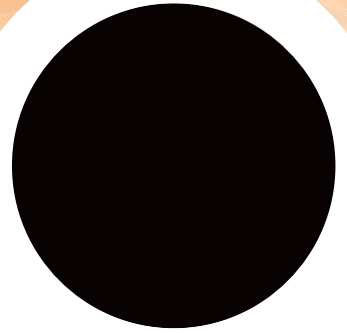


PE 4710 IPS – GEOTHERMAL PIPE

Designed for: Geothermal Heat Exchange Systems

- Iron Pipe Size – HDPE
- Black



Specifications:

- PE 4710 Resin listed in PPI TR4
- Hydrostatic Design Basis: 1600 psi @ 73°F, 1000 psi @ 140°F
- Cell Classification per ASTM D3350 = 445574C and 445576C
- 3/4" – 3" pipe: ASTM D3035, 4" – 24" pipe: ASTM F714
- NSF 358 Certification of Geothermal Piping Systems

Pressure Ratings:

All pressure ratings are a maximum PSI @ 73.4°F.
If temperatures exceed 80°F, contact Charter Plastics for a working pressure de-rating.

Charter Geo Loops:

Charter Geo Loops are a single coil. Each loop is comprised of a supply and return pipe, made to your specified length and run parallel with a Charter U-Bend (180° fitting) factory fused to one end. The other end of the pipe is sealed and the entire coil is pressurized with air.

Charter Plastics Geo Loops are available in .75", 1", 1.25" and 1.5" IPS pipe sizes.

Joining:

Charter Plastics IPS pipe is based on outside diameter. Heat fusion is the preferred method for joining this pipe. All personnel conducting fusions should be experienced and follow guidelines published by the pipe manufacturer or by PPI in TR 33. Lateral piping may be joined with Stab fittings or OD Mechanical fittings designed for pipe made to D 3035 or ASTM F714 Standards. A stiffener should be inserted when using OD Compression type fittings on pipe < 2".

Never use any lubricant on the pipe. Do not expose the pipe to direct flame.

Installing:

Charter Geo pipe is designed to be used in vertical or horizontal applications, down well applications, pond loops and can be horizontally directionally drilled.

Designers must ensure that the heat transfer fluid is compatible with the pipe and all system components.

All pipe installed down wells should be grouted from the bottom with bentonite. Horizontally run pipe must be buried below the frost line and fully surrounded and supported by proper embedment material like sand or gravel. Do not lay pipe directly on top of pipe without proper embedment between each layer. Refer to PPI's "Handbook of Polyethylene Pipe", the IGSHPA Installation Manual and follow as local, state or federal guidelines.

To safely handle and store polyethylene, refer to PPI's Material Handling Guide.

***This pipe is not designed to be used inside the building or for hot water applications.**

Testing:

All pipe should be hydrostatically tested after installation.
Pneumatic testing is not recommended.
Refer to PPI's Handbook of Polyethylene Pipe for Guidelines.



Pipe for a New World.

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PIPE SIZE	O.D. ACTUAL		DR 9 PR 250 PSI	DR 11 PR 200 PSI	DR 13.5 PR 160 PSI	*DR 15.5 PR 138 PSI	DR 17 PR 125 PSI
.75"	1.050	MIN WALL	.117	.095	.078		
		NOM. ID.	.796	.840	.874	N/A	N/A
		WEIGHT PER FT	.153	.130	.111		
1"	1.315	MIN WALL	.146	.120	.097		
		NOM. ID.	1.003	1.055	1.101	N/A	N/A
		WEIGHT PER FT	.236	.201	.169		
1.25"	1.660	MIN WALL	.184	.151	.123	.107	
		NOM. ID.	1.270	1.338	1.394	1.426	N/A
		WEIGHT PER FT	.374	.316	.266	.236	
1.5"	1.900	MIN WALL	.211	.173	.141	.123	
		NOM. ID.	1.453	1.533	1.598	1.634	N/A
		WEIGHT PER FT	.490	.412	.345	.307	
2"	2.375	MIN WALL	.264	.216	.176	.153	.140
		NOM. ID.	1.815	1.917	2.002	2.049	2.075
		WEIGHT PER FT	.767	.643	.534	.471	.436
3"	3.500	MIN WALL	.389	.318	.259	.226	.206
		NOM. ID.	2.675	2.826	2.951	3.021	3.063
		WEIGHT PER FT	1.665	1.394	1.158	1.021	.937
4"	4.500	MIN WALL	.500	.409	.333	.290	.265
		NOM. ID.	3.440	3.633	3.794	3.885	3.938
		WEIGHT PER FT	2.751	2.305	1.914	1.685	1.550
5"	6.625	MIN WALL	.736	.602	.491	.427	.390
		NOM. ID.	5.065	5.349	5.584	5.720	5.798
		WEIGHT PER FT	5.962	4.995	4.154	3.653	3.357

Weight calculations per PP1TR7

*Note: DR15.5 is not recognized in the PPI Plastic Piping Materials for Geothermal/Geoexchange standard

Pipe sizes in bold face comply with NSF/ANSI 358-1-2017 Standard

PE 4710 IPS – GEOTHERMAL PIPE

Designed for: Geothermal Heat Exchange Systems

- Iron Pipe Size – HDPE
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PIPE SIZE	O.D. ACTUAL		DR 9 PR 250 PSI	DR 11 PR 200 PSI	DR 13.5 PR 160 PSI	*DR 15.5 PR 138 PSI	DR 17 PR 125 PSI
8"	8.625	MIN WALL	.958	.784	.639	.556	.507
		NOM. ID.	6.594	6.963	7.270	7.446	7.550
		WEIGHT PER FT	10.103	8.469	7.039	6.192	5.683
10"	10.750	MIN WALL	1.194	.977	.796	.694	.632
		NOM. ID.	8.219	8.679	9.062	9.279	9.410
		WEIGHT PER FT	15.695	13.154	10.929	9.632	8.829
12"	12.750	MIN WALL	1.417	1.159	.944	.823	.750
		NOM. ID.	9.746	10.293	10.749	11.005	11.160
		WEIGHT PER FT	22.089	18.507	15.372	13.548	12.427
14"	14.00	MIN WALL	1.556	1.273	1.037	.903	.824
		NOM. ID.	10.701	11.301	11.802	12.086	12.253
		WEIGHT PER FT	26.634	22.319	18.541	16.323	14.991
16"	16.00	MIN WALL	1.778	1.455	1.185	1.032	.941
		NOM. ID.	12.231	12.915	13.488	13.812	14.005
		WEIGHT PER FT	34.783	29.154	24.214	21.320	19.566
18"	18.00	MIN WALL	2.000	1.636	1.333	1.161	1.059
		NOM. ID.	13.760	14.532	15.174	15.539	15.755
		WEIGHT PER FT	44.017	36.881	30.644	26.983	24.771
20"	20.00	MIN WALL	2.222	1.818	1.481	1.290	1.176
		NOM. ID.	15.289	16.146	16.860	17.265	17.507
		WEIGHT PER FT	54.337	45.537	37.829	33.312	30.565
22"	22.00	MIN WALL		2.00	1.630	1.419	1.294
		NOM. ID.	N/A	17.760	18.544	18.992	19.257
		WEIGHT PER FT		55.105	45.796	40.308	36.995
24"	24.00	MIN WALL	2.667	2.182	1.778	1.548	1.412
		NOM. ID.	18.346	19.374	20.231	20.718	21.007
		WEIGHT PER FT	78.261	65.584	54.496	47.970	44.037

Weight calculations per PP1TR7

*Note: DR15.5 is not recognized in the PPI Plastic Piping Materials for Geothermal/Geoexchange standard

Pipe sizes in bold face comply with NSF/ANSI 358-1-2017 Standard

Charter Plastics

Polyethylene. Pipe. Partners.



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