



# liquid diamond

wall protection & plastic products

ph: (877) 489-1901

## Puckboard Resin Properties

### High Density Polyethylene Resin

#### Applications

HDPE Resin is a multipurpose polymer designed for the high speed production of blow molded containers used to package household industrial chemicals (e.g., detergents, bleach, fabric softeners), toiletries and cosmetics (e.g., shampoos, creams, lotions etc.), health and medicinal aids, and food products. In addition, it can be blow molded into other thin walled parts and houseware items and can be extruded into profiles.

- Excellent stress-crack resistance and rigidity
- High impact strength
- Low swell
- Good melt strength
- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a  
Consult the regulations for complete details.

#### Physical Properties

##### Resin Properties

Flow Rate (I<sub>21</sub>) @190°C/21.60 kg, g/10 min  
Melt Index (I<sub>2</sub>) @190°C/2.16 kg, g/10 min  
Density, g/ cm<sup>3</sup>  
DSC Melting Point, °F (°C)

##### Test Method

ASTM D 1238  
ASTM D 1238  
ASTM D 792  
Dow Method

##### Values<sup>(1)</sup> English (SI)

39  
0.46  
0.953  
268 (131)

Vicat Softening Point, °F (°C)

ASTM D 1525

262 (128)

##### Molded Plaque Properties<sup>(2)</sup>

Hardness, Shore D

ASTM D 2240

64

Tensile Strength at Break, psi (MPa)

ASTM D 638

4900 (34)

Tensile Strength at Yield, psi (MPa)

ASTM D 638

3700 (26)

Tensile Elongation at Break, %

ASTM D 638

1000

Tensile Elongation at Yield, %

ASTM D 638

8

Tensile Impact Strength, ft·lb/in.<sup>2</sup> (kJ/m<sup>2</sup>)

ASTM D 1822, Type S

80 (168)

Environmental Stress Crack Resistance,  
122°F (50°C), F<sub>50</sub>, 100% Igepal®, hrs.

ASTM D 1693

40

Deflection Temperature Under Load

ASTM D 648

@ 66 psi (0.45 MPa), °F (°C)

158 (70)

(1) Typical values, not to be construed as specifications. Users should confirm results by their own tests.

(2) Molded and tested in accordance with ASTM D4976.