

TECHNICAL DATA SHEET

VERSAPIPE® 4710 GAS

High Density Polyethylene Pipe for Gas Distribution

Manufactured from PE4710. Certified to NSF gas, ASTM D2513 and CSA B137.4.



Scope

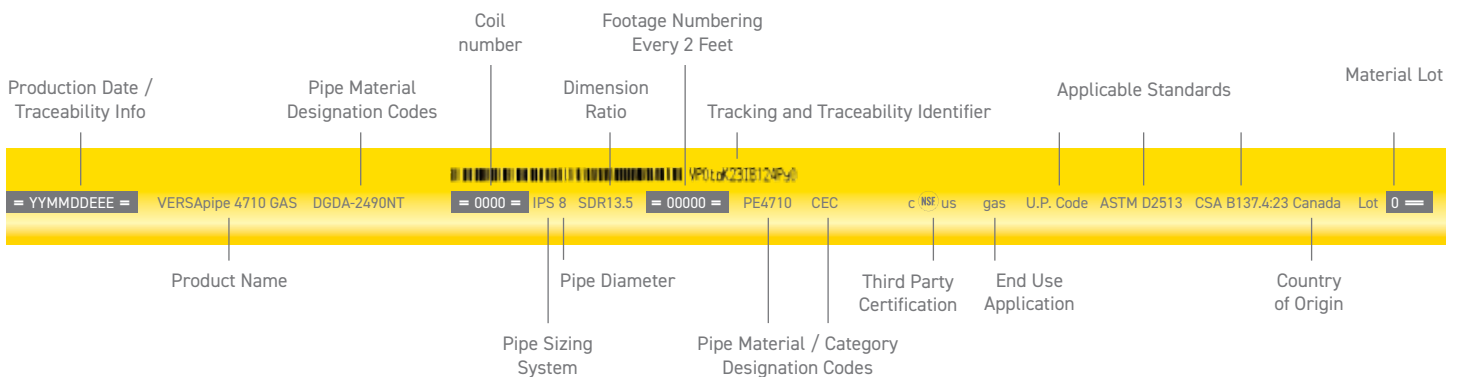
This technical data sheet designates the properties of the **VERSAPIPE® 4710 GAS** pipe for use in gas distribution systems. It describes the minimum requirements established by **Versaprofiles** for the design and manufacture of a pipe especially created for gas distribution application where long term hydrostatic strength combined with outstanding resistance to slow crack growth and rapid crack propagation are desired.

Raw material

All **VERSAPIPE® 4710 GAS** high density polyethylene pipes are manufactured from virgin, 0% regrind, Dow Chemical CONTINUUM™ DGDA-2490 PE4710 bimodal HDPE resin meeting the cell classification PE445574E per ASTM D3350. The material is listed as a standard grade in Plastics Pipe Institute (PPI) TR-4 with HDB ratings of 1 600 psi at 73°F and a 1 000 psi at 140°F. The raw material is filled with a UV inhibitor so the pipe can be stored outside for more than 3 years. In addition, the heavy metal-free raw material offers good protection against chemical agents. See the table below for more information about the raw material.

Printline

Versaprofiles VERSAPIPE® 4710 GAS pipe is identified with permanent marking and sequential footage numbering every two feet. The product also includes a tracking and traceability identifier per ASTM F2897.



Handling, joining and installation

In order to assure the complete integrity of the piping system, do not drag or roll the **VERSAPIPE® 4710 GAS** pipe across rocks or rough ground. Installation and backfill practices for **VERSAPIPE® 4710 GAS** pipe in trench should comply to the Plastics Pipe Institute (PPI)¹, and in accordance with ASTM D2774, 49 CFR -Part 192 or CAN/CSA Z662. Butt, socket and saddle fusion of **VERSAPIPE® 4710 GAS** pipe shall be made using procedures in accordance with 49 CFR - Part 192 or CAN/CSA Z662 and should comply with Plastics Pipe Institute (PPI)² recommendations. The fittings must be made with equivalent polyethylene used in the pipe.

¹ <http://plasticpipe.org/pdf/chapter07.pdf> ² <http://plasticpipe.org/pdf/chapter09.pdf>

RAW MATERIAL PROPERTIES AND CELL CLASSIFICATION (PER ASTM D3350)




| Properties | Cell Classification (445574E) | ASTM Test Method | Typical Values | |
|---|-------------------------------|------------------|-------------------------|-------------------------|
| | | | Imperial Units | SI Units |
| Density (natural) | 4 | D792 | 0,949 g/cm ³ | 0,949 g/cm ³ |
| Melt Index (190 °C / 21,6 kg) | 4 | D1238 | 7 g / 10 min | 7 g / 10 min |
| Flexural Modulus | 5 | D790B | 150 000 psi | 1 030 MPa |
| Tensile Strength at Yield | 5 | D638 | > 3 500 psi | > 24,1 MPa |
| Elongation at Break | - | D638 | > 500% | > 500% |
| Resistance to Slow Crack Growth (SCG), h (PENT) | 7 | F1473 | > 10 000 h | > 10 000 h |
| Hydrostatic Design Basis @ 23°C (73°F) | 4 | D2837 | 1 600 psi | 11 MPa |
| Hydrostatic Design Basis @ 60°C (140°F) | | | 1 000 psi | 6,9 MPa |
| Yellow Color Concentrate with UV Inhibitor | E | - | 2% | 2% |
| Brittleness Temperature | | D746A | < -103°F | < -75°C |
| Thermal Stability | | D3350 | > 428°F | > 220°C |

STANDARD PRODUCT SIZES (PER ASTM D2513 AND CSA B137.4)

| Nominal Pipe Size (IPS) ¹ | Outside Diameter in (mm) | Dimension Ratio ¹ | Min. Wall Thickness in (mm) | Weight for 100 ft ² lb (kg) | Coil/ Stick ³ | Length per Coil/Stick ⁴ ft (m) | Pallet/ Bundle Size ft (m) | Number Coils/ Sticks per Pallet | Pallet/ Bundle Total Length ft (m) | Number Pallets/ Bundles per Truck | Total Length, 53 ft Truck ft (m) |
|--------------------------------------|--------------------------|------------------------------|-----------------------------|--|--------------------------|---|----------------------------------|---------------------------------|------------------------------------|-----------------------------------|----------------------------------|
| 1/2 CTS | 0,625 (15,9) | - | 0,090 (2,27) | 6,51 (2,95) | Coil | 494 (150) | 4 x 4 (1,2 x 1,2) | 15 | 7 410 (2 250) | 26 | 192 660 (58 500) |
| | 1,125 (28,6) | | 0,099 (2,51) | 13,88 (6,29) | | 494 (150) | 4 x 4 (1,2 x 1,2) | | 3 952 (1 200) | | 102 752 (31 200) |
| 3/4 | 1,050 (26,7) | 11 | 0,095 (2,41) | 12,44 (5,64) | Coil | 494 (150) | 4 x 4 (1,2 x 1,2) | 7 | 3 458 (1 050) | 26 | 89 908 (27 300) |
| | 1,315 (33,4) | | 0,119 (3,02) | 19,52 (8,85) | | 494 (150) | 4 x 4 (1,2 x 1,2) | | 3 952 (1 200) | | 102 752 (31 200) |
| 1 ¼ | 1,660 (42,12) | 10 | 0,166 (4,22) | 33,90 (15,38) | Coil | 494 (150) | 6 x 6 (1,8 x 1,8) | 10 | 4 940 (1 500) | 8 | 39 520 (12 000) |
| | 1,900 (48,3) | | 0,173 (4,39) | 40,81 (18,51) | | 494 (150) | 5 x 5 (1,5 x 1,5) | | 2 964 (900) | | 20 748 (6 300) |
| 2 | 2,375 (60,4) | 11 | 0,216 (5,49) | 63,77 (28,92) | Coil | 494 (150) | 7 x 7 (2,1 x 2,1) | 7 | 3 458 (1 050) | 7 | 24 206 (7 350) |
| | 3,500 (88,9) | | 0,318 (8,08) | 138,43 (62,78) | | 40 (12) | 40 x 4 (12 x 1,2) | | 2 000 (600) | | 12 (7 200) |
| 4 | 4,500 (114,3) | 11 | 0,409 (10,39) | 228,86 (103,79) | Reel | 885 (270) | 7 x 4 x 7 (2,1 x 1,2 x 2,1) | 1 | 895 (270) | 8 | 7 080 (2 160) |
| | 4,500 (114,3) | | 0,409 (10,39) | 228,86 (103,79) | | 40 (12) | 40 x 4 (12 x 1,2) | | 1 160 (348) | | 12 (4 176) |
| 6 | 6,625 (168,3) | 11 | 0,602 (15,29) | 496,00 (224,94) | Reel | 951 (290) | 11 x 7 x 11 (3,4 x 2,1 x 3,4) | 1 | 951 (290) | 3 | 2 853 (870) |
| | 6,625 (168,3) | | 0,602 (15,29) | 496,00 (224,94) | | 40 (12) | 40 x 4 (12 x 1,2) | | 520 (156) | | 12 (1 872) |
| 8 | 8,625 (219,1) | 11 | 0,784 (19,92) | 845,95 (384,52) | Stick | 40 (12) | 40 x 4 (12 x 1,2) | 9 | 360 (108) | 10 | 3 600 (1 800) |
| | 8,625 (219,1) | | 0,639 (16,23) | 698,81 (316,92) | | 40 (12) | 40 x 4 (12 x 1,2) | | 360 (108) | | 10 (1 080) |

¹ Others pipe sizes and DR available. Ask your sales representative for information. ² Pipe weigh are calculated in accordance with PPI TR-7.
³ All products are available in sticks. Ask your sales representative for information. ⁴ Different lengths on coils, reels or sticks available. Ask your sales representative for information.

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PRESSURE RATING OF GAS DISTRIBUTION PIPE

| Pipe Standard Dimension Ratio (SDR) | Standard Pressure Rating (PSIG @ 23°C [73°F]) | | Maximum Operating Pressure (PSI @ 23°C [73°F]) | |
|-------------------------------------|---|-------|--|-------------------------|
| | psi | kPa | Canada (0,40 Design Factor) | US (0,32 Design Factor) |
| 17 | 125 | 900 | 80 | 64 |
| 13,5 | 160 | 1 100 | 100 | 80 |
| 11 | 200 | 1 380 | 125 | 100 |
| 10 | 225 | 1 550 | 142 | 112 |
| 9 | 250 | 1 725 | 160 | 125 |



About Versaprofiles

With over 50 years of experience in thermoplastic extrusion, **Versaprofiles** offers innovation to make your job easier and lighten your workload. We are producing pipe and tubing for maple sap, geothermal, water and natural gas distribution applications in addition of specializing into custom made profiles. With our collective expertise in various sectors and our versatile equipment, we can bring your projects to higher level. We work closely and in a friendly atmosphere with each partner to deliver products that meet expectations and provide dedicated customer service.



References: 49 CFR - Part 192 – ASTM Standards D2774, D3035, D3350, D2513 and F2997 – CSA Standards B137.4 and Z662 – Plastics Pipe Institute (PPI), http://plasticpipe.org/publications/pe_handbook.html

Versaprofiles can change the information contained in this document without notice. Please contact the customer service to receive an updated version.

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