High Density Polyethylene GM5255

Description:

GM5255 is a high density polyethylene developed for the production of corrugated pipes. It is produced with bimodal technology and shows excellent mechanical properties and resistance to stress cracking, high resistance to oxidative degradation and excellent processability.

Application:

Thin-wall and double-wall corrugated pipes for non-pressure drainage and sewage; underground conduits for power and communication cables; blends for irrigation pipes.

Process:

Pipe extrusion.

Control Properties:

	ASTM Method	Units	Values
Melt Flow Rate (190/2.16)	D 1238	g/10 min	0.25
Melt Flow Rate (190/21.6)	D 1238	g/10 min	24
Density	D 792	g/cm^3	0.952

Typical Properties:

Plaque Properties[a]

	ASTM Method	Units	Values
Tensile Strength at Yield	D 638	MPa	24
Tensile Strength at Break	D 638	MPa	34
Flexural Modulus – 1% Secant	D 790	MPa	1220
Shore D Hardness	D 2240	-	62
Notched Izod Impact Strength	D 256	J/m	105
Environmental Stress Cracking Resistance[b]	D 1693	h/F50	240
Environmental Stress Cracking Resistance[c]	D 1693	h/F50	> 1000
Deflection Temperature under Load at 0.455 MPa	D 648	ºC	69
Vicat Softening Temperature at 10 N	D 1525	°C	125
OIT at 200ºC	D 3895	min	> 25
NCLS – Notched Constant Ligament Stress	F 2136	h	> 50

(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.

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 Application Engineering.
5. For information about safety, handling, individual protection, first aids and waste disposal, please see MSDS. CAS Registry number: 25087-34-7.
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.