

# CERTENE™ HI-1252

Channel Prime Alliance - High Density Polyethylene

Sunday, November 17, 2019

## General Information

### Product Description

HI-1252 is a certified prime copolymer designed for molding applications requiring good toughness and moderate stiffness. HI-1252 features medium flow, easy processability, good Environmental Stress Cracking Resistance (ESCR,) good impact strength, and good warpage resistance. HI-1252 applications include housewares, medium size food pails, buckets, over-caps and closures, tote boxes, toys, ink and photo-film cartridges. HI-1252 recommended processing temperature is 210 to 230°C. with mold @ 20 to 40°C.

### General

|                   |  |  |   |
|-------------------|--|--|---|
| Material Status   | • Commercial: Active   |  |   |
| Availability      | • North America  |  |   |
| Features          | <ul style="list-style-type: none"> <li>• Copolymer</li> <li>• Good Impact Resistance</li> <li>• Good Processability</li> </ul> | <ul style="list-style-type: none"> <li>• Good Stiffness</li> <li>• Good Toughness</li> <li>• High Density</li> </ul> | <ul style="list-style-type: none"> <li>• High ESCR (Stress Crack Resist.)</li> <li>• Medium Flow</li> <li>• Warp Resistant</li> </ul> |
| Uses              | <ul style="list-style-type: none"> <li>• Caps</li> <li>• Household Goods</li> </ul>  | <ul style="list-style-type: none"> <li>• Pails</li> <li>• Toys</li> </ul>  |   |
| Forms             | • Pellets  |  |   |
| Processing Method | • Injection Molding  |  |   |

## ASTM & ISO Properties <sup>1</sup>

| Physical  | Nominal Value | Unit              | Test Method |
|---|---------------|-------------------|-------------|
| Density   | 0.952         | g/cm <sup>3</sup> | ASTM D1505  |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)   | 12            | g/10 min          | ASTM D1238  |
| Environmental Stress-Cracking Resistance (ESCR)<br>50°C, 100% Igepal, Compression Molded, F50 | 4.00          | hr                | ASTM D1693  |
| Mechanical  | Nominal Value | Unit              | Test Method |
| Tensile Strength <sup>2</sup> (Yield, Compression Molded)                                     | 27.6          | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break, Compression Molded)                                   | 700           | %                 | ASTM D638   |
| Flexural Modulus - 1% Secant <sup>3</sup> (Compression Molded)                                | 1210          | MPa               | ASTM D790   |
| Impact  | Nominal Value | Unit              | Test Method |
| Tensile Impact Strength (Compression Molded)  | 58.8          | kJ/m <sup>2</sup> | ASTM D1822  |
| Thermal   | Nominal Value | Unit              | Test Method |
| Deflection Temperature Under Load<br>0.45 MPa, Unannealed                                     | 70.0          | °C                | ASTM D648   |
| Brittleness Temperature   | -90.0         | °C                | ASTM D746   |
| Vicat Softening Temperature   | 124           | °C                | ASTM D1525  |

### Additional Information

This Specimen was compression molded and was tested according to ASTM D1928 Procedure C.

## Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Processing (Melt) Temp | 210 to 230    | °C   |
| Mold Temperature       | 20 to 40      | °C   |

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### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

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<sup>2</sup> 50 mm/min

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<sup>3</sup> 1.3 mm/min