

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	°C	69
Vicat Softening Temperature at 10 N	D 1525	°C	125
OIT at 200°C	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.

