

# ExxonMobil™ HDPE HPA 020 Molding

## High Density Polyethylene (HMW) Resin

### Product Description

HPA 020 is a high molecular weight HDPE resin, characterized by an excellent balance of rigidity, ESCR and impact strength.

### General

|                           |  |                |          |
|---------------------------|--|----------------|----------|
| Availability <sup>1</sup> | ▪ Africa & Middle East   | ▪ Asia Pacific | ▪ Europe |
| Additive                  | ▪ Thermal Stabilizer: Yes  |                |          |
| Applications              | <ul style="list-style-type: none"> <li>▪ Drainage Pipes</li> <li>▪ Heavy Gauge Sheet</li> <li>▪ Large Part Blow Molding</li> <li>▪ Large Parts &amp; Containers (20 to 100 L) for non-food end uses</li> </ul> |                |          |
| Revision Date             | ▪ 01/01/2017   |                |          |

| Resin Properties                         | Typical Value (English) | Typical Value (SI)      | Test Based On |
|--|-------------------------|-------------------------|---------------|
| Density                                  | 0.952 g/cm <sup>3</sup> | 0.952 g/cm <sup>3</sup> | ASTM D1505    |
| High Load Melt Index (190°C/21.6 kg)     | 9.0 g/10 min            | 9.0 g/10 min            | ASTM D1238    |
| Melt Mass-Flow Rate (MFR) (190°C/5.0 kg) | 0.35 g/10 min           | 0.35 g/10 min           | ASTM D1238    |

| Thermal                     | Typical Value (English) | Typical Value (SI) | Test Based On |
|-----------------------------|-------------------------|--------------------|---------------|
| Vicat Softening Temperature | 259 °F                  | 126 °C             | ASTM D1525    |

| Molded Properties                                   | Typical Value (English) | Typical Value (SI) | Test Based On |
|---|-------------------------|--------------------|---------------|
| Tensile Modulus (0.20 in/min (5.0 mm/min))          | 150000 psi              | 1000 MPa           | ASTM D638     |
| Tensile Stress at 100%<br>2.0 in/min (50 mm/min)    | 2000 psi                | 14 MPa             | ASTM D638     |
| Tensile Strength at Yield<br>2.0 in/min (50 mm/min) | 3100 psi                | 21 MPa             | ASTM D638     |
| Elongation at Break<br>(2.0 in/min (50 mm/min))     | > 100 %                 | > 100 %            | ASTM D638     |
| Environmental Stress-Crack Resistance               |                         |                    | ASTM D1693    |
| 10% Igepal  | 330 hr                  | 330 hr             |               |
| 100% Igepal   | > 600 hr                | > 600 hr           |               |
| Durometer Hardness (Shore D, 15 sec)                | 61                      | 61                 | ASTM D2240    |

| Impact                       | Typical Value (English)   | Typical Value (SI)   | Test Based On |
|------------------------------|---------------------------|----------------------|---------------|
| Notched Izod Impact Strength | 8.6 ft-lb/in <sup>2</sup> | 18 kJ/m <sup>2</sup> | ISO 180/1A    |

### Legal Statement

This product is not intended for use in food contact application.

This product is not intended for use in medical applications and should not be used in any such applications.

### Processing Statement

The molded properties have been measured on compression molded sheets, prepared according to ASTM D4703 and ASTM D 638. ASTM D 638: Specimen type T1 / thickness 3 mm (118 mil); tensile modulus : speed of testing 5 mm/min (197 mil/min); tensile strength at yield and elongation at break: speed of testing 50 mm/min (1970 mil/min). ASTM D1693: Conditions B, F50, 10 % Igepal and 100 % Igepal

### Notes

Typical properties: these are not to be construed as specifications.

<sup>1</sup> Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

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For additional technical, sales and order assistance: [www.exxonmobilchemical.com/ContactUs](http://www.exxonmobilchemical.com/ContactUs)

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