



AIA[®] Document G716[™] – 2004

Request for Information (“RFI”)

TO:

Brian T. Dunn, AIA
KG+D Architects, PC
285 Main Street
Mount Kisco, NY 10549

FROM: LJ Coppola**PROJECT:**

Harrison, Town-Village Recreation Center Phase 2
270 Harrison Avenue
Harrison, NY 10528

ISSUE DATE:

2/17/2025

RFI No.


#036

PROJECT NUMBERS: 2020-1005 /**REQUESTED REPLY DATE:****COPIES TO:****RFI DESCRIPTION:** *(Fully describe the question or type of information requested.)*

See Attached

REFERENCES/ATTACHMENTS: *(List specific documents researched when seeking the information requested.)***SPECIFICATIONS:** See Attached**DRAWINGS:** See Attached**OTHER:** See Attached**SENDER'S RECOMMENDATION:** *(If RFI concerns a site or construction condition, the sender may provide a recommended solution, including cost and/or schedule considerations.)***RECEIVER'S REPLY:** *(Provide answer to RFI, including cost and/or schedule considerations.)*

Phil Pignatelli

February 17, 2025

BY**DATE****COPIES TO**

Note: This reply is not an authorization to proceed with work involving additional cost, time or both. If any reply requires a change to the Contract Documents, a Change Order, Construction Change Directive or a Minor Change in the work must be executed in accordance with the Contract Documents.

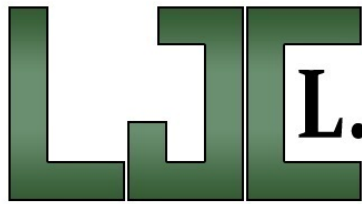
OLA Response 02-19-2025:

Refer to product data from Phase 1 submittal on pages 4-7.

Electrofusion fittings are acceptable for below slab applications. Fittings shall conform to ASTM F1055 or EN 1555-3.

See Phase 1 submittals attached.

BRIAN DUNN 2025-03-03



L.J. COPPOLA INC.

MECHANICAL CONTRACTORS

40 Farrington Road
Brewster, NY 10509
(914) 769-7666
Fax: (914) 769-5141
Plumbing License No. 750

PLUMBING

H.V.A.C.

PROCESS PIPING

SEWAGE TREATMENT

ESTABLISHED 1972

REQUEST FOR INFORMATION

Project: HARRISON REC CENTER PHASE 2 **Date:** 2/14/25 **Log No.:** LJC# -04

Drwg.: N/A **Spec.:** 232113.33 **Area:** MER

Directed To: PIAZZA BROTHERS **Date Required:**

Impact: MER

Regarding: PHASE 1 GEOTHERMAL PIPING CONNECTIONS

REQUESTED BY: LJC **cc:**

INFORMATION REQUIRED:

The Phase 1 geothermal contractor left the HDPE loop connections below grade, and we have no record of what manufacturer/product they installed. Please provide the product data for their installation to ensure compatibility.

Also, please confirm that electrofusion fittings will be acceptable to use until the GWS/R lines are above the slab level, as we will not be able to use a butt fusion machine on lines so close together.

RESPONSE:

RESPONSE BY:

RESPONSE DATE: **cc:**

Your response is requested by the date listed above. Failure to respond by this date may delay the project schedule and may have a cost impact.



SUBMITTAL COVER SHEET

Contractor: Laura Li Industries

Address: P.O. Box 195 Purchase NY 10577

Telephone: (914)261-4248

Owner: Town/Village of Harrison

Name of Project: Harrison Recreation & Community Center

TYPE OF SUBMITTAL:

☐ Shop Drawings
☒ Technical Data
☐ Test Report

☐ Schedule
☐ Certificate
☐ Warranty

☐ Physical Sample
☐ Color Sample
☐ _____

Submission #: 1st 2nd 3rd 4th (circle one)

Description:

Product Identification: 1 1/4" & 2" Loop Piping

Manufacturer: Oil Creek Plastics

Subcontractor/Supplier: _____

DOCUMENT REFERENCES: (Must be fully filled out)

Spec Section No.: 232113.33 Drawing No(s): 5-M701

Paragraph: 2.02 Rm. Or Det. No(s): _____

Contractor Remarks: Product Data Only – Shop

Drawings to follow upon approval of product

Contractor Submittal Review Stamp

THE ATTACHED MATERIAL HAS BEEN REVIEWED BY THE UNDERSIGNED AND IS BELIEVED TO COMPLY WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE UNDERSIGNED UNDERSTANDS VERIFICATION OF FIELD DIMENSIONS, AND COORDINATION WITH OTHER TRADES, REMAINS THE RESPONSIBILITY OF THE CONTRACTOR.

DATE: 11-29-23 BY (SIGN): _____

Digitally signed by Vincent Sessano
DN: cn=Vincent Sessano, email=vincent.sessano@gmail.com, o=Vincent Sessano
Date: 2023.11.29 10:47:45-0500

Consultant use below this line:

Architect Submittal Review Stamp

☐ NO EXCEPTIONS

☐ MAKE CORRECTIONS
NOTED

☐ REJECTED

☐ REVISE AND RESUBMIT

☐ EXAMINED

☐ SUBMIT SPECIFIED ITEM

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS & SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED & CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES & THE SATISFACTORY PERFORMANCE OF HIS WORK

KAEYER, GARMENT + DAVIDSON ARCHITECTS, P.C.

DATE _____ BY _____

SHOP DRAWING REVIEW

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NO EXCEPTION TAKEN	X
MAKE CORRECTIONS NOTED	
AMEND & RESUBMIT	
REJECTED - SEE REMARKS	

OLA Consulting Engineers, P.C.
50 Broadway
Hawthorne, NY 10532

Date: 01-15-24 By: HM

1. Submittal is a substitution from the specified product/manufacturer; however, is in compliance with IGSHPA and ASTM standards for geothermal installations.



GEOTHERMAL - DR-11

SIZE	O.D.	MINIMUM WALL	WEIGHT PER 100'	PSI RATING
3/4"	1.050	0.095	11.6	200
1"	1.315	0.120	18.3	200
1-1/4"	1.660	0.161	27.9	200
1-1/2"	1.900	0.173	38.3	200
2"	2.375	0.216	59.7	200
3"	3.500	0.318	129.0	200
4"	4.500	0.409	208.0	200
6"	6.625	0.602	496.8	200



AQUA JET I.D. / AQUA JET O.D. / AQUA BLUE / GEOTHERMAL

PROPERTIES	TEST METHOD	UNIT	AQUA-JET & GEOTHERMAL (VALUE)	AQUA BLUE (VALUE)
DENSITY	ASTM D-1505	GMS/CM ³	0.954	0.944
MELT INDEX	ASTM D-1238 (190 / 2.16)	GMS/10 MIN	0.10	0.11
TENSILE STRENGTH AT BREAK	ASTM D-638	PSI	4500	4500
TENSILE STRENGTH AT YEILD	ASTM D-638	PSI	3200	3300
ULTIMATE ELONGATION	ASTM D-638	%	850	>800
FLEXURAL MODULAS	ASTM D-790	PSI	120,000	120,000
LINEAR THERMAL EXPANSION	ASTM D-696	INCH/INCH/F	9X10 ⁻⁵	9X10 ⁻⁵
HARDENESS	ASTM D-2240	SHORE D	58	68
BRITTLINESS TEMPERATURE	ASTM 746	°F	<-148	<-180
PENT	ASTM-F-1473	HOURS	>100	>100
MATERIAL DESIGNATION	PPI-TR4	-	PE-3608	PE-3608
CELL CLASSIFICATION	ASTM D-3350	-	345464C	345464C
HDB AT 73.4°F (23°C)	ASTM D-2837	PSI	1600	1600
HBD AT 140°F (60°C)	ASTM D-2837	PSI	800	800

OIL CREEK PLASTICS TYPICAL MATERIAL PROPERTIES



PE-4710 SERIES / AQUA JET I.D. / AQUA JET O.D. / AQUA BLUE / GEOTHERMAL

SIZE	O.D.	MINIMAL WALL	AQUA-JET & GEOTHERMAL (VALUE)	AQUA BLUE (VALUE)
DENSITY (BLACK)	ASTM D-791	GMS/CM ₃	0.959	
DENSITY (AQUA BLUE)	ASTM D-791	GMS/CM ₂	0.949	
MELT INDEX	ASTM D-1238 (190/2.16)	GMS/10 MIN	0.080	
TENSILE STRENGTH AT YIELD	ASTM D-638	PSI	>3500	
ULTIMATE ELONGATION AT BREAK	ASTM D-638	%	>500%	
FLEXURAL MODULAS	ASTM D-790	PSI	150,000	
HYDROSTIC STRENGTH	ASTM D-1598		>8 DAY	
1798 PSI AT 68°F			>42 DAY	
725 PSI AT 176°F				
BRITTLINESS TEMPERATURE	ASTM D746A	°F	>-103°F	
SLOW CRACK GROWTH PENT	ASTM D-1437	HOURS	>1 YEAR	
MATERIAL DESIGNATION	PPI-TR4	-	PE-4710	
CELL CLASSIFICATION	ASTM D-3350	BLACK	PE-445574C	
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KAEYER, GARMENT + DAVIDSON ARCHITECTS, P.C.

DATE 2024-01-15 BY BRIAN DUNN

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OLA Consulting Engineers, P.C.
50 Broadway
Hawthorne, NY 10532

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☐ Shop Drawings

☒ Technical Data

☐ Test Report

☐ Schedule

☐ Certificate

☐ Warranty

☐ Physical Sample

☐ Color Sample

☐ _____

Submission #: 1st 2nd 3rd 4th (circle one)

Description:

Product Identification: Fusion Pipe Couplings, Elbows, Tees

Manufacturer: B&D

Subcontractor/Supplier: _____

DOCUMENT REFERENCES: (Must be fully filled out)

Spec Section No.: 232113.33 Drawing No(s): 5-M701

Paragraph: 2.02 Rm. Or Det. No(s): _____

Contractor Remarks: Product Data Only – Shop

Drawings to follow upon approval of product

Contractor Submittal Review Stamp

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DATE: 11-22-23 BY (SIGN): _____

Digitally signed by Vincent Sessano
DN: cn=US,
ou=Signature, email=Vincent.Sessano@gmail.com,
c=US

Consultant use below this line:

Architect Submittal Review Stamp

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Date: 01-15-24 By: HM

1. Submittal is a substitution from the specified product/manufacturer; however, is in compliance with IGSHPA and ASTM standards for geothermal installations.

SOCKET FITTINGS: COUPLINGS

Size	Part Number
3/4" x 3/4"	SPC44
1" X 3/4"	SPC54
1" X 1"	SPC55
1 1/4" X 3/4"	SPC64
1 1/4" X 1"	SPC65
1 1/4" X 1 1/4" (Slim Line)	SPC66-SL
1 1/4" X 1 1/4"	SPC66
1 1/2" X 3/4"	SPC74
1 1/2" X 1"	SPC75
1 1/2" X 1 1/4"	SPC76
1 1/2" X 1 1/2"	SPC77
2" X 1"	SPC85
2" X 1 1/4"	SPC86
2" X 1 1/2"	SPC87
2" X 2"	SPC88
2" X 2" (Heavy Duty)	SPC88-HD
3" X 3"	SPC1010

NOTE: FITTINGS LISTED ABOVE ARE SDR11



SPC88-HD



Slim Line



ALL THE "PUMP" YOU NEED AND MORE

NEED A SPECIAL SIZE?
FABRICATED SIZES AVAILABLE!
CALL YOUR SALESMAN, TODAY!

1-866-646-6724

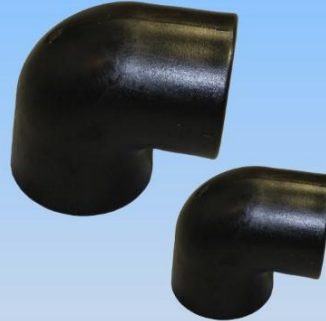
712-652-3424

www.bdmfginc.com

SOCKET FITTINGS: ELBOWS

FUSION ELBOWS (FUSION X FUSION)

Size	Part Number
3/4" x 3/4"	SPE44
1" X 3/4"	SPE54
1" X 1"	SPE55
1 1/4" X 3/4"	SPE64
1 1/4" X 1"	SPE65
1 1/4" X 1 1/4"	SPE66
1 1/2" X 1 1/2"	SPE77
2" X 1 1/4"	SPE86
2" X 2"	SPE88



FUSION 45° ELBOWS (FABRICATED)

Size	Part Number
1 1/2" X 1 1/2" - 45° ELBOW (FAB)	SPE77-45



FUSION 45° ELBOW MOLDED

Size	Part Number
1" X 1" - 45° ELBOW	SPE55-45
1 1/4" X 1 1/4" - 45° ELBOW	SPE66-45
2" X 2" - 45° ELBOW	SPE88-45



FUSION ELBOWS (SLIM LINE)

Size	Part Number
1 1/4" X 1 1/4" (SLIM LINE)	SPE66SL



NOTE: ALL FITTINGS LISTED ABOVE ARE SDR11



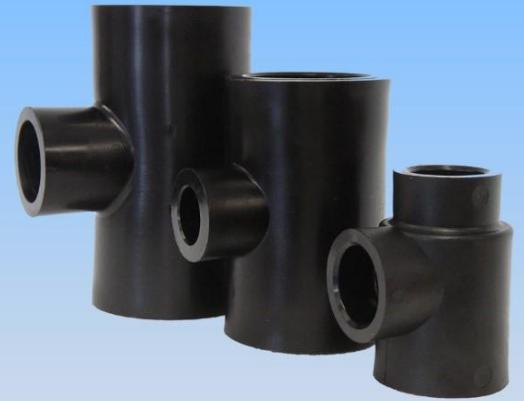
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SOCKET FITTINGS: TEES

Size	Part Number
3/4" X 3/4" X 3/4"	SPT444
1" X 1" X 3/4"	SPT554
1" X 1" X 1"	SPT555
1 1/4" X 3/4" X 3/4"	SPT644
1 1/4" X 1" X 1"	SPT655
1 1/4" X 1 1/4" X 3/4"	SPT664
1 1/4" X 1 1/4" X 1"	SPT665
1 1/4" X 1 1/4" X 1 1/4"	SPT666
1 1/2" X 3/4" X 3/4"	SPT744
1 1/2" X 1 1/4" X 3/4"	SPT764
1 1/2" X 1 1/4" X 1"	SPT765
1 1/2" X 1 1/4" X 1 1/4"	SPT766
1 1/2" X 1 1/2" X 3/4"	SPT774
1 1/2" X 1 1/2" X 1"	SPT775
1 1/2" X 1 1/2" X 1 1/4"	SPT776

NOTE: FITTINGS LISTED ABOVE ARE SDR11



Size	Part Number
1 1/2" X 1 1/2" X 1 1/2"	SPT777
2" X 1 1/4" X 3/4"	SPT864
2" X 1 1/4" X 1"	SPT865
2" X 1 1/4" X 1 1/4"	SPT866
2" X 1 1/2" X 3/4"	SPT874
2" X 1 1/2" X 1"	SPT875
2" X 1 1/2" X 1 1/4"	SPT876
2" X 2" X 3/4"	SPT884
2" X 2" X 1"	SPT885
2" X 2" X 1 1/4"	SPT886
2" X 2" X 2"	SPT888

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Submission #: 1st 2nd 3rd 4th (circle one)

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2. U-bend shall be 1-1/4" DR11.

3. Quantity by contractor.

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50 Broadway
Hawthorne, NY 10532

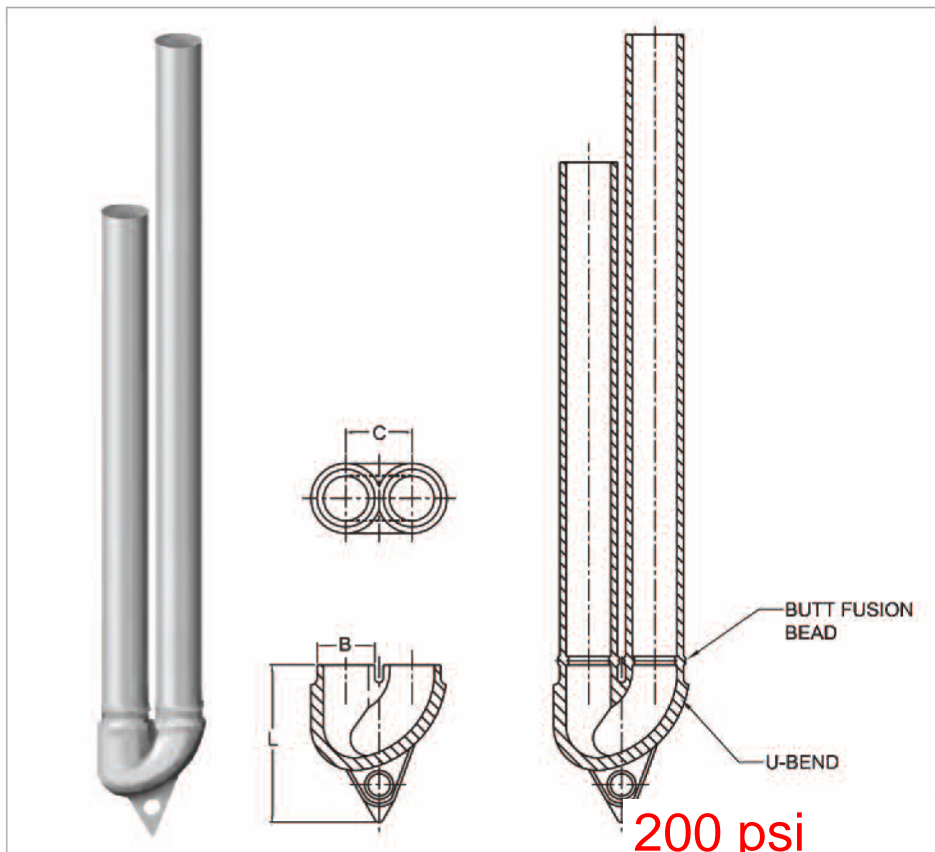
Date: 01-15-24 By: HM

OIL CREEK PLASTICS GEOHERMAL LOOPS

**MEETS IGSHPA SPECIFICATIONS FOR GROUND HEAT EXCHANGER MATERIALS
WITH 1-PIECE CENTRAL PLASTICS U-BEND PRE-INSTALLED**

Oil Creek Plastics geothermal pipe is manufactured from virgin high density PE-3608 or PE-4710 material designed to meet or exceed ASTM D 3035, and D 3350. Our geothermal pipe is guaranteed for life against rot, rust, electrolytic corrosion, and defects in both material and workmanship.

All geothermal loops with 1-piece u-bend pre-installed are butt fused by certified personnel and accomplished in accordance to the guidelines in the IGSHPA Installation Guide.



**200 psi
ONLY**



PE-4710 U-BENDS DIMENSIONS

NOMINAL SIZE	B	C	L
3/4" IPS	1.05	1.75	3.84
1" IPS	1.31	1.82	3.84
1-1/4" IPS	1.66	1.91	4.55

GEOHERMAL PIPE PE-3608 or PE-4710

SIZE	O.D.	MINIMUM WALL	WEIGHT PER 100'	PSI RATING	
DR-11				PE-3608	PE-4710
3/4"	1.050	.095	12.9	160	200
1"	1.315	.120	20.0	160	200
1-1/4"	1.660	.151	31.4	160	200
DR-9					
3/4"	1.050	.117	15.3	200	250
1"	1.315	.146	23.5	200	250
1-1/4"	1.660	.184	37.2	200	250
1-1/2"	1.900	.211	48.7	200	250



pw

Potable water



OIL CREEK PLASTICS

GEOTHERMAL PIPE

HIGH DENSITY POLYETHYLENE PIPE



High Density Polyethylene Pipe is the recommended material for use in ground source heat pump systems because of certain characteristics that it possesses. These characteristics include:

- **High Abrasion Resistance** – HDPE pipe has very good abrasion resistance and can withstand the wear and tear associated with GSHP installations.
- **Corrosion Resistance** – HDPE pipe is inert in nearly all soil conditions and will not rust, rot, or corrode with age.
- **High Environmental Stress Crack Resistance** – HDPE pipe can withstand temperature fluctuations, ground movement, and other environmental stresses without cracking or failing.
- **Fusible** – HDPE pipe can be easily joined together using a variety of methods, including; socket, butt, sidewall, and electrofusion.
- **Easy to Use** – HDPE pipe is relatively lightweight and malleable, which decreases installation time and labor costs.

These characteristics apply to all HDPE pipe manufactured from PPI & NSF listed PE-3608 or PE-4710 resins. Why then should you choose to use Oil Creek Plastics, Inc. Geothermal Pipe as opposed to our competitors?

Oil Creek Plastics, Inc. uses the most technologically advanced extrusion processes to ensure that all pipe leaving our warehouse is of the highest quality. The following are a few of the ways that we make our pipe the best pipe in the market:

- **Ultrasonic Wall Monitors** – Oil Creek Plastics Geothermal pipe is extruded using ultrasonic wall monitors that measure the wall thickness, outside diameter, inside diameter, and ovality of the pipe as it is extruded. This ensures that all pipe is within specifications before leaving the factory.
- **Pressurized.** – Oil Creek Plastics Geothermal Pipe is packaged using our special Air Infusion Method. The pipe is pressurized, ensuring that no damage has occurred during shipping and installation.
- **Job Specific Lengths** – Oil Creek Plastics, Inc. will manufacture Geothermal Pipe to any specified length that the customer desires.
- **Lifetime Limited Warranty** – Oil Creek Plastics, Inc. is so sure that our Geothermal Pipe is the best in the market that we are the first company to offer a lifetime limited warranty, including labor reimbursement for each linear foot of pipe replaced.
- **Great Service** – At Oil Creek Plastics, Inc. we operate our own fleet of trucks, ensuring that your order will arrive when we say it will arrive.

At OCP we believe that Ground Source Heat Pump (GSHP) systems are the future of the residential and commercial heating/cooling industry. This belief is the foundation upon which we manufacture our Geothermal Pipe.

Oil Creek Plastics' commitment to quality during our manufacturing process ensures that you will receive the best possible product on the market.

OCP is a member in good standing of the International Ground Source Heat Pump Association (IGSHPA) and manufactures all Geothermal Pipe according to the specifications set forth in appendix C of the Closed Loop/Ground-Source Heat Pump Systems Installation Guide.



OIL CREEK PLASTICS

TYPICAL MATERIAL PROPERTIES

PROPERTIES	TEST METHOD	UNIT	VALUE	
PE-3608 SERIES AQUA JET/AQUA PLUS/AQUA BLUE/GEOTHERMAL			AQUA-JET/ AQUA PLUS/ GEOTHERMAL	AQUA-BLUE
Density	ASTM D-1505	gms/cm ³	0.954	0.944
Melt Index	ASTM D-1238 (190/2.16)	gms/10 min	0.10	0.11
Tensile Strength @ Break	ASTM D-638	psi	4500	4500
Tensile Strength @ Yield	ASTM D-638	psi	3200	3300
Ultimate Elongation	ASTM D-638	%	850	>800
Flexural Modulus	ASTM D-790	psi	120,000	120,000
Linear Thermal Expansion	ASTM D-696	inch/inch/F	9x10 ⁻⁵	9x10 ⁻⁵
Hardness	ASTM D-2240	Shore D	58	68
Brittleness Temperature	ASTM D-746	°F	< -148	< -180
Pent	ASTM F-1473	Hours	> 100	>100
Material Designation	PPI-TR4	—	PE-3608	PE-3608
Cell Classification	ASTM D-3350	—	345464C	335464A
HDB@73.4°F (23°C)	ASTM D-2837	psi	1600	1600
HDB@140°F (60°C)	ASTM D-2837	psi	800	800

PE-2708 YELLOW - GAS PIPE

Density (Yellow)	ASTM D-1505	gms/cm ³	0.943
Melt Index	ASTM D-1238 (190/2.16)	gms/10 min	0.20
Tensile Strength @ Break	ASTM D-638	psi	4500
Tensile Strength @ Yield	ASTM D-638	psi	2800
Ultimate Elongation	ASTM D-638	%	800
Flexural Modulus	ASTM D-790	psi	100,000
ESCR Condition (B, 10% & C)	ASTM D-1693	Hours	> 5000
Hardness	ASTM D-2240	Shore D	64
Brittleness Temperature	ASTM D-746	°F	< -180
Pent	ASTM F-1473	Hours	> 100
Material Designation	PPI-TR4	—	PE-2708
Cell Classification	ASTM D-3350	—	234373E
HDB@73.4°F (23°C)	ASTM D-2837	psi	1250
HDB@140°F (60°C)	ASTM D-2837	psi	1000

PE-4710 SERIES AQUA JET/AQUA PLUS/AQUA BLUE/GEOTHERMAL/GAS PIPE

Density (Black)	ASTM D791 ²	gms/cm ³	0.959
Density (Aqua-Blue)	ASTM D791 ¹	gms/cm ²	0.949
Melt Index	ASTM D1238 (190/2.16)	gms/10 min.	0.080
Tensile Strength @ Yield	ASTM D638	psi	> 3500
Ultimate Elongation @ Break	ASTM D638	%	> 500%
Flexural Modulus	ASTM D790	psi	150,000
Hydrostatic Strength	ASTM D1598 ²		
1798 psi @ 68°F			> 8 DAY
725 psi @ 176°F			> 42 DAY
Brittleness Temperature	ASTM D746A	°F	< -103°F
Slow Crack Growth PENT	ASTM F1473 ³	Hours	> 1 YEAR
Material Designation	PPI-TR4	—	PE-4710
Cell Classification	ASTM D3350	BLACK	PE-445574C
HDB@ 73.4°F (23°C)	ASTM D2837	psi	1600
HDB@ 140°F (60°C)	ASTM D2837	psi	1000

Notes

¹ Natural resin

² Natural resin extruded with carbon black (6.5%)

³ Compression molded parts prepared according to ASTM D4703 Procedure C



CHEMICAL RESISTANCE



S = Satisfactory.

M = Marginal.

U = Unsatisfactory.

= Not known.

* = some stress cracking.

REAGENT	70°F 140°F	REAGENT	70°F 140°F	REAGENT	70°F 140°F	REAGENT	70°F 140°F
Acetic Acid* 1-10%	S S	Copper Chloride Sat'd	S S	Lactic Acid* 90%	S S	Potassium Ferri/Ferro Cyanide Sat'd	S S
Acetic Acid* 10-60%	S M	Copper Cyanide Sat'd	S S	Latex*	S S	Potassium Fluoride	S S
Acetic Acid* 80-100%	S M	Copper Fluoride 2%	S S	Lead Acetate Sat'd	S S	Potassium Hydroxide 20%	S S
Acetone	M U	Copper Nitrate Sat'd	S S	Low Pressure Gas	S S	Potassium Hydroxide Conc.	S S
Acrylic Emulsions*	S S	Copper Sulfate Dilute	S S	Lube Oil	S M	Potassium Nitrate Sat'd	S S
Aluminum Chloride - Dilute	S S	Copper Sulfate Sat'd	S S	Magnesium Carbonated Sat'd	S S	Potassium Perborate Sat'd	S S
Aluminum Chloride Conc.	S S	Cottonseed Oil*	S S	Magnesium Chloride Sat'd	S S	Potassium Perchlorate 10%	S S
Aluminum Fluoride Conc.	S S	Cuprous Chloride Sat'd	S S	Magnesium Hydroxide Sat'd	S S	Potassium Sulfate Conc.	S S
Aluminum Sulfate Conc.	S S	Cyclohexanol	S S	Magnesium Nitrate Sat'd	S S	Potassium Sulfide Conc.	S S
Alums (all types) Conc.	S S	Cyclohexane	M U	Magnesium Sulphate Sat'd	S S	Potassium Persulfate Sat'd	S S
Ammonia 100% Dry Gas	S S	Detergents Synthetic*	S S	Mercuric Chloride Sat'd	S S	Propane	S S
Ammonium Carbonate	S S	Developers Photographic	S S	Mercuric Cyanide Sat'd	S S	Propargyl Alcohol*	S S
Ammonium Chloride Sat'd	S S	Dextrin Sat'd	S S	Mercurous Nitrate Sat'd	S S	Propyl Alcohol*	S S
Ammonium Fluoride 20%	S S	Dextrene Sat'd	S S	Mercury	S S	Propylene Dichloride 100%	U U
Ammonium Hydroxide 0.888 S.Q.	S S	Diethylphthalate	S M	Methyl Alcohol* 100%	S S	Propylene Glycol*	S S
Ammonium Metaphosphate Sat'd	S S	Disodium Phosphate	S S	Methyl Bromide	M U	Rayon Coagulating Bath*	S S
Ammonium Nitrate Sat'd	S S	Diaso Salts	S S	Methyl Chloride	M U	Salt Water	S S
Ammonium Persulfate, Sat'd	S S	Diethylene Glycol*	S S	Methyl Ethyl Ketone 100%	M U	Salt Water Cont. 20% Crude Oil	S S
Ammonium Sulfate Sat'd	S S	Diglycolic Acid*	S S	Methylsulfuric Acid*	S S	Sea Water	S S
Ammonium Sulfide Sat'd	S S	Dimethylamine	M U	Methylene Chloride 100%	M U	Selenic Acid	S S
Ammonium Thiocyanate Sat'd	S S	Emulsions, Photographic*	S S	Milk	S S	Shortening*	S S
Amyl Acetate	M U	Ethyl Acetate 100%	M U	Mineral Oils	S U	Silicic Acid	S S
Amyl Alcohol* 100%	S S	Ethyl Alcohol* 100%	S S	Molasses Comm.	S S	Silver Nitrate Sol.	S S
Amyl Chloride 100%	M U	Ethyl Alcohol* 35%	S S	Natural Gas, Wet	S S	Soap Solution* Any Conc's	S S
Aniline 100%	S M	Ethyl Butyrate	M U	Natural Gas, Dry	S S	Sodium Acetate Sat'd	S S
Antimony Chloride	S S	Ethyl Chloride	M U	Nickel Chloride, Sat'd	S S	Sodium Benzoate 35%	S S
Aqua Regis	U U	Ethyl Ether	U U	Nickel Nitrate Conc.	S S	Sodium Bicarbonate Sat'd	S S
Barium Carbonate Sat'd	S S	Ethylene Chloride	U U	Nickel Sulfate Sat'd	S S	Sodium Bisulfate Sat'd	S S
Barium Chloride	S S	Ethylene Chlorohydrin	U U	Nicotine* Dilute	S S	Sodium Bisulfite Sat'd	S S
Barium Hydroxide	S S	Ethylene Dichloride	M U	Nicotinic Acid*	S S	Sodium Borate	S S
Barium Sulfate Sat'd	S S	Ethylene Glycol*	S S	Nitric Acid 0-30%	S S	Sodium Bromide Dilute Sol.	S S
Barium Sulfide Sat'd	S S	Ferris Chloride Sat'd	S S	Nitric Acid 30-50%	S M	Sodium Carbonate Conc.	S S
Beer	S S	Ferris Nitrate Sat'd	S S	Nitric Acid 70%	S M	Sodium Carbonate	S S
Benzene	M U	Ferrous Chloride Sat'd	S S	Nitric Acid 95-98%	U U	Sodium Chlorate Sat'd	S S
Benzene Sulfonic Acid*	S S	Ferrous Sulphate	S S	Nitrobenzene 100%	U U	Sodium Chloride Sat'd	S S
Bismuth Carbonate Sat'd	S S	Fish Solubles*	S S	Ochyl Gresol	S U	Sodium Cyanide	S S
Bleach Lye 10%	S S	Fluoboric Acid	S S	Oils and Fats	S U	Sodium Dichromate Sat'd	S S
Black Liquor	S S	Fluorine	S U	Oleic Acid Conc.	S U	Sodium Ferricyanide Sat'd	S S
Borax Cold Sat'd	S S	Fluosilicic Acid 32%	S S	Olsum Conc.	U U	Sodium Ferrocyanide Sat'd	S S
Boric Acid Dilute	S S	Fluosilicic Acid Conc.	S S	Orange Extract	S S	Sodium Fluoride Sat'd	S S
Boric Acid Conc.	S S	Formaldehyde* 40%	S M	Oxalic Acid* Dilute	S S	Sodium Hydroxide Conc.	S S
Bromic Acid 100%	S S	Formic Acid* 0-20%	S S	Oxalic Acid* Sat'd	S S	Sodium Hypochlorite	S S
Bromine Liquid 100%	M U	Formic Acid* 20-50%	S S	Ozone 100%	S U	Sodium Nitrate	S S
Butane	S S	Formic Acid* 100%	S S	Perchloric Acid 10%	S S	Sodium Sulfate	S S
Butanediol* 10%	S S	Fructose Sat'd	S S	Petroleum Ether	U U	Sodium Sulfide 2%	S S
Butanediol* 60%	S S	Fruit Pulp	S S	Phenol 90%	U U	Sodium Sulfide Sat'd Sol.	S S
Butanediol* 100%	S S	Fuel Oil	S U	Phosphoric Acid up to 30%	S S	Sodium Sulfide Sat'd	S S
Butyl Alcohol* 100%	S S	Furfural 100%	M U	Phosphoric Acid Over 30%	S S	Stannous Chloride Sat'd Sol.	S S
Calcium Bisulfide	S S	Furfuryl Alcohol	M U	Phosphoric Acid 90%	S S	Stannic Chloride Sat'd	S S
Calcium Carbonate Sat'd	S S	Gallic Acid* Sat'd	S S	Phosphorous (Yellow) 100%	S N	Starch Solution* Sat'd	S S
Calcium Chloride Sat'd	S S	Gasolene	M U	Phosphorus Pentoxide 100%	S N	Stearic Acid* 100%	S S
Calcium Chlorate Sat'd	S S	Gin	S U	Photographic Solutions	S S	Sulfuric Acid 0-50%	S S
Calcium Hydroxide	S S	Glucose	S S	Pickling	S S	Sulfuric Acid 70%	S M
Calcium Hypochlorite Bleach Sol.	S S	Glycerine*	S S	Sulfuric Acid*	S S	Sulfuric Acid 80%	S U
Calcium Nitrate 50%	S S	Glycol*	S S	Hydrochloric Acid*	S S	Sulfuric Acid 96%	M U
Calcium Sulfate	S S	Glycolic Acid* 30%	S S	Sulfuric-Nitric*	S U	Sulfuric Acid 98%	M U
Camphor Oil	M U	Grape Sugar Sat'd Aq.	S S	Plating Solutions	S S	Sulfuric Acid, Fuming	M U
Carbon Dioxide 100% Dry	S S	Hexanol, Tart*	S S	Brass*	S S	Sulfurous Acid	S S
Carbon Dioxide 100% Wet	S S	Hydrobromic Acid 50%	S S	Cadmium*	S S	Tallow	S M
Carbon Dioxide Cold Sat'd	S S	Hydrocyanic Acid Sat'd	S S	Chromium*	N N	Tanic Acid* 10%	S S
Carbon Disulphide	M U	Hydrochloric Acid 10%	S S	Copper*	S S	Tanning Extracts* Conc.	S S
Carbon Monoxide	S S	Hydrochloric Acid 30%	S S	Gold*	S S	Tartaric Acid Sat's	N N
Carbon Tetrachloride	M U	Hydrochloric Acid 35%	S S	Indium*	N S	Tetrahydrofurane	N U
Carbonic Acid	S S	Hydrochloric Acid Conc.	S S	Lead*	S S	Titanium Tetrachloride Sat'd	N U
Castor Oil* Conc.	S S	Hydrofluoric Acid 40%	S S	Nickel*	S S	Toulene	M U
Chlorine Dry Gas 100%	S M	Hydrofluoric Acid 60%	S S	Rhodium*	S S	Transformer Oil	S M
Chlorine Moist Gas	M U	Hydrofluoric Acid 75%	S S	Silver*	S S	Trisodium Phosphate Sat'd	S S
Chlorine Liquid	M U	Hydrogren 100%	S S	Tin*	S S	Trichloroethylene	U U
Chlorobenzene	M U	Hydrogen Bromide 10%	S S	Zinc*	S S	Urea* Up to 30%	S S
Chloroform	M U	Hydrogen Chloride Gas Dry	S S	Potassium Bicarbonate Sat'd	S S	Urine	S S
Chlorosulfonic Acid 100%	M U	Hydrogen Peroxide 30%	S S	Potassium Berate 1%	S S	Vinegar conc.	S S
Chrome Alum Sat'd	S S	Hydrogen Peroxide 90%	S M	Potassium Bromate 10%	S S	Vanilla Extract*	S S
Chromic Acid 20%	S S	Hydrogen Phosphate 100%	S S	Potassium Bromate Sat'd	S S	Wetting Agents*	S S
Chromic Acid up to 50%	S S	Hydroquinone	S S	Potassium Carbonate	S S	Whiskey*	N N
Chromic Acid and Sulfuric Acid	S M	Hydrogen Sulfide	S S	Potassium Chlorate Sat'd	S S	Wines	S S
Cider*	S S	Hypochlorous Acid Cons.	S S	Potassium Chloride Sat'd	S S	Xylene	M U
Citric Acid* Sat'd	S S	Inks*	S S	Potassium Chromate 40%	S S	Yeast	S S
Coconut Oil Alcohols*	S S	Iodine (ink l sol.) Conc.	S U	Potassium Cyanide Sat'd	S S	Zinc Chloride Sat'd	S S
Cola Concentrates*	S S	Lactic Acid* 10%	S S	Potassium Dichromate 40%	S S	Zinc Sulfate Sat'd	S S



LIFETIME LIMITED WARRANTY

**NSF Approved Pipe/Tubing - Gas Pipe -
Geothermal Pipe - Irrigation Pipe**

Oil Creek Plastics, Inc. warrants that its NSF Approved Pipe/Tubing - Gas Pipe - Geothermal Pipe - HEATFLEX PE-RT - Irrigation Pipe (The Warranted Products) shall be reasonably free from defects, such as rot, rust and electrolytic corrosion in accord with the terms of this Limited Warranty.

- 1. Term** – The term of this Limited Warranty begins on the date of Installation and continues for the lifetime of the individual purchaser of the Warranted Products (or for sixty (60) years).
- 2. Obligations of Purchaser Upon Claim** – If a purchaser of any Warranted Product wishes to make a claim under the terms of this Limited Warranty the Purchaser shall:
 - a.) secure and preserve in good condition the Warranted Product subject to the claim for inspections by Oil Creek Plastics, Inc. and
 - b.) notify Oil Creek Plastics, Inc. in writing of the claim, the nature of the claim, and the location of the Warranted Products subject to the claim; and
 - c.) cooperated with Oil Creek Plastics, Inc. in its investigation and adjustment of the claim.
- 3. Obligations of Oil Creek Plastics, Inc. Upon Claim** – Upon receipt of a warranty claim, shall reasonably investigate the claim and advise the claimant whether Oil Creek Plastics, Inc. concurs that the claim is subject to warranty adjustment under the terms of this Limited Warranty, the obligations of Oil Creek Plastics, Inc. shall be limited to:

For Warranted Product Used In Distribution Lines:

- a.) providing to the claimant, free of charge and freight prepaid, a replacement quantity of the Warranted Product equal to the quantity of the Warranted Product proven to be defective; and
- b.) payment of reasonable direct labor charges actually incurred by the claimant not to exceed \$.75 per linear foot of Warranted Product replaced incurred on the site in removing the defective Warranted Product and in replacing it with the new Warranted Product provided by Oil Creek Plastics, Inc. pursuant to this Limited Warranty.

For Warranted Pump Pipe:

- a.) providing to the claimant, free of charge and freight prepaid, a replacement quantity of the Warranted Product equal to the quantity of the Warranted Product proven to be defective;
- b.) payment of reasonable direct labor charges actually incurred by the claimant on the site in removing the defective Warranted Product - plus \$40.00 US to cover any required transportation;
- c.) payment of a reasonable price for the repair or replacement of any submersible pump actually lost or damaged as a result of a proven defect or separation in any Warranted Product subject to the following limitations:
 - i. for repairs, the actual cost of any repair but never more than \$35.00 for any one repair,
 - ii. for replacement, the lowest available cost of an equivalent pump at time of replacement reduced by a betterment adjustment equal to an amount that fairly reflects the years and nature of use already accrued on the lost or damaged pump at the time of its damage or loss.

4. Exclusions – This Limited Warranty shall not extend to (and Oil Creek Plastics, Inc. shall not be liable for):

- a.) compression joints
- b.) tube flares
- c.) replacements or repairs made necessary in whole or in part as the result of conditions, events, products, installation mistakes, misuse, breakage of fittings, separation of joints, failure to follow good and workmanlike practices in the installation or removal, use beyond design specifications, etc., other than proven defects in any Warranted Product.
- d.) any consequential damages of any nature, description or amount not specifically required by the terms of this Limited Warranty.
- e.) any loss or damage resulting, in whole or in part, from the negligence of parties other than Oil Creek Plastics, Inc., casualties, acts of God, or other matters beyond the control of Oil Creek Plastics, Inc.

The foregoing express warranty is the only warranty made by Oil Creek Plastics, Inc. concerning the Warranted Products and is made in lieu of any and all other warranties, express or implied, including but not limited to any implied warranties of merchantability or of fitness for any particular purpose. No warranties of any nature or description, express or implied, except the limited express warranty stated herein, shall apply to the warranted products.

This Limited Warranty is limited to and is for the sole and exclusive benefit of the original user of the Warranted Products and the sale of the Warranted Products and this Limited Warranty shall not create any rights or claims in any other person or entity.

This Limited Warranty shall not be modified in any way except in a writing approved by the Board of Directors of Oil Creek Plastics, Inc. and signed by the senior executive officers of Oil Creek Plastics, Inc.

