Polyethylene Technology, inc.
21670 Hamburg Avenue <> Lakeville, MN 55044 Tel: (952) 469-2198 <> Fax: (888)-270-9447

CERTIFICATE OF COMPLIANCE AS OF March 12th 2024

Resin Compounds –
Polyethylene materials used shall be of High Density Polyethylene (HDPE), meeting 1600 Design Stress @ 23°C or 1000 Design Stress @ 60°C applicable requirements for PE4710 pipe & tubing as defined by ASTM D3350, Cell Classification 445576C with a minimum 2% carbon black as an UV inhibitor.

Geothermal pipe shall conform to the specifications as noted below -
Pipe and Tubing shall be Permanently Indented every two-feet along the pipes barrel - identifying the pipe or tubing with Manufacturers name or Logo, Pressure rating, Nominal size, NSF–pw Logo, and QC control codes.

PIPE -
All SDR ratings of Polyethylene Technology Geothermal Pipe are manufactured from the materials stated herein - ASTM D 3035 & AWWA C901 is listed by the NSF International Standard 14 & 61& 358. Only SDR 9 is allowed to bear the AWWA C901 for "Oxidative Resistance Classification" with a CC3 rating.

ACCREDITATION -
Polyethylene Technology, Inc. hereby certifies that all SDR categories of our Geothermal pipe meets and/or exceeds the standards stated within.

WARRANTY -
Geo Thermal pipe manufactured by Polyethylene Technology, Inc. is warranted for a period of 50 years, as specifically defined in our official limited warranty.

GEO THERMAL 200 PSI, PE4710 ASTM D-3035, SDR 11, NSF LISTED

Size	O.D.	I.D.	Wall	WT/100'
3/4"	1.050"	.860"	.095"	12.2#
1"	1.315"	1.077"	.120"	19.1#
1-1/4"	1.660"	1.358"	.151"	30.6#
1-1/2"	1.900"	1.554"	.173"	40.2#
2"	2.375"	1.943"	.216"	62.7#

GEO THERMAL 250 PSI, PE4710 ASTM D-3035, AWWA C901 SDR 9, NSF LISTED

Size	O.D.	I.D.	Wall	WT/100'
¾"	1.050"	.818"	.117	14.6#
1"	1.315"	1.023"	.146"	22.9#
1-1/4"	1.660"	1.292"	.184"	36.5#
1-1/2"	1.900"	1.478"	.211"	47.9#
2"	2.375"	1.847"	.264"	74.9#

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Geothermal Specification for polyethylene plastic molding and extrusion material – PE 4710

Typical Raw Material Properties

	Values		ASTM
	English Units	**SI Units**	**Method**
Density (Natural)		0.949 g/cc	D 4883
Density (Black)		0.959 g/cc	
High Load Melt Index		16.0 g/10min	D 1238
Melt Index		.07g/10 min	D 1238
Tensile Strength			
@ Yield (2 in/min)	3540 psi	24.4 MPa	D 638
@ Break (2 in/min)	4970 psi	34.3 MPa	D 638
Elongation			
@ Break (2 in/min)	635%	635%	D 638
2% Secant Modulus	141,000 psi	972 MPa	D 790
DSC Induction Temperature	513° F	267° C	D3350
Hardness (Shore D)	66	66	D 2240
Heat Deflection Temperature @ 66 psi	154° F	68° C	D 746
Vicat Softening Point	259° F	126° C	D 1525
Thermal Stability	428° F min	220° C min	D2513/3350
Hydrostatic Design Basis			
@23° C	1600 psi	11.0 MPa	D 2837
@60° C	1000 psi	6.9 MPa	D 2837
PENT @ 2.4 MPa and 80° C	>500 hrs	>500 hrs	F 1473
Minimum Carbon Black Concentration	2%	2%	D 1603
Cell Classification	445574C	445576C	D 3350