| conEdison | LAST REVIEW DATE: 09/02/22 | REVIEW CYCLE: |
|---|---|---|
| | EFFECTIVE DATE: 05/13/22 | 5 Years |

**SPECIFICATION:** **G-8104-16b**

**TITLE:** **POLYETHYLENE PIPE, TUBING AND FITTINGS FOR GAS MAINS AND SERVICES**

**VOLUME:** **6 & Yellow Book**

**COURSE ID:** **NONE**

**REQUIRED TRAINING GROUPS:** **NONE**

Each group listed is responsible for its own training which may be specific to a title/individual and not to the group in its entirety. Please check with your local training coordinator/department.

**Administrative Revisions**
**Rev 16b (5/28/24)**

| | |
|---|---|
| 1) Section 4.0 & 13.1 | Updated the abbreviation for MT to include ISCO. |
| 2) Section 13.3 | Added Dresser as an approved manufacture. |
| 3) Section 13.7 | Updated the part number C&S# 341-4794. Removed all the 1" and 1 ¼" CTS outlet size tee part numbers as part of the consolidation of tees. |
| 4) Section 13.8 | Added new 16" reducing tees. Updated the part numbers for all the 12" IPS sizes. Updated the part number for the 12" IPS Drip tee. |
| 5) Section 13.9 | Updated the part numbers for C&S#'s NS0247959, NS0247961, and NS0247963. |
| 6) Section 13.10 | Added a new part number for C&S# 341-2225. |
| 7) Section 13.11 | Added new 2" x 1" IPS reducer. Added a new part number for C&S# 341-1170. |
| 8) Section 13.12 | Removed the 10" IPS since it was discontinued and added in the 16" IPS. |
| 9) Section 13.13 | Added in the "PUSA" designated for highlighted lines. Added a new part number for the 12" IPS. Added in the 16" IPS row. Consolidated the Elbows from Section 13.26 into this table. |
| 10) Section 13.14 | Removed the 12" IPS C&S# 341-5791. |
| 11) Section 13.17 | Updated the outlet size of the 6". Added in the lines for the 4" main 4" outlet row and the 8" main 8" outlet row. Removed the |

| | | |
|---|---|---|
| 12) | Section 13.18 | C&S# NS3414281. Added “Sidewall” to the section title. Removed the Pup Length column form the table. Added in 1” IPS x 1” CTS. Updated highlighted manufacture information. Updated the part numbers for the 1” IPS x ½” CTS. Removed the 1 ¼” IPS with ½” CTS C&S# 338-7099, all the 2” IPS with ½” CTS parts numbers, the 3” IPS with 1 ¼” CTS C&S# 314-1035 and the 4” IPS with 1 ½” CTS C&S# 337-9716, the 6” IPS with ½” CTS C&S# 341-1051, the 6” IPS with 1 ¼” CTS C&S# 337-9724, and the 8” IPS with ½” CTS C&S# 341-1040. |
| 13) | Section 13.19 | Updated the Note below the table. Updated highlighted manufacture information. Updated the C&S# for the 1 ¼” IPS with 1” IPS outlet. |
| 14) | Section 13.20 | Used the “Reserved” section for the Pipe Pillo Supports. |
| 15) | Section 13.22 | Expanded the range of the last item to 16”. |
| 16) | Section 13.25 | Added in the 4” IPS with a 4” outlet size and the 6” IPS with a 6” outlet size. Removed the C&S# column of the table because it is not needed. |
| 17) | Section 13.26 | Removed the 16” IPS C&S# 332-1749. Removed the rest of the electrofusion 45deg Elbows in this section and incorporated them into section 13.13. All subsequent sections were renumbered. |
| 18) | Throughout this specification various C&S#s, part numbers and part information were updated. These updates have been highlighted. Updates were made to the MT Deason listings to remove prefabricated electrofusion fittings. Added “D” designation for MT Deason fittings. | |

**REV 16a** (9/2/22)

| | |
|---|---|
| 1) Cover Page: | Added training statement to align with new format, and added “Entire Document” to Substantive Revision item #2. |
| 2) Sections 13.8 & 13.13: | Updated manufacturers’ abbreviation to align with key. |
| 3) Section 13.19: | Added new listing to table and clarified language on usage, and corrected note. |
| 4) Section 11.6: | Removed inappropriately placed “★”. |
| 4) Section 11.7: | Change “his” to “their”. |

## SUBSTANTIVE REVISIONS: (See ★)

| | | | |
|---|---|---|---|
| 1) | Cover Page | - | Updated to current format and terminology |
| 2) | Entire Document | - | Made minor changes for clarity, reformatted tables, and updated manufacturers’ names for clarity & consistency throughout document. |
| 3) | Sections 2.0 & 4.2 | - | Added specific code references |
| 4) | Section 4.1 | - | Added Endot to approved tubing suppliers |
| 5) | Section 10.5 | - | Removed redundant paragraph 10.5 on supplemental information |
| 6) | Section 13.3 | - | Added additional listing to table |

| | | | |
|---|---|---|---|
| 7) | Section 13.6 | | Added additional listing to table |
| 8) | Section 13.8 | - | Removed 10" tee, added reducer tees and drip tee |
| 9) | Section 13.10 | - | Added new listings |
| 10) | Section 13.14 | - | Added butt-fusion elbow to list |
| 11) | Section 13.17 | - | Removed molded branch saddles from list |
| 12) | Section 13.19 | - | Corrected class & stock numbers, added new listings |
| 13) | Section 13.25 | - | Added Plasson saddle |

# Gas Operations Standards

**TITLE: POLYETHYLENE PIPE, TUBING AND FITTINGS FOR GAS MAINS AND SERVICES**

## TABLE OF CONTENTS

## 1.0 SCOPE

This specification establishes the requirements for the purchase of polyethylene pipe, tubing, molded fittings, fabricated fittings, transition fittings, electrofusion fittings, and anodeless risers.

## ★ 2.0 LEGAL REQUIREMENTS

2.1 Code of Federal Regulations Title 49 Transportation Part 192, Sections 59 and 283-285

2.2 NYCRR Part 255 Codes, Rules and Regulations of the State of New York, Title 16 “Public Service,” Section 10.3

## 3.0 GENERAL REQUIREMENTS

3.1 All pipe/tubing, fittings and risers shall comply with the latest revision of ASTM D2513 "Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings" (except for marking requirements D2513-87). For references to external standards cited in this specification, use the accepted revision indicated in 16 NYCRR Section 10.3. If the external standard is not listed within section 10.3, use the latest revision of the standard.

A) API 5L, "Specification for Line Pipe," (Includes Errata and Addendum)

B) ASTM A53, "Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless"

C) ASTM F1055, "Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing"

D) ASTM D3261, "Standard Specification for Butt Heat Fusion Polyethylene Plastic Fittings for Polyethylene Plastic Pipe and Tubing"

E) ASTM F1924, "Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing"

F) ASTM F1973, "Specification for Factory Assembled Anodeless Risers and Transition Fittings"

3.0 **GENERAL REQUIREMENTS** (Continued)

3.1 (Continued)

G) ASTM F1948, "Specification for Metallic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing"

H) Plastic Pipe Institute Technical Note TN-30, "Requirements for the Use of Rework Materials in Manufacturing of Polyethylene Gas Pipe"

I) ASME B1.20.1, "Pipe Threads, General Purpose"

3.2 Prior to approval of material for use in the Con Edison distribution system, all manufacturers of polyethylene pipe/tubing, molded fittings, fabricated fittings, transition fittings, and risers shall:

A) Provide all test data required to show compliance with the appropriate code, specification, or ASTM requirements to the Gas Engineering Development Lab.

B) Have their product(s) comply with the requirements of the applicable ASTM specification and all Federal and New York State regulations.

3.3 Manufacturers must provide a letter of compliance for USDOT 49 CFR Part 192.283 relating to the following fusion procedures:

A) For non-lateral connections, butt fusion testing for pipe and fittings using the PPI generic butt fusion joining procedure in Appendix A of PPI Technical Report TR-33. Include additional qualification testing information of manufacturer's D2513 high density polyethylene (PE 3408/4710) pipe joined in accordance with TR-33 and evaluated in accordance with 192.283. See list of approved pipe/tubing manufacturers in Section 13.2.

B) For lateral connections, saddle fusion testing for pipe and fittings using the PPI generic saddle fusion joining procedure in Appendix A of PPI Technical Report TR-41. Include additional qualification testing information of manufacturer's D2513 high density polyethylene (PE 3408/4710) pipe joined in accordance with TR-41 and evaluated in accordance with 192.283. See list of approved pipe/tubing manufacturers in Section 13.2.

C) Manufacturers must qualify their electrofusion joining procedure to ASTM F1055 in accordance with 192.283.

## ★ 4.0 APPROVED PLASTIC RESIN MATERIAL

★ 4.1 The following table lists the approved resins and manufacturers for the various components:

| Resin Mfr./ Resin # / Component | DOW Chem/ DGDA 2490 | Ineos/ Eltex TUB-121 | Basell/ Hostalen GM5010T2 | Totalfina/ Finathene XT-10N | Totalfina/ Finathene XS-10B | Chevron Phillips/ Marlex H516 |
|---|---|---|---|---|---|---|
| **Pipe** | EN, JM, PP, DU | | | PP | | PP |
| **Tubing, Coiled** | EN, JM, PP, DU | EN | | PP | | PP |
| **Transition Fittings** | JM, PP | | | PP | | |
| **Molded Fittings** | PP, EP | GFCP, EP | | PP | GFCP | |
| **Anodeless Risers, CTS** | PP | | | PP | | |
| **Anodeless Risers, IPS** | JM, PP | | | PP | | |
| **Electrofusion Fittings** | | GFCP, IF, PUSA, II,MT | IF | | GFCP, NG | IF |
| **Fabricated Fittings** | PUSA | | | PUSA | | |
| **Sleeve Pipe** | PP, DU | | | | | PP |

Abbreviations: The following abbreviations are used in the table above:

| | | | |
|---|---|---|---|
| EN | Endot | JM | JM Eagle |
| IF | Ipex (Friatec) | MT | MT Deason/ISCO |
| II | Ipex (Innoge) | PUSA | Plasson USA |
| EP | Elster Perfection | PP | Performance Pipe |
| JM | JM Eagle | GFCP | Georg Fischer Central Plastics |
| NG | Nupigeco | DU | Dura-line |

★ 4.2 Rework Material

Rework and/or regrind material is not allowed in plastic pipe, tubing, and molded fittings purchased under this specification as per 49 CFR 192.59(d).

4.0 **APPROVED PLASTIC RESIN MATERIAL** (Continued)

4.3 New Suppliers

Any manufacturers of PE 3408/4710 plastic pipe/tubing, electrofusion and molded fittings, transition fittings, or risers not listed in Section 5.1 may request consideration for approval from the Gas Engineering Development Lab. Submitted material shall be capable of meeting the legal and general requirements of Section 2.0 and 3.0 of this specification, as appropriate.

4.4 Changes to ASTM Standards that allow reclassification of plastic material approved under this specification does not constitute a change in formula and does not require additional testing. Suppliers of plastic materials should submit to the Gas Engineering Development Lab their intention to change to the corresponding classification prior to making any change.

4.5 Approved PE Pipe and Tubing

A) Polyethylene gas tubing in copper tubing sizes (CTS) shall be supplied with a standard 0.090" minimum wall thickness. See the table in Section 13.2 for approved CTS tubing material.

B) Iron pipe sizes (IPS) shall be supplied with standard dimension ratios as indicated in Section 13.2.

4.6 Extruded pipe, tubing, electrofusion and molded fittings shall be manufactured to dimensional tolerances as specified in ASTM D2513 or F1055 as appropriate. Molded fittings shall be smooth and have uniform dimensions internally.

4.7 Approved PE Fittings, Transition Fittings, and Anodeless Risers

All molded, electrofusion, and fabricated plastic fittings, transition fittings, and anodeless risers, electrofusion and heat fusion assembled, are found in Section 13.3 through13.29 of this specification.

4.0 **APPROVED PLASTIC RESIN MATERIAL** (Continued)

4.8 Fabricated Fittings and Pup Pieces

A) The mitering of any butt fusion joint is strictly forbidden.

B) Only approved plastic pipe/tubing in accordance with Section 13.2 shall be used to butt fuse “pup” lengths on molded fittings, and to manufacture fabricated fittings such as 3-way reducing tees, assembled offsets, assembled crosses, etc.

C) Manufacturers and suppliers must identify the heat fusion joiner on the fitting label or directly on the pipe.

D) Approved manufacturers and materials for all are shown in Section 4.1.

## 5.0 ANODELESS RISER EQUIPMENT

5.1 Anodeless Risers (riser) shall conform to requirements of ASTM F1973. The riser shall consist of combined 24" rigid and 36" flexible casings with integral service head adapter (SHA) with swivel capabilities and approved moisture seal. The service head adapter unit must be joined with crimping/swaging of a collar to the riser unit.

The swivel (SHA) shall consist of a bottoming swivel nut, permanent internal stiffener, compression seal and ferrule assembly and have an outlet male pipe thread. The SHA fitting shall be manufactured in accordance with ASTM F1948-05, Category 1. The SHA shall incorporate a snap-ring groove in the nut portion of the adapter that is used for the purpose of joining the nut to a flexible casing.

5.2 The riser shall completely enclose the above ground portion of the plastic service line in a metallic casing. The outlet of the riser shall be of API 5L or ASTM A53 Schedule 40 steel pipe or equivalent. The metallic casing shall have a minimum wall thickness of 0.065".

5.0 **ANODELESS RISER EQUIPMENT** (Continued)

5.3 The riser shall be designed and constructed so that in the event of a leak or failure of the plastic pipe within the casing, the gas would not escape from the seal at the transition zone.

5.4 All welding shall be performed in accordance with API 1104.

5.5 The underground portion of the riser shall be effectively sealed to prevent the entrance of moisture. The seal shall be designated and constructed to withstand a 10 PSIG pressure test. The moisture seal shall be manufactured from molded vinyl and tested for Dura Hard A, between 60-70 and Weight per Gal.- Liquid Plastisols 9.78-9.98 LB. and Brookfield Visc SP #4, 20 rpm @ 80 Deg F 1200 to 2400 cps.

5.6 End caps are required on both plastic and threaded steel ends.

5.7 Prior to use in the gas distribution system, all risers shall be approved for use per requirements of Section 3.2 of this specification. The manufacturer shall submit design drawings, material certifications, coating specifications, marking requirements, and performance test reports to verify compliance with ASTM F1973. All joints used in risers shall be Category 1.

6.0 **TAPPING TEE REQUIREMENTS**

6.1 All cutters shall be made of or plated with a corrosion-resistant material or treated with an anti-rust material and shall be capable of tapping SDR 11 and 9.3 pipe and capturing and retaining the “coupon.”

6.2 The cutters of all 2" outlet tapping tees for main sizes 6" and larger shall be designed in a manner to prevent collapse of the cutter and to prevent stress cracking during tapping operations. All cutters must have internal threads or “similar design” to facilitate tapping and removal/retention of the “coupon” by the cutter.

## 7.0 TRANSITION FITTING REQUIREMENTS

7.1 Transition fittings purchased by the company shall meet requirements of ASTM F1973.

7.2 A crimp type anode connector designed to accept a No. 10 AWG stranded wire shall be tack welded to the steel pipe as close to the transition area as possible. The anode connector shall be installed in such a way so as to not protrude excessively from the surface of the pipe. Each new manufacturer (prior to approval) must submit a sketch showing the proposed location of the anode connector.

7.3 The minimum length of the steel and plastic ends of the transition fitting shall be as indicated in Section 13.3.

7.4 Each transition fitting shall be pressure tested prior to shipment. The required minimum test pressure for all transition fittings is 150 PSIG for 10 seconds.

7.5 Steel pipe used shall conform to API 5L or ASTM A53. Steel pipe shall be Schedule 40 and conform to Spec G-8107.

7.6 The threads of threaded transition fittings shall conform to requirements of ASME B1.20.1, “Pipe Threads,” and be protected from damage. End caps are required on the plastic end.

7.7 Prior to use in the gas distribution system, all transition fittings shall be approved for use per requirements of Section 3.2 of this specification. The manufacturer shall submit design drawings, material certifications, coating specifications, marking requirements, and performance test reports to verify compliance with ASTM 1973. All joints used in transition fittings shall be Category 1.

## 8.0 COATING REQUIREMENTS

### 8.1 Transition Fittings

A) The steel pipe section of all transition fittings shall be supplied with an approved mill coating. The surface preparation and coating application shall be in accordance with the coating manufacturer's recommended procedure with minimum dry film thicknesses as listed in 8.1C in this specification.

B) The limits of the coating shall be as follows:
- sizes 3" and smaller - 6" from beveled end
- sizes 4" and larger - 8" from beveled end
- all sizes - 1" from threaded end

C) The requirement for coating material is 16 mils minimum, 18 mils average. The following coating materials have been approved for transition fittings:
- DuPont Nap-Gard 7-2530 (Gray Fusion Bonded Epoxy)
- DuPont Nap-Gard 7-2534 (Riser Gray III)

### 8.2 Anodeless Risers

A) The outer steel casing portion of the riser shall be supplied with an approved mill coating. The surface preparation and coating application shall be in accordance with the coating manufacturer's recommended procedure with a minimum dry film thickness as listed in 8.2B of this specification.

B) The requirement for coating material is 16 mils minimum, 18 mils average. The following coating materials have been approved for anodeless risers:
- DuPont Nap-Gard 7-2530 (Gray Fusion Bonded Epoxy)
- DuPont Nap-Gard 7-2534 (Riser Gray III)

## 9.0 QUALITY CONTROL

9.1 The manufacturer or supplier is responsible for complying with all of the provisions of this specification. Con Edison may make any investigation necessary to verify compliance by the manufacturer and may reject any material that does not comply with this specification.

9.2 Material which shows injurious defects, visually unacceptable fusions per ASTM F 2620 or which proves defective when properly applied in service will be reason to reject the manufacturer's product and remove the product from the approved list.

9.3 In the event of a discrepancy with the manufacturer's test data and the Company's Quality Control test data, a mutually agreed upon independent test lab may be used for verification testing.

9.4 If the test results confirm substandard or defective materials, the manufacturer will become responsible for all costs associated with the removal of the substandard or defective materials including independent testing lab fees.

9.5 At the request of the Gas Development Lab, the pipe or tubing manufacturer shall submit a Certification Letter* with the following information:

A) Customer Order Number

B) Ship Date

C) Date Manufactured

D) Nominal Size

E) Total Quantity Shipped

F) Extruded Pipe Lot Numbers (Print Line Info)

G) Footage Shipped For Each Extruded Pipe Lot Number

H) Min/Max O.D. For Each Extruded Pipe Lot Number

I) Min/Max Burst For Each Extruded Pipe Lot Number

J) Min/Max Wall Thickness for Each Extruded Pipe Lot Number

K) Min/Max Hoop stress for Each Extruded Pipe Lot Number

**This letter may be requested at time of shipment or when an adverse product condition is discovered.*

9.0 **QUALITY CONTROL** (Continued)

9.6 Approved manufacturers shall not make any change in the design, fabrication, material, marking or packaging prior to submitting written notification of change to the Gas Engineering Development Lab for evaluation. Unannounced changes will result in the manufacturer's product being unapproved and removed from the Approved Vendor's list.

9.7 Changes in resin formula are considered a change in design. Notification to the Gas Engineering Development Lab will be made for required testing and approval.

★ 10.0 **MARKINGS AND IDENTIFICATION**

10.1 All pipe, tubing, electrofusion and molded fittings, fabricated fittings, transition fittings, and anodeless risers must be permanently marked in accordance with the appropriate ASTM standard. General marking requirements include the following information:

A) Manufacturer's name
B) Date of manufacture
C) Size
D) SDR or wall thickness
E) Material
F) Lot number
G) ASTM designation

10.2 Anodeless risers and transition fittings shall be marked to meet Category 1 tensile strength.

10.3 All anodeless risers shall be labelled to clearly show the transition zone between the plastic and metallic carrier, to prevent installation of the riser so that the transition zone is below grade.

10.4 Markings and other product identifiers shall be durable and resistant to fading. The identifier shall be permanently affixed to the product.

## 11.0 TRANSPORTATION HANDLING AND STORAGE

(Refer to Con Ed Specification G-8122, "Transportation, Handling and Storage of Polyethylene Plastic Pipe and Fittings for Gas Mains and Service.")

11.1 The supplier is responsible for the polyethylene pipe and fittings during transportation.

11.2 The manufacturer shall provide end protection of such design, material, and mechanical strength to protect the ends of the pipe and tubing from damage and entry of foreign material under normal handling and transportation conditions.

11.3 Coils of plastic pipe and tubing must be delivered on pallets or reels, whichever is applicable.

11.4 Bundles of plastic pipe shall not be stacked higher than seven (7) bundles high.

11.5 All plastic pipe, tubing, transition fittings and anodeless risers shall be supplied with plastic end closures.

11.6 Large diameter plastic pipe is to be shipped from the manufacturer with adequate separation ("lags") between each row to facilitate safe unloading using a forklift.

11.7 Upon arrival of the plastic pipe and fittings from the supplier at Company or cross docker's warehouses, the material will be inspected. Any pipe or fittings found to be damaged during this inspection will be rejected and returned to the supplier at their expense.

## 12.0 PACKAGING AND LABELING

12.1 Boxes of fittings must be labeled to show the description and quantities of the fitting, including the Con Ed class and stock number or non-stock numbers.

12.2 All coated fittings shall be adequately packaged to prevent any damage to the mill coating and threads during shipping, handling, or storage.

12.3 All electrofusion fittings shall be individually sealed/packaged by the manufacturer to protect the fittings from the elements.

## ★ 13.0 POLYETHYLENE PIPE, TUBING AND FITTINGS

**NOTE:** For resin type, refer to table in Section 4.1.

13.1 Abbreviations

CP – Georg Fischer Central Plastics
DU – Dura-Line Polypipe
EN – Endot
IF – Ipex (Friatec)
II – Ipex (Innoge)
PUSA – Plasson USA
EP – Elster Perfection
PP – Performance Pipe
MRC – MRC Global
MT – MT Deason/ISCO
NG – Nupigeco
N/A – Not Available
GD – Gas Distribution (for JM Eagle Pipe)
CF – Chicago Fittings

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.2 Pipe and Tubing – Approved materials: JM Eagle PE 4710 GD, Dura-line GDB50, Performance Pipe Yellowstripe 8300, Endot PE 4710

| Nominal Size | SDR | Outside Diameter | Minimum Wall Thickness | Length | Class & Stock Number |
|---|---|---|---|---|---|
| ½" CTS | 7.0 | 0.625" | 0.090" | 500' Coil | 360-0947 |
| 1" CTS | 12.5 | 1.125" | 0.090" | 500' Coil | 360-0988 |
| 1" CTS | 12.5 | 1.125" | 0.090 | 20' Lth | 328-1786 |
| 1¼" CTS | 15.3 | 1.375" | 0.090" | 20' Lth | 328-1784 |
| 1¼" CTS | 15.3 | 1.375" | 0.090" | 500' Coil | 360-0954 |
| 1" IPS | 11.0 | 1.315" | 0.119" | 20' Lth | 328-1787 |
| 1" IPS | 11.0 | 1.315" | 0.119" | 500' Coil | 328-0351 |
| 1¼" IPS | 11.0 | 1.660" | 0.151" | 500' Coil | 328-0369 |
| | | | | 20' Lth | 328-1785 |
| 2" IPS | 11.0 | 2.375" | 0.216" | 20' Lth | 328-0591 |
| | | | | 40' Lth | 328-0856 |
| | | | | 350' Coil | 328-0377 |
| 3" IPS | 11.0 | 3.500" | 0.318" | 20' Lth | 328-0583 |
| | | | | 40' Lth | 328-0385 |
| 4" IPS | 11.0 | 4.500" | 0.409" | 20' Lth | 328-0575 |
| | | | | 40' Lth | 328-0393 |
| 6" IPS | 11.0 | 6.625" | 0.602" | 20' Lth | 328-0567 |
| | | | | 40' Lth | 328-0401 |
| 8" IPS | 11.0 | 8.625" | 0.785" | 20' Lth | 328-0559 |
| | | | | 40' Lth | 328-0518 |
| 12" IPS | 11.0 | 12.750" | 1.159" | 40' Lth | 328-0641 |
| | | | | 20' Lth | 328-0849 |
| 16" IPS | 11.0 | 16.000" | 1.455" | 40' Lth | 320-0053 |

## ★ 13.0 POLYETHYLENE PIPE, TUBING AND FITTINGS (Continued)

### ★ 13.3 Transition Fittings

The following table lists fittings that allow for a transition from schedule 40 steel pipe to PE 4710 SDR 11 polyethylene pipe. Approved manufacturers are Central Plastics, R.W. Lyall, Smith Blair, and Dresser.

| Nominal Size | Steel End Type | Steel Length | PE Length | Class & Stock Number |
|---|---|---|---|---|
| 1" | Beveled | 18" | 12" | 341-1113 |
| 1" | Threaded | 24" | 12" | 341-4323 |
| 1¼" | Beveled | 18" | 12" | 341-1105 |
| 1¼" | Threaded | 24" | 12" | 341-4331 |
| 1¼" | Threaded | 5½" | 12" | 341-5981 |
| 2" | Beveled | 18" | 12" | 341-1097, ★341-1780* |
| 2" | Threaded | 24" | 12" | 341-4349 |
| 3" | Beveled | 18" | 12" | 341-1089 |
| 3" | Threaded | 24" | 12" | 341-4356 |
| 4" | Beveled | 18" | 18" | 341-1071 |
| 4" | Threaded | 24" | 18" | 341-4414 |
| 6" | Beveled | 18" | 18" | 341-1063 |
| 8" | Beveled | 18" | 18" | 341-2822 |
| 12" | Beveled | 18" | 24" | 341-3820 |
| 16" | Beveled | 18" | 24" | 341-0278 |

*Buy America Compliant version (domestic steel manufacture)

### ★ 13.4 Sleeve Pipe for Trenchless Technology

| Nominal Size | SDR | Outside Diameter | Minimum Wall Thickness | Length | Class & Stock Number |
|---|---|---|---|---|---|
| 6" IPS | 26 | 6.625" | 0.255" | 40' | 328-0682 |
| 8" IPS | 26 | 8.625" | 0.332" | 40' | 328-0674 |
| 10" IPS | 32.5 | 10.750" | 0.331" | 40' | 328-0666 |

### 13.5 **RESERVED**

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.6 Riser Bends

Anodeless Riser Bends

| Nominal Size | PE Wall Thickness | Perfection Part No. | RW Lyall Part No. | Class & Stock Number |
|---|---|---|---|---|
| 1" IPS x ½" CTS | 0.090" | 75199 | Con Ed 050010B | 341-3721 |
| 1" IPS x 1" CTS | 0.090" | 75607 | Con Ed 07003A | 341-3739 |
| 1" IPS x 1" IPS | SDR 11 | 79437 | N/A | 341-5023 |
| 1½" IPS x 1¼" IPS | SDR 11 | 79782 | N/A | 341-5650 |
| ★1½" IPS x 1¼" CTS | 0.090" | 79055 | N/A | 341-3747 |
| 2" IPS x 2" IPS | SDR 11 | 78302 | N/A | 341-5304 |
| 3" IPS x 3" IPS | SDR 11 | 78512 | N/A | 341-5577 |
| 3" IPS Flanged x 3" IPS | SDR 11 | 79912 | N/A | 341-5593 |
| 4" IPS x 4" IPS | SDR 11 | 79964 | N/A | 341-5585 |
| 4" IPS Flanged x 4" IPS | SDR 11 | 79965 | N/A | 341-5601 |

Semi-Rigid/ Partial Flexible Riser Bends

| Nominal Size | Steel Casing Dimension | PE Wall Thickness | Chicago Part No. | Class & Stock Number |
|---|---|---|---|---|
| ¾" IPS x ½" CTS | 24 L" x ¾" MPT | 0.090" | RXR-10B-12-24-36EG | 341-4380 |
| 1¼" IPS x 1" CTS | 24 L" x 1¼" MPT | 0.090" | RXR-18B-20-24-36-EG | 341-4364 |
| 1½" IPS x 1¼" CTS | 24 L" x 1½" MPT | 0.090" | RXR 22B-24-24-36EG | 341-4372 |

★ 13.7 Molded Threaded Brass Base Service Tees

| Inlet Size | Outlet Size | Outlet Pup Length | Manufacturer & Part Number | Class & Stock Number |
|---|---|---|---|---|
| 1¼" MPT | 1¼" CTS | -- | CP 10011154 | 341-4463 |
| 1½" MPT | 1¼" CTS | -- | CP 10005419 | 341-4588 |
| 2" MPT | 1¼" CTS | -- | CP 10005421 | 341-4505 |
| 2" MPT | 2" IPS | -- | CP 360020860 | 341-4794 |

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.8 Molded 3-Way Tees

| Size | SDR | Manufacturer & Part Number | Class & Stock Number |
|---|---|---|---|
| 1" IPS | 11 | PP 1007910<br>CP 10003838 | 341-1329 |
| 1¼" IPS | 11 | PP 1007917<br>CP 10003815 | 341-1311 |
| 2" IPS | 11 | PP 1006426<br>CP 10002956 | 341-1303 |
| 3" IPS | 11 | PP 1007933<br>CP 10007746 | 341-1295 |
| 4" IPS | 11 | PP 1006434<br>CP 10012422 | 341-1287 |
| 6" IPS | 11 | PP 1006442<br>CP 10007787 | 341-2137 |
| 8" IPS | 11 | PP 1007945<br>CP 10007789 | 341-2830 |
| 12" IPS | 11 | MT TRI0399 -D | 341-3853 |
| 12" x 4" IPS | 11 | MT TRI0394 -D | 332-2181 |
| 12" x 6" IPS | 11 | MT TRI0396 -D | 332-2182 |
| 12" x 8" IPS | 11 | MT TRI0398- -D | 332-2183 |
| 12" IPS Drip Tee | 11 | MT TRI0399DRIP-D | 341-1937 |
| 16" x 4" IPS | 11 | MT TRI0406 -D | 341-2485 |
| 16" x 6" IPS | 11 | MT TRI0407 -D | 341-2486 |
| 16" x 8" IPS | 11 | MT TRI0408 -D | 341-2487 |
| 16" x 12" IPS | 11 | MT TRI0409 -D | 341-2488 |

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.9 Electrofusion 3-Way Tees*

| Size | SDR | Manufacturer & Part Number | Class & Stock Number |
|---|---|---|---|
| 1" x 1" x 1" | 11 | MT TRI0265 | NS0247959 |
| 1¼" x 1¼" x 1¼" | 11 | - | NS0247960 |
| 2" x 2" x 2" | 11 | Plasson, MT TRI0320 | NS0247961 |
| 3" x 3" x 3" | 11 | - | NS0247962 |
| 4" x 4" x 2" | 11 | MT TRI0342D | NS0247964 |
| 4" x 4" x 4" | 11 | MT TRI0340D, Plasson | NS0247963 |
| 6" x 6" x 4" | 11 | MT TRI0370(D) | 332-1358 |
| 6" x 6" x 6" | 11 | MT TRI0360 | NS0247965 |
| 8" x 8" x 4" | 11 | MT TRI0385 | 332-1359 |
| 8" x 8" x 6" | 11 | MT TRI0390 | 332-1360 |
| 8" x 8" x 8" | 11 | MT TRI0380 | NS0247966 |
| 12" x 12" x 4" | 11 | - | Contact Dev Lab |
| 12" x 12" x 6" | 11 | - | |
| 12" x 12" x 8" | 11 | - | |
| 16" x 16" x 16" | 11 | MT | NS0342058 |
| 16" x 16" x 4" | 11 | - | Contact Dev Lab |
| 16" x 16" x 6" | 11 | - | |
| 16" x 16" x 8" | 11 | - | |

**The Gas Development Lab can special order 16" x 16" x 6" and 16" x 16" x 8" Saddle Heat Fusion 3-Way Tees.*

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.10 Caps

| Size | SDR | Type | Manufacturer & Part Number | Class & Stock Number |
|---|---|---|---|---|
| 1" IPS | 11 | Molded | PP 1007908, CP 10003837 | 341-2087 |
| 1¼" IPS | 11 | Molded | PP 1007915, CP 10001876 | 341-1279 |
| 2" IPS | 11 | Molded | PP 1006420, CP 10007419 | 341-1261 |
| | | Electrofusion | MT TRI0500-D | 341-1869 |
| 3" IPS | 11 | Molded | PP 1007930, CP 10002937 | 341-1253 |
| | | Electrofusion | MT TRI0505-D | 341-1870 |
| 4" IPS | 11 | Molded | PP 1006428, CP 10002938 | 341-1246 |
| | | Electrofusion | MT TRI0510-D | 341-1871 |
| 6" IPS | 11 | Molded | PP 1006436, CP 10007786 | 341-1238 |
| | | Electrofusion | MT TRI0515-D | 341-1872 |
| 8" IPS | 11 | Molded | PP 1007942, CP 10007484 | 341-3184 |
| | | Electrofusion | MT TRI0520-D | 341-1873 |
| 10" IPS | 11 | Molded | PP 1064048, CP 10009508 | 341-4133 |
| 12" IPS | 11 | Molded | CP 10009510, MT TRI0524-D | 341-2225 |
| 16" IPS | 11 | Molded | MT POLY-B 6216-D | 341-5841 |

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.11 Molded Reducers

| Nominal Size | IPS SDR | CTS Wall Thickness | Part Number | Class & Stock Number |
|---|---|---|---|---|
| 1" IPS x ½" CTS | 11 | 0.090 | PP 1071055, CP 10004189 | 341-1196 |
| 1" IPS x 1" CTS | 11 | 0.090 | PP 1010907, CP 10004194 | 341-2079 |
| 1" IPS x 1¼" CTS | 11 | 0.090 | PP 1010910, CP 6911190 | 341-2749 |
| 1¼" IPS x 1¼" CTS | 11 | 0.090 | PP 1007958, CP 10003946 | 341-1188 |
| 2" x 1" IPS | 11 | N/A | CP 360000414 | 336-2489 |
| 2" IPS x 1¼" CTS | 11 | 0.090 | PP 1010912 CP 10004200 | 341-1170 |
| 1¼" IPS x 1" IPS | 11 | N/A | PP 1007964, CP 10004197 | 341-4620 |
| 2" IPS x 1¼" IPS | 11 | N/A | PP 1007977, CP 10007479 | 341-1220 |
| 3" IPS x 2" IPS | 11 | N/A | PP 1007985, CP 10007480 | 341-1212 |
| 4" IPS x 2" IPS | 11 | N/A | PP 1006466, CP 10007481 | 341-2855 |
| 4" IPS x 3" IPS | 11 | N/A | PP 1007992, CP 10007482 | 341-1204 |
| 6" IPS x 4" IPS | 11 | N/A | PP 1006469, CP 10007784 | 341-4067 |
| 8" IPS x 6" IPS | 11 | N/A | PP 1007995, CP 10007483 | 341-2814 |
| 10" IPS x 8" IPS | 11 | N/A | CP 10009509 | 341-4109 |
| 12" IPS x 8" IPS | 11 | N/A | CP 10013268 | 341-3861 |
| 12" IPS x 10" IPS | 11 | N/A | CP 10009511 | 341-4927 |
| 16" IPS x 12" IPS | 11 | N/A | MT TRI0280-(D)BF | 341-1881 |

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.12 90° Elbows Molded and Electrofusion

| Size | SDR | Part Number | Type | Class & Stock Number |
|---|---|---|---|---|
| 1" IPS | 11 | PP 1007909, CP 10004111 | Molded | 341-1378 |
| | | PUSA 5905B003010 | Electrofusion | 341-1355 |
| 1¼" IPS | 11 | PP 1007916, CP 10002945 | Molded | 341-1360 |
| | | PUSA 5905B003013 | Electrofusion | 341-1356 |
| 2" IPS | 11 | PP 1006422, CP 10002946 | Molded | 341-1352 |
| | | MT TRI0475-D, PUSA 5905B003020 | Electrofusion | 341-1207 |
| 3" IPS | 11 | PP 1007932, CP 10007745 | Molded | 341-1345 |
| | | PUSA 5905B003030 | Electrofusion | 341-1357 |
| 4" IPS | 11 | PP 1006432, CP 10001630 | Molded | 341-1337 |
| | | MT TRI0485-D, PUSA 5905B003040 | Electrofusion | 341-1208 |
| 6" IPS | 11 | PP 1006440, CP 10007785 | Molded | 341-2095 |
| | | MT TRI0490-D | Electrofusion | 341-1209 |
| 8" IPS | 11 | PP 1007944, CP 10007788 | Molded | 341-3044 |
| | | MT TRI0495-D | Electrofusion | 341-1210 |
| 12" IPS | 11 | CP 10003853 MT TRI0498-D | Molded | 341-3796 |
| 16" IPS | 11 | MT TRI0499-D | Molded | 341-1734 |

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.13 45° Elbows Molded and Electrofusion

| Size | SDR | Part Number | Type | Class & Stock Number |
|---|---|---|---|---|
| 1" IPS | 11 | PUSA 5906B003010 | Electrofusion | 341-1363 |
| 1¼" IPS | 11 | PUSA 5906B003013 | Electrofusion | 341-1353 |
| 2" IPS | 11 | MT TRI0420-D, PUSA 5906B003020 | Electrofusion | 341-1203 |
| 3" IPS | 11 | PP 1007931, CP 10002941 | Molded | 341-2103 |
| | | PUSA 5906B003030 | Electrofusion | 341-1354 |
| 4" IPS | 11 | PP 1006430, CP 10002942 | Molded | 341-2111 |
| | | MT TRI0440-D, PUSA 5906B003040 | Electrofusion | 341-1205 |
| 6" IPS | 11 | PP 1006438, CP 10009505 | Molded | 341-2160 |
| | | MT TRI0445-D | Electrofusion | 341-1206 |
| 8" IPS | 11 | PP 1007943, CP 10009506 | Molded | 341-2806 |
| | | MT TRI0450-D | Electrofusion | 341-1211 |
| 10" IPS | 11 | CP 10004070 | Molded | 341-4091 |
| 12" IPS | 11 | CP 10004078 MT TRI0460-BF | Molded | 341-3804 |
| | | MT TRI00460-D | Electrofusion | 341-1700 |
| 16" IPS | 11 | MT TRI0464-D | Molded | 341-1733 |

★ 13.14 22.5° Elbows

| Size | SDR | Part No. | Type | Class & Stock Number |
|---|---|---|---|---|
| 12" IPS | 11 | ★ MT TRI0415-D | Molded (electrofusion) | 328-1374 |
| | | MT TRI0415-D | Butt fusion | 341-1944 |

★ 13.15 Butt Fusion Offsets

| Size | SDR | MRC Part Number | Class & Stock Number |
|---|---|---|---|
| 4" IPS | 11 | 6102-2226 | 341-4646 |
| 6" IPS | 11 | 6102-2227 | 341-4638 |
| 8" IPS | 11 | 6102-2225 | 341-4653 |

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

13.16 Reserved

★ 13.17 Sidewall Branch Saddles*

| Main Size | Outlet Size | SDR | Part Number | Type | Class & Stock Number |
|---|---|---|---|---|---|
| 4" | 4" | 11 | MT TRI1165-D | Electrofusion | |
| 6" | 6" | 11 | MT TRI1176-D | Electrofusion | |
| 8" | 4" | 11 | MT TRI1180 | Electrofusion | NS3414398 |
| 8" | 6" | 11 | MT TRI1185 | Electrofusion | NS0243583 |
| 8" | 8" | 11 | MT TRI1188-D | Electrofusion | |
| 12" | 4" | | MT TRI1200-D | Electrofusion | NS0243584 |
| 12" | 6" | 11 | MT TRI1205-D | Electrofusion | NS0243585 |
| 12" | 8" | 11 | MT TRI1210-D | Electrofusion | NS0243586 |
| 16" | 6" | 11 | Not Available | Molded | Non-stock |
| 16" | 8" | 11 | CP 10005060 | Molded | Non-stock |

* For Gas Development Lab use only

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.18 Electrofusion Couplings/ Reducers

| Size | Manufacturer | Class & Stock Number |
|---|---|---|
| 1¼" CTS | CP, IF, PUSA, MT | 341-5957 |
| 1" IPS | CP, IF, PUSA, MT TRI0100 | 341-4224 |
| 1¼" IPS | CP, IF, PUSA, MT TRI0105 | 341-4174 |
| 2" IPS | IF, PUSA, MT TRI-0120-D | 341-4216 |
| 3" IPS | IF, PUSA, M TRI-0130-D | 341-4208 |
| 4" IPS | IF, PUSA, MT TRI-0140-D | 341-4190 |
| 6" IPS | IF, PUSA, MT TRI-0160-D | 341-4182 |
| 8" IPS | IF, PUSA, MT TRI-0180-D | 341-4976 |
| ½" CTS | IF, PUSA, MT | 341-5866 |
| 1" CTS | IF, PUSA, MT | 341-5965 |
| 1" IPS | IF, PUSA, MT | 341-5908 |
| 1¼" IPS | IF, PUSA, MT | 341-5916 |
| 2" IPS | IF, PUSA, MT | 341-5387 |
| 3" IPS | IF, PUSA, MT | 341-5403 |
| 4" IPS | IF, PUSA, MT | 341-5379 |
| 6" IPS | IF, PUSA, MT | 341-5395 |
| 8" IPS | IF, PUSA, MT | 341-5411 |
| 12" IPS | IF, MT TRI-0195-D | 341-5429 |
| 16" IPS | IF, MT TRI-0198-D | 341-5858 |
| 1" IPS x ½" CTS | CP 10003869, MT TRI0200, IF 128204 | 341-5932 |
| 1" IPS x 1" CTS | CP10004629 | |
| 1" IPS x ¾" IPS | MT TRI0210-D | 341-1615 |
| 1¼" IPS x 1" IPS | CP | 341-5973 |
| 2" IPS x 1" CTS | IF | 341-0441 |
| 2" IPS x 1¼" CTS | MT TRI021401-D | 341-1604 |
| 2" IPS x 1¼" IPS | PUSA | 341-1061 |
| 4" IPS x 2" IPS | MT TRI0220-D | 328-1375 |
| 6" IPS x 4" IPS | MT TRI0230-D | 332-1362 |
| 8" IPS x 6" IPS | MT TRI0236-D | 332-1364 |
| 12" IPS x 6" IPS | MT TRI0248-D | 341-1603 |
| 12" IPS x 8" IPS | MT TRI0249-D | 341-1602 |

★ 13.0 **POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

★ 13.19 Electrofusion Tapping Tees

| Main Size | Outlet Size | Manufacturer | Cl/Stk |
|---|---|---|---|
| 1¼" IPS | 1" IPS | Plasson | 338-7081 |
| 2" IPS | 1" IPS | Plasson, Ipex (Friatec), MT TRI-0705-D | 341-5643 |
| 2" IPS | 2" IPS | Ipex (Friatec) MT TRI-0955-D | 337-9757 |
| 3" IPS | 1" IPS | Ipex (Friatec), MT Deason | 341-1036 |
| 3" IPS | 2" IPS | Ipex (Friatec), MT Deason | 341-6021 |
| 4" IPS | 1" IPS | Ipex (Friatec), MT TRI-0810-D | 341-1038 |
| 4" IPS | 2" IPS | Ipex (Friatec), MT Deason | 337-9781 |
| 6" IPS | 1" IPS | Ipex (Friatec), MT Deason | 341-1039 |
| 6" IPS | 2" IPS | Ipex (Friatec), MT TRI-0985-D | 337-9765 |
| 8" IPS | 1" IPS | Ipex (Friatec), MT TRI-0870-D | 341-1041 |
| 8" IPS | 2" IPS | Ipex (Friatec), MT TRI-0995-D | 337-9773 |
| 10"-12" IPS | 2" IPS | Ipex (Friatec)* | 341-1065 |
| 12" IPS | 1" IPS | MT TRI-0930-D | 341-1138 |
| 12" IPS | 2" IPS | MT TRI-1015-D | 341-0980 |
| 16" IPS | 2" IPS | Ipex (Friatec)** | 341-1745 |
| | | MT TRI--D | 337-2212 |

*Top loader required

** Top loader required. Flow restriction fitting. Verify with Distribution Planning before use.

**NOTE:** Contact Gas Development Lab for ordering information on tapping tools

**13.0 POLYETHYLENE PIPE, TUBING AND FITTINGS** (Continued)

13.20 Pipe Pillo: Supports for plastic pipe installations from 12"-16" in diameter. Made by PipeSak Pipeline Protection. Available as Class & Stock 003-2474.Supports for plastic pipe installations from 4"-8" in diameter. Made by PipeSak Pipeline Protection. Available as Class & Stock 003-2473.

★ 13.21 Electrofusion Repair Patches: Available for order from the Gas Development Lab in main sizes from 3"-12". Sizes below 8" include a saddle clamp.

★ 13.22 Electrofusion SPA Saddles

| Main Size | Manufacturer & Part Number | Class & Stock Number |
|---|---|---|
| 3" IPS | IF 228236 | 341-1044 |
| 4" IPS | IF 228237 | 341-1045 |
| 6" IPS | IF 228238 | 341-1046 |
| 8" IPS | IF 228335 | 341-1047 |
| 10"-16" IPS | IF 228241 | 341-1049 |

★ 13.23 Electrofusion Adjustable Elbows

| Size | Manufacturer & Part Number | Class & Stock Number |
|---|---|---|
| 4" IPS | PUSA 5947B003040 | 341-1062 |
| 6" IPS | PUSA 5947B003060 | 341-1064 |
| 8" IPS (one-sided) | PUSA 5947B0S3080, 5901B004080 | 341-1605 |
| 8" IPS (two-sided) | PUSA 5947B003080 | 341-1600 |
| 12" IPS (one-sided) | PUSA 5947B0S3120 | 341-1601 |
| 12" IPS (two-sided) | PUSA 5947B003120 | 341-1606 |

★ 13.24 Electrofusion Buttfused Repair Sleeves (non-leaking use only)

| Size | Manufacturer & Part Number | Class & Stock Number |
|---|---|---|
| 2" IPS | Mulcare | Direct order only |
| 4" IPS | NG 12EIBFRS04 | 341-0300 |
| 6" IPS | NG 12EIBFRS06 | 341-0279 |
| 8" IPS | Mulcare | Direct order only |
| 12" IPS | Mulcare | |

## ★ 13.0 POLYETHYLENE PIPE, TUBING AND FITTINGS (Continued)

### ★ 13.25 Electrofusion Branch Saddles*

| Main Size | Outlet Size | Manufacturer | Part Number |
|---|---|---|---|
| 4" IPS | 4" IPS | MT Deason | MT TRI1165-D |
| 6" IPS | 4" IPS | Ipex (Friatec) | 228227 |
| 6" IPS | 4" IPS | Plasson | 5958BBX3060040 |
| 6" IPS | 6" IPS | MT Deason | MT TRI1176-D |
| 8" IPS | 4" IPS | Plasson | 5958BBX3080040 |
| 8" IPS | 6" IPS | MT Deason | TRI1185-D |
| 10"-22" IPS | 2" IPS | Ipex (Friatec) | 228182 |
| 10"-16" IPS | 4" IPS | Plasson | 5958BBX3100040 |
| 12" IPS | 4" IPS | MT Deason | TRI1200-D |
| 12" IPS | 6" IPS | MT Deason | TRI1205-D |
| 12" IPS | 8" IPS | MT Deason | TRI1210-D |
| 16" IPS | 4" IPS | Plasson | 5958BB03160040T |

* Gas Development Lab Use Only

### ★ 13.26 Electrofusion 90° Elbows

| Size | SDR | Part No. | Type | Class & Stock Number |
|---|---|---|---|---|
| 2" IPS | 11 | TRI0475-D | Molded | 341-1207 |
| 4" IPS | 11 | TRI0485-D | Molded | 341-1208 |
| 6" IPS | 11 | TRI0490-D | Molded | 341-1209 |
| 8" IPS | 11 | TRI0495-D | Molded | 341-1210 |
| 12" IPS | 11 | TRI0498-D | Molded | 341-1701 |
| 16" IPS | 11 | TRI0499-D | Molded | 341-1734 |

### ★ 13.27 Electrofusion Bottom Out Saddles*

| Main Size | Outlet Size | Manufacturer | Density | Class & Stock Number |
|---|---|---|---|---|
| 12" IPS | 4" IPS | MT Deason | High | NS0245372 |
| 12"IPS | 6" IPS | MT Deason | High | NS0245373 |

*Gas Development Lab Use Only

## ★ 14.0 RECORDS RETENTION

Any records generated in the course of performing work in accordance with this specification shall be maintained as required by Corporate Instruction CI-870-1 “Records Management.” Guidance on the retention of Company Gas Operations records can also be found on the Records Management intranet site.

## 15.0 REFERENCES

| | | |
|---|---|---|
| CI-870-1 | - | Corporate Instruction on Records Management |
| G-100,298 | - | Valves for Gas Transmission and Distribution Piping Systems |
| G-8107 | - | Steel Pipe for Gas Mains and Services |
| G-8121 | - | Qualification of Installers Joining Polyethylene (PE) Plastic Pipe/Tubing and Fittings for Gas Mains and Services |
| G-8122 | - | Inspection, Handling Storage and Transportation of Polyethylene (PE) Plastic Pipe, Tubing and Fittings for Gas Mains and Services |
| G-8123 | - | Heat Fusion Joining of Polyethylene (PE) Plastic Pipe/Tubing and Fittings for Gas Mains and Services |