



PolyEXT
H.D.P.E. Lining Systems

Technical Information Sheet

Description: High Density Polyethylene

PolyEXT is a High Density Polyethylene (HDPE) liner, intruded into tubing. It is designed for use at elevated temperatures and pressures in production and injection tubing. It is a tough, flexible lining which will resist damage and cracking during handling. The relative low co-efficient of friction of the lining allows for increased hydraulic efficiency.

Lining Properties

Property	ASTM Test Method	Nominal Values	
		SI Units	English Units
Density, Natural	D1505	0.946 gm/cc	--
Density, Black	D1505	0.955 gm/cc	--
Melt Index (190°C/2.16 kg)	D1238	0.07 gm/10 min.	--
Flow Rate (190°C/21.6 kg)	D1238	8.5 gm/10 min.	--
Tensile Strength @ Ultimate	D638	34.5 MPa	5000 psi
Tensile Strength @ Yield	D638	24.1 MPa	3500 psi
Ultimate Elongation	D638	>800%	>800%
Flexural Modulus	D790	938 MPa	136,000 psi
2% Secant			
Environmental Stress Crack Resistance (ESCR)			
FO, Condition C	D1696	>10,000 hrs.	>10,000 hrs.
PENT	F1473	>100 hrs.	>100hrs.
Brittleness Temperature	D746	<-117°F	<-180°F
Hardness, Shore D	D2240	64	64
Vicat Softening Temperature	D1525	124°C	255°F
Izod impact Strength (Notched)	D256	0.37 KJ/m	7ft – lbf/in
Volume Resistivity Coefficient	D991	>10 ¹⁵ ohm-cm	--
Thermal Expansion Coefficient		2x10 ⁻⁴ cm/cm/°C	1.0x10 ⁻⁴ in/in/°F

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CELL CLASSIFICATION:	D3350	345464C	Grade PE36
MATERIAL CLASSIFICATION:	D1248	Type III	Class C
		Category 5	
PPI HYDROSTATIC DESIGN BASIS (HDB)	D2837	11.0 MPa @23°C	1,600psi @73.4°F
<i>(As listed in PPI TR-4)</i>		5.5MPa@60°C	800psi @ 140°F
PPI HYDROSTATIC DESIGN STRESS (HDS)		5.5MPa@23°C	800 psi @ 73.4°F

(As established by the Hydrostatic Stress Board (HSB) of the Plastics Pipe Institute (PPI))

* Nominal values are intended to be guides only, and not as a specification limit.

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