

Pipe Extrusion

Product Summary Sheet

polyethylene

Grade	Additive Package	Melt Flow Rate ⁽³⁾ 190C/21.6 (190C/2.16)	Density	Tensile Strength @ Yield ⁽⁴⁾	Ultimate Elongation	Secant Flexural Modulus @ 2% Strain MD	Izod Impact Resistance @ 23°C
		D 1238 g/10 min	D 792 g/cm ⁽⁵⁾	D 638 MPA (psi)	D 638 %	D 3350 MPA (psi)	D 256 J/cm / (ft-lb/in)
NOVAPOL® HD-2007-H	A/O's	8.5	0.945	23 (3,300)	850	850 (123,000)	3.7 (7)
NOVAPOL HD-2100-U	A/O's, PPA and UVS	(0.14)	0.940	20 (2,900)	800	780 (112,000)	N/A
NOVAPOL HP-Y353-A	A/O's	(0.30)	0.9535	27 (3,915)	>900	1150 (167,000)	N/A
NOVAPOL HE-Y449-AC	A/O's	(0.40)	0.949	24 (3,480)	650	950 (138,000)	N/A
NOVAPOL PP-0118-F	A/O's	(1.0)	0.918	10 (1,450)	900	408 (59,160)	6.8 (12.5)

- (1) Resin grades are all natural color base resins. Approved color masterbatches are required to produce color pipe.
 (2) Contact NOVA Chemicals Technical Service for appropriate information of the approved masterbatches – (403) 291-8444.
 (3) Extension Rate 2.0 inches/minute, Type IV, plaqued specimen
 (4) Condition B, 10% Igepal, F₀
 (5) Condition B, 100% Igepal, F₅₀
 (6) Contact NOVA Chemicals Technical Service for details.

Additive Package Coding

AO Antioxidant

PPA Process Stabilizer

UVS Slip

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Grade	Hardness Shore D	ESCR Condition C 100% Igepal 100C F ₂₀ / hrs	Vicat Softening Point °C (°F)	Melting Point °C (°F)	Slow Crack Growth Resist. (PENT) hrs.	Thermal Stability °C (°F)
	D 2240	D 1693	D 1525	D 3417	F 1473	D 3350
NOVAPOL® HD-2007-H	60	>5000	124 (255)	128 (262)	>100	260 (500)
NOVAPOL HD-2100-U	60	>5000	119 (246)	128 (262)	>500	260 (500)
NOVAPOL HP-Y353-A	65	>75 ⁽⁴⁾	126 (259)	132 (269)	N/A	264 (507)
NOVAPOL HE-Y449-AC	61	>1000 ⁽⁵⁾	124 (255)	130 (266)	N/A	N/A
NOVAPOL PP-0118-F	58	>2500	104 (219)	120 (248)	N/A	>220 (>428)

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Grade ⁽¹⁾	End-Use Application	Brittleness Temperature	Coefficient of Linear Thermal Expansion	Pipe Ring Tensile @ Yield	HDB @ 23°C	HDB @ 60°C
		D 746 °C (°F)	D 696 cm/cm/°C (in/in/°F)	D 2290 MPa (psi)	D 2837 MPa (psi)	D 2837 MPa
NOVAPOL® HD-2007-H	Pipes, with approved color masterbatches where appropriate (2), for use in pressure and non-pressure service from 1 to 64 inches, municipal potable water pipe, fuel gas pipe, re-lining pipe, industrial and mining pipe, storm and sanitary sewer pipe	<-100 (<-150)	1.4 X 10 ⁻⁴ (0.8 X 10 ⁻⁴)	22.5 (3,260)	11 (1,600)	5.5 (800)
NOVAPOL HD-2100-U	Pipes, with approved color masterbatches where appropriate (2), for use in pressure and non-pressure service from 1 to 24 inches, municipal potable water pipe, fuel gas pipe, re-lining pipe, industrial and mining pipe, storm and sanitary sewer pipe	<-100 (<-150)	1.4 X 10 ⁻⁴ (0.8 X 10 ⁻⁴)	19 (2,800)	8.6 (1,250)	5.5 (800)
NOVAPOL HP-Y353-A	Corrugated pipe resin (4"– 64" diameter), storm sewer, culvert and conduit	<-70 (<-94)	1.4 X 10 ⁻⁴ (0.8 X 10 ⁻⁴)	N/A	N/A	N/A
NOVAPOL HE-Y449-AC	Corrugated tubing, conduit	<-100 (<-150)	1.4 X 10 ⁻⁴ (0.8 X 10 ⁻⁴)	N/A	N/A	N/A
NOVAPOL PP-0118-F	Pipes for use in pressure and non-pressure service from 12 to 100 mm, potable water pipe and tubing, underground sprinkler systems, irrigation pipe	<-70 (<-94)	1.4 X 10 ⁻⁴ (0.8 X 10 ⁻⁴)	10 (1,450)	5.5 (800)	N/A

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Grade	Canadian Standards Association (CSA) ⁽¹⁾ B 137.0, B 137.1, B 137.4	ASTM Cell Classification D 3350	Plastics Pipe Institute (PPI) TR-4 Listing ⁽¹⁾ TR-3	National Sanitation Foundation (NSF) ⁽¹⁾ Standard 14 & Standard 61
NOVAPOL® HD-2007-H	PE-3408	PE-345444A or PE-345464A	PE-3408	yes
NOVAPOL HD-2100-U	PE-2406	PE-234343C	PE-2406	no
NOVAPOL HP-Y353-A	Yes ⁽⁶⁾	PE-335520A	CPPA	no
NOVAPOL HE-Y449-AC	Yes ⁽⁶⁾	PE-335430A	Conduit Division	no
NOVAPOL PP-0118-F	PE-1404	123141A	N/A	no

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