


**Technical Data Sheet**  
 Revision 1 (May/18)

## High Density Polyethylene HDI0453U1

**Description:**

HDI0453U1 is a high density polyethylene with a narrow molecular weight distribution, developed for injection molding segment. Parts made from this material exhibit a shiny surface and good impact strength and stiffness. This resin has UV stabilizers.

**Applications:**

Containers and buckets.

**Process:**

Injection Molding

**Control Properties:**

|                                | Test Methods | Units             | Values |
|--------------------------------|--------------|-------------------|--------|
| Melt Flow Rate (190°C/2.16 kg) | ASTM D1238   | g/10 min          | 4.5    |
| Density                        | ASTM D792    | g/cm <sup>3</sup> | 0.953  |

**Typical Properties<sup>1</sup>:**

|                                         | Test Methods         | Units | Values |
|-----------------------------------------|----------------------|-------|--------|
| Strength at Yield                       | ASTM D638            | MPa   | 29     |
| Deformation at Yield                    | ASTM D638            | %     | 7      |
| Strength at Break                       | ASTM D638            | MPa   | 34     |
| Deformation at Break                    | ASTM D638            | %     | 929    |
| Modulus of Elasticity (secant 1%)       | ASTM D638            | MPa   | 1213   |
| Flexural Modulus, (Secant 1%)           | ASTM D790            | MPa   | 1160   |
| Izod Impact Strength                    | ASTM D256            | J/m   | 61     |
| VICAT Softening Point                   | ASTM D1525           | °C    | 128    |
| Heat Deflection Temperature (0.455 Mpa) | ASTM D648            | °C    | 70     |
| ESCR <sup>2</sup>                       | Internal Methodology | h     | 13     |

<sup>1</sup> Test specimens from compression molded plaque according to ASTM D4703.

<sup>2</sup> 100% IGEPAI

**Final Observations:**

- The information in this document is provided in good faith and reflects typical values obtained in our laboratories and should not be considered as absolute nor warranted. Only the properties and values mentioned on the Certificate of Quality are considered as product warranty.
- In some applications, Braskem IDESA has developed resins well-tailored to meet specific requirements.
- In case of doubts regarding our product use or for other applications, please contact our Braskem IDESA technical services [serviciostecnicos@braskem.com](mailto:serviciostecnicos@braskem.com)
- For information about safety, handling, individual protection equipment, first aid and disposal, consult the Safety Data Sheet (SDS) or please contact our Braskem IDESA safety team [product.safety@braskem.com](mailto:product.safety@braskem.com). CAS Number: 25213-02-9.
- The values reported in this document may change without Braskem IDESA previous communication.
- Braskem IDESA does not recommend the use of this product for the manufacture of packages, parts or any other product used for storage or contact with parenteral solution nor with the inside of the human body.
- This resin does not contain the substance Bisphenol A (BPA, CAS#80-05-7) in its composition.



8. The content of this Product Data Sheet replaces the one issued previously.

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