kg)	D1238	g/10 min.	10.0
Density	D792	g/cc	0.950
<b>Compression Molded Samples</b>			
Tensile Strength @ Yield	D638	MPa (psi)	26.1 (3750)
Tensile Strength @ Break	D638	MPa (psi)	36.0 (5200)
Elongation @ Yield	D638	%	10
Elongation @ Break	D638	%	920
Flexural Modulus (Tangent Method)	D790A	MPa (psi)	1220 (177000)
Flexural Modulus (2% Secant)	D790A	MPa (psi)	950 (137000)
Notched Izod Impact Strength	D256	kJ/m <sup>2</sup> (ft-lbf/in)	40.5 (7.7)
Hardness (Shore D)	D2240	-	67
Vicat Softening Point	D1525	°C (°F)	126 (259)
Brittleness Temperature	D746	°C (°F)	<-75 (<-103)
Heat Deflection Temperature (@ 66 psi)	D648	°C (°F)	72 (161)
Environmental Stress Crack Resistance (Condition B, 100% Igepal, F50)	D1693	hrs.	264
Oxidation Induction Time (@ 210 C)	D3895	min	>21

### Important Note:

The properties listed above are typical values obtained under laboratory conditions and are not intended to be used as specifications. It meets Food and Drug Administration requirements of 21 CFR 177.1520.

