

## High Density Polyethylene HS5403

### Description:

HS5403 is a high density polyethylene, hexene copolymer, produced through Unipol® process, exhibit high die swell and an outstanding environmental stress cracking resistance (ESCR).

### Application:

Blow Molded Small Volume: Bottles for cleaning products, detergents, chemicals and fabric softener.

### Process:

Blow Molding.

### Control Properties:

	ASTM Method	Units	Values
Melt Flow Rate (190°C/2.16kg)	D 1238	g/10 min	0.30
Melt Flow Rate (190°C/21.6kg)	D 1238	g/10 min	26
Density	D 792	g/cm <sup>3</sup>	0.954

### Typical Properties:

#### Plaque Properties<sup>a</sup>

	ASTM Method	Units	Values
Tensile Strength at Yield	D 638	MPa	30
Tensile Strength at Break	D 638	MPa	33
Flexural Modulus – 1% Secant	D 790	MPa	1136
Shore D Hardness	D 2240	-	64
Izod Impact Strength	D 256	J/m	100
Environmental Stress Cracking Resistance <sup>b</sup>	D 1693	h/F50	100
Environmental Stress Cracking Resistance <sup>c</sup>	D 1693	h/F50	200
Deflection Temperature under Load at 0.455 MPa	D 648	°C	66
Vicat Softening Temperature at 10 N	D 1525	°C	128

(a) Test specimens prepared from compression molded sheet made according to ASTM D 4703.

(b) Compression molded 2 mm thickness, 0.3 mm notched-plaques. 10% Igepal. 50°C.

(c) Compression molded 2 mm thickness, 0.3 mm notched-plaques. 100% Igepal. 50°C.

### Recommended Processing Conditions:

#### Temperature Profile:

- Feeding zone: 185°C
- Barrel: 190°C
- Die: 195°C
- Parison: 200°C
- Mold Temperature range: 5°C to 25°C

**Final Remarks:**

1. This resin meets the requirements for olefin polymers as defined in 21 CFR, section 177.1520 issued by FDA – Food and Drug Administration in force on the date of publication of this specification. The additives present are covered in appropriate regulation by FDA
2. The information presented in this Data Sheet reflects typical values obtained in our laboratories, but should not be considered as absolute or as warranted values. Only the properties and values mentioned on the Certificate of Quality are considered as guarantee of the product.
3. In some applications, Braskem has developed tailor-made resins to reach specific requirements.
4. In case of doubt regarding utilization, or for other applications, please contact our Technical Assistance.
5. For information about safety, handling, individual protection, first aids and waste disposal, please see MSDS. CAS Registry number: 25213-02-9.
6. The mentioned values in this report can be changed at any moment without Braskem previous communication.
7. Braskem does not recommend this grade for packages, parts or any kind of product manufacture that will be used for storage or contact with solution that will have internal contact with human body.
8. The content of this Data Sheet replaces previous revisions published for this product.
9. This resin does not contain the substance Bisphenol A (BPA, CAS # No. 80-05-7) in its composition.