

MATERIAL APPROVAL SUBMITTAL

(See Instructions on Reverse)

FORM APPROVED
OMB NO. 9000-0062
Expires Apr.30 1993

Public reporting burden for this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to the Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project OMB No 9000-0062, Washington DC 20503. Please DO NOT RETURN your form either of these addresses. Send your completed form to: SAF/AQCO, Pentagon, Washington DC 20330-1000.

TO: (Contracting Officer)
Lia Arthofer, SMSgt

FROM: (Contractor)
Aztec General Contractors, LLC

DATE
29-Apr-2016

CONTRACT NUMBER
~~W912LC-15-C-0000~~ **W912LC-15-C-5002**

SUBMISSION NUMBER
001-16110

SUBMITTAL
 NEW ESUBMITTAL

PREVIOUS SUBMITTAL NUMBER

PROJECT NUMBER
Construct Range Control Facility & Fitness Center, Project #: FTAE 12-9002

TO BE COMPLETED BY CONTRACTOR			FOR GOVERNMENT USE ONLY			
(line number) ITEM NO.	SPECIFICATION SECTION / PARA NO./DRAWING NO.	DESCRIPTION OF MATERIAL (Include Type, Model Number, Catalog, Mfg., etc.)	APPROVED	DISAPPROVED	SEE REVERSE	INITIAL
1	Para 1.04.B.1	Raceways-Product Data	X		X	SRM

BY COMPLETING THIS FORM, THE UNDERSIGNED CONTRACTOR CERTIFIES THAT THE MATERIAL COMPLIES WITH ALL SPECIFICATIONS OF SUBJECT CONTRACT.

DATE: 29-Apr-2016

TYPE OR PRINT NAME AND TITLE: **RUSSELL B. LUKER, Submittal Manager**

SIGNATURE: 

FOR GOVERNMENT USE ONLY

TO: (Base Civil Engineering Officer)

For Evaluation and Action

DATE

TYPE OR PRINT NAME AND GRADE

SIGNATURE

TO: (AF Contracting Office)

See attached comments

RECOMMEND APPROVAL DISAPPROVAL AS INDICATED ABOVE AND SUBJECT TO ANY APPLICABLE COMMENTS ON THE REVERSE

DATE: 12May2016

TYPE OR PRINT NAME AND GRADE: **WILLIAM N.T. SMITH, LTCOL**

SIGNATURE: **SMITH.WILLIAM.NATHANTERR.1052248600**

Digitally signed by SMITH.WILLIAM.NATHANTERR.1052248600
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USAF, cn=SMITH.WILLIAM.NATHANTERR.1052248600
Date: 2016.05.12 16:28:10 -06'00'

TO: (CONTRACTOR)

Aztec General Contractors, LLC

APPROVED DISAPPROVED AS INDICATED ABOVE AND SUBJECT TO ANY APPLICABLE COMMENTS ON THE REVERSE SIDE.
REQUEST RESUBMITTAL ON DISAPPROVED ITEMS WITHIN _____ DAYS OF DATE SHOWN BELOW.

DATE: **31May16**

TYPE OR PRINT NAME AND GRADE: **LIA ARTHOFER, SMSgt**

SIGNATURE

COMMENTS

(Number to correspond with applicable Item Number on reverse)

#1) Page 6 - Non-Detectable Underground Tape is REJECTED (See 16195 para 2.02.B.1 for requirements)

#2) Page 7 - 1/2" PVC fittings are REJECTED (See 16110 para 2.03.A for requirements)

#3) Page 8 - 1/2" PVC fittings are REJECTED (See 16110 para 2.03.A for requirements)

#4) Page 9 - 1/2" PVC fittings are REJECTED (See 16110 para 2.03.A for requirements)

#5) Page 14 - 1/2" PVC Conduit Bodies & Junction Boxes are REJECTED (See 16110 para 2.02.L for requirements)

#6) Page 18 - NEW Submittal is required for spec section 16110 para 2.02.P for any EMT conduit to be installed for any systems identified in this paragraph.

#7) Page 22 - 1/2" conduit couplings & conduit are REJECTED (See 16110 para 2.02.A for requirements)

#8) Page 23 - 1/2" PVC conduit & fittings are REJECTED (See 16110 para 2.03.A for requirements)

#9) Page 24 - 1/2" PVC conduit & fittings are REJECTED (See 16110 para 2.03.A for requirements)

#10) Page 32 - Solvent cement for EZ-Flex ENT is REJECTED

INSTRUCTIONS TO CONTRACTORS

2. This form is to be used by contractors for submitting Shop Drawing, Equipment Data, Manufacturer's Literature and Certificates and samples of Materials to the Government for approval in accordance with the provisions of this contract. Unless otherwise specified, it is to be prepared in 4 copies, signed, and provide to the contracting officer with appropriate attachments.

3. Item(s) to be approved will be clearly tabbed or identified. Data pertainin to item(s) to be approved will be clearly identified or tabbed, particularly where documents are voluminous, in order to properly evaluate the materials or articles to be incorporated in the work. Each attachment will be numbered to correspond with the item number shown on the face of this form.

4. Request submittal shal be numbered consecutively, by contract. In the space entitled "Submission No". This number, in addition to the contract No., will be used to identify each Material Approval Submittal. Resubmissions will be indicated in the appropriate block and the insertion of previous submission number and data in addition to a new submission number. A Single submission should be used for all work of a section of the specifications, but in NO instace should the submission include work for more than one (1) contract. Submittals requiring priority handling will be submitted by seprate submittal using the form and so marked across the face of the form.

5. This Material Approval Submittal is not valid unless it is signed by the contracting officer. This approval is required as called for by the contracting officer under the terms of this contract.



SUBMITTAL COVER SHEET

Project Name: Ft. Carson Range Control Facility and Fitness Center
Contractor: Great American Electric, LLC

Project No.: FTAE 12-9002
Project Manager: Joshua Coufal
Address: 7338 S. Alton Way Suite 16F
Centennial, CO 80112
Phone: 303-658-0318

Architect/Engineer: Burns and McDonnell
Owner: 140 MSG/MS Air Guard Contracting Office

Project Manager:
Address:
Phone:

1. **Date:** 04/27/2016
2. **Submitted Item:** EMT, PVC, Flex, Sealtight, Fittings
3. **Manufacturer:** Plastibond, Raco, Hubbell, AFC Cable Systems, Ideal, Allied, Dottie, Caddy, Arlington Industries, Carlon, Anamet Electrical
4. **Person Submitting:** Joshua Coufal
5. **Spec. Location:** Section 16110
6. **Notes:**

Architect/Engineer's Stamp

- No exception taken.
- Revise as noted. Do not resubmit. See Notes above.
- Revise as noted. Resubmit. See Notes above.
- Rejected. See Notes above.

REVIEWED

By Stephen Melko at 10:05 am, May 06, 2016

By: _____ Date: _____

PLASTI-BOND REDH₂OT COATED CONDUIT AND NIPPLES

Coated Conduit Technical Data

COATED CONDUIT

Metric Size Designators	Pipe Size Inches	Catalog Number	Outside Wall Thickness Inches	Diameter With Coating Inches	Internal Inside Diameter Inches	Traverse Area Sq. Inches	Nominal Weight	Aluminum Catalog #
<input checked="" type="checkbox"/> 16	1/2"	PRHCONDUIT-1/2	.104"	.920"	0.632"	0.314"	85	PRCONDUIT-AL-1/2
<input type="checkbox"/> 21	3/4"	PRHCONDUIT-3/4	.107"	1.130"	0.836"	0.549"	112	PRCONDUIT-AL-3/4
<input type="checkbox"/> 27	1"	PRHCONDUIT-1	.126"	1.395"	1.063"	0.887"	164	PRCONDUIT-AL-1
<input type="checkbox"/> 35	1-1/4"	PRHCONDUIT-1-1/4	.133"	1.740"	1.394"	1.326"	217	PRCONDUIT-AL-1-1/4
<input type="checkbox"/> 41	1-1/2"	PRHCONDUIT-1-1/2	.138"	1.980"	1.624"	2.071"	268	PRCONDUIT-AL-1-1/2
<input type="checkbox"/> 53	2"	PRHCONDUIT-2	.146"	2.455"	2.083"	3.408"	358	PRCONDUIT-AL-2
<input type="checkbox"/> 63	2-1/2"	PRHCONDUIT-2-1/2	.193"	2.955"	2.489"	4.866"	546	PRCONDUIT-AL-2-1/2
<input type="checkbox"/> 78	3"	PRHCONDUIT-3	.205"	3.580"	3.090"	7.499"	708	PRCONDUIT-AL-3
<input type="checkbox"/> 91	3-1/2"	PRHCONDUIT-3-1/2	.215"	4.080"	3.570"	10.010"	851	PRCONDUIT-AL-3-1/2
<input type="checkbox"/> 103	4"	PRHCONDUIT-4	.225"	4.580"	4.050"	12.882"	1009	PRCONDUIT-AL-4
<input type="checkbox"/> 129	5"	PRHCONDUIT-5	.245"	5.643"	5.073"	20.212"	1337	PRCONDUIT-AL-5
<input type="checkbox"/> 155	6"	PRHCONDUIT-6	.266"	6.705"	6.093"	29.158"	1993	PRCONDUIT-AL-6

PLASTI-BOND REDH₂OT COATED NIPPLES

APPLICATION

PLASTI-BOND REDH₂OT factory threaded nipples save you time and money in the field. Electrical continuity is maintained across assembled joints.

*The exteriors of certain short nipples are coated with urethane in lieu of PVC. This is dictated by the manufacturing process as well as assembly considerations.

FEATURES

- 40 mil gray PVC exterior coating
- 2 mil red urethane interior and thread coating
- 12 trade sizes from 1/2" through 6"
- 11 standard lengths in available: Close, 2" to 12"
- Made to order lengths available – Call for quote
- Plastic thread protector caps are color coded for quick identification of conduit size.

Thread Protector Cap Colors:

- Black- for 1/2" sizes, 1/2", 1-1/2", 2-1/2", 3-1/2"
- Red- for 1/4" sizes, 3/4", 1-1/4"
- Blue- for even sizes, 1", 2", 3", 4", 5", 6"

COMPLIANCES

UL Listed, (Standard 6) with PVC as the primary corrosion protection for the steel conduit. The underlying zinc coating is a supplemental corrosion protection coating. Restricted for use with threaded fittings only. (UL 6 is now used in lieu of WWC 581.)

ETL VERIFIED: Plasti-Bond Nipples are manufactured from ETL-verified conduit.

Simple Steps To Ordering

To order PLASTI-BOND coated nipples follow these simple steps to create a catalog number:

1- Determine Proper Prefix.

- For steel conduit nipples use the prefix: **PRHNIP-**
- For aluminum conduit nipples use the prefix: **PRNIP-AL-**

2- Add the conduit *trade size* needed to your catalog prefix. Example - 1/2" coated *steel* nipple: **PRHNIP-1/2**

3- Enter an "X" to represent "by" as in "2X4". Example - **PRHNIP-1/2X**

4- Enter the desired *nipple length*. Example - 10" **PRHNIP-1/2X10**

The catalog number for a Plasti-Bond coated steel, 1/2" nipple with a length of 10": **PRHNIP-1/2X10**

This number can then be looked up in the listing of pricing to determine price and availability.

Call 903-843-5591 for custom orders, customer service and more information on **Plasti-Bond REDH₂OT**.

APPROVAL STAMP

(See online product submittal guide at www.plastibond.com)

90 Degree Flex Connectors (lined through items not used)

B69

FLEXIBLE METAL CONDUIT FITTINGS

MALLEABLE IRON - 90 DEGREE SQUEEZE CONNECTORS

Application

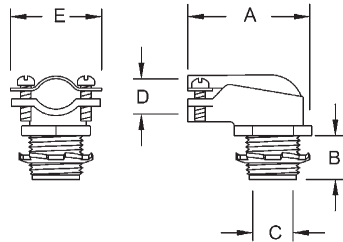
- For use in dry locations to bond flexible metal conduit to a box or enclosure

Product Features

- Malleable construction insures mechanical protection for the raceway
- Electro zinc plated for added corrosion protection
- UPC bar coded fittings are individually polybagged with a preprinted UPC-A bar code and packaged in pre-scored tear top cartons for an attractive presentation

Insulated and Uninsulated Compliances

-  US



- A = Overall length
- B = Thread length and thread spec
- C = Throat I.D.
- D = Clamping range
- E = Maximum width body



RACO COMMERCIAL FITTINGS

ORDERING INFORMATION - DIMENSIONS

SQUEEZE 90 DEGREE - INSULATED AND UNINSULATED - MALLEABLE IRON					
INSULATED IRON CATALOG NUMBER	UNINSULATED IRON CATALOG NUMBER	TRADE SIZE	UNIT CTN. QTY.	SHIP CTN. QTY.	UPC BAR CODE
3201	2201	3/8" *		50	
3202		1/2"		25	
	2202	1/2"	25	100	
3202-8	2202-8	1/2"	1	25	
3203	2203	3/4"	—	25	—
3203-8	2203-8	3/4"	1	20	
3204	2204	1"	—	25	—
3204-8	2204-8	1"	1	5	
3205	2205	1-1/4"	—	10	—
3206	2206	1-1/2"	—	5	—
3208	2208	2"	—	5	—
3210	2210	2 1/2"		1	
3212	2212	3"		1	
3214	2214	3 1/2"		1	
3216	2216	4"		1	

* For 1/2" knockout

DIMENSIONS							
CAT. NO. INSULATED	CAT. NO. UNINSLTD.	A	B	THD. SPEC.	C	D	E
3201	2201	2 1/64"	23/64"	1/2" 14 NPS	.570	.300 .630	1 3/8"
3202	2202	2 15/64"	27/64"	1/2" 14 NPS	.570	.317 .650	1 51/64"
3202-8	2202-8						
3203	2203	2 1/2"	1/2"	3/4" 14 NPS	.922	.830 1.110	1 31/32"
3203-8	2203-8						
3204	2204	2 27/32"	33/64"	1" 11 1/2 NPS	.850	1.205 MAX	2 11/32"
3204-8	2204-8						
3205	2205	4 18/64"	43/64"	1 1/4" 11 1/2 NPS	1.210	1.505 MAX	2 55/64"
3206	2206	4 57/64"	13/32"	1 1/2" 11 1/2 NPS	1.450	1.830 MAX	3 9/32"
3208	2208	6 35/64"	51/64"	2" 11 1/2 NPS	1.880	2.415 MAX	3 51/64"
3210	2210	7 9/16"	1 7/64"	2 1/2" 8 NPS	2.300	2.515 MAX	4 21/64"
3212	2212	8 31/32"	1 3/64"	3" 8 NPS	2.810	3.025 MAX	5 11/64"
3214	2214	11 15/64"	1 17/64"	3 1/2" 8 NPS	3.440	3.700 MAX	6 51/64"
3216	2216	12 11/32"	1 9/16"	4" 8 NPS	3.895	4.050 MAX	7 17/64"



LIQUIDTIGHT CONDUIT AND CORD CONNECTORS
MALLEABLE IRON - 90 DEGREE CONNECTORS

Applications

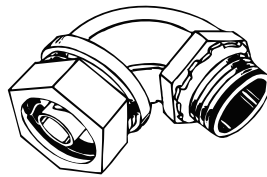
- For use in outdoor or indoor locations on flexible metallic liquidtight conduit and Type B flexible nonmetallic liquidtight conduit
- Use to positively bond the conduit to a box or enclosure
- RACO® liquidtight connectors are suitable for use in Class 1, Division 2; Class 2, Division 1 and 2; and Class 3, Division 1 and 2 hazardous locations

Product Features

- Patented split gland-ring is designed to slip onto the conduit quickly and to grip the jacket of the conduit, speeding installation, assuring a perfect seal, and preventing pullouts
- Malleable iron castings mate with other components perfectly without strain or distortion
- All components are reusable — RACO® liquidtight connectors may be easily disassembled and reused after years of service
- Sealing washer (included) provides a liquidtight seal when terminating the connector in a threadless opening
- Heavy duty locknut included with every RACO® liquidtight connector assures continuity of ground
- All metallic components are zinc electro plated for added corrosion protection
- UPC bar coded fittings are individually polybagged with a preprinted UPC-A bar code and packaged in pre-scored tear top cartons for an attractive presentation

Compliances

- – Standard 514B
- – C22.2 #18



90 DEGREE INSULATED MALLEABLE IRON



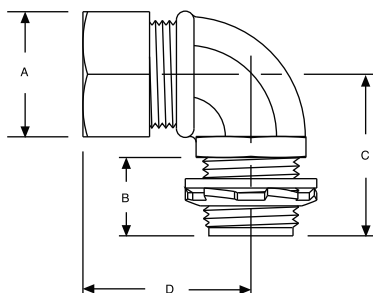
90 DEGREE - UNINSULATED MALLEABLE IRON

ORDERING INFORMATION - DIMENSIONS

90 DEGREE - INSULATED AND UNINSULATED- MALLEABLE IRON					
INSULATED IRON CATALOG NUMBER	UNINSULATED IRON CATALOG NUMBER	TRADE SIZE	UNIT CTN. QTY.	SHIP CTN. QTY.	UPC BAR CODE
3541*	3421*	3/8"	25	100	—
3542	3422	1/2"	25	100	—
3542-8	3422-8	1/2"	1	10	—
3543	3423	3/4"	25	100	—
3543-8	3423-8	3/4"	1	10	—
3544	3424	1"	—	10	—
3544-8	3424-8	1"	1	5	—
3545	3425	1-1/4"	—	10	—
3546	3426	1-1/2"	—	5	—
3548	3428	2"	—	5	—
3550	3430	2-1/2"	—	1	—
3552	3432	3"	—	1	—
3553	3433	4"	—	1	—

*1/2" Trade size hub

DIMENSIONS					
TRADE SIZE	A	B	THREAD SPEC.	C	D
3/8"	1-1/16"	10/32"	1/2-14 NPT	1-5/16"	1-7/16"
1/2"	1-3/16"	10/32"	1/2-14 NPT	1-5/16"	1-1/16"
3/4"	1-29/64"	19/32"	3/4-14 NPT	1-7/16"	1-5/8"
1"	1-23/32"	21/32"	1-11-1/2 NPT	1-25/32"	2-3/16"
1-1/4"	2-3/16"	5/8"	1-1/4-11-1/2 NPT	1-31/32"	2-1/2"
1-1/2"	2-1/2"	5/8"	1-1/2-11-1/2 NPT	2-3/16"	2-11/16"
2"	3"	21/32"	2-11-1/2 NPT	2-17/32"	3-1/4"
2-1/2"	3-5/8"	1"	2-1/2-8 NPT	3-3/8"	4-1/4"
3"	4-5/16"	1"	3-8 NPT	3-11/16"	4-7/8"
4"	5-5/16"	1"	4-8 NPT	4-8/16"	5-5/8"



A = Nut Flats
 B = Thread length and thread spec.
 C = Thread to bend
 D = Nut to bend



RACO COMMERCIAL FITTINGS



Ordering Information

Reduced Wall Aluminum Flexible Metal Conduit

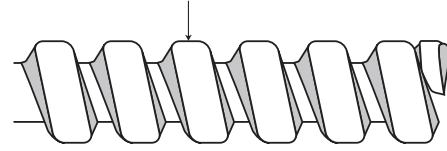
Description

- Lightweight Reduced Wall Aluminum Flexible Conduit
- Premium aluminum alloy
- Interlocking design

Applications

- Flexible metal raceway for electrical power, control and communication cables
- Motor leads
- Listed assemblies
- Listed wire fixtures
- Manufactured wiring systems

Interlocking Aluminum Armor



References & Ratings

- UL 1, UL 1479, File Reference E11831, CSA File Number 15035, CSA C22.2 No. 56 (trade size 3/8 only)
- Federal Specification WW-C-566C, (now superseded by UL 1)
- NEC® 250.118(6), 300.22(C), 348, 430.123, 501.4(B)(2), 645.5
- Cable Tray installations per NEC®
- Environmental Air-Handling space installation NEC® 300.22(C)
- UL Classified 1, 2 and 3-hour Through-Penetration Fire Systems UL File R14141



Ordering Information

Product Dimensions/ Bend Radius

Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight/100 feet (pounds)	Internal Diameter (min/max) inches	External Diameter (min/max) inches	Bend Radius (inches)
5601-22-00	2/8	12	25'		6	0.275/0.202	0.560/0.610	2
5601-24-00	3/8	12	50'		6	0.375/0.393	0.560/0.610	2
5601-30-00	2/8	12	100'		6	0.275/0.202	0.560/0.610	2
5601-42-00	2/8	12	250'		6	0.275/0.202	0.560/0.610	2
5601-45-00	2/8	12		500'	6	0.275/0.202	0.560/0.610	2
5601-60-00	3/8	12		1000'	6	0.375/0.393	0.560/0.610	2
5602-22-00	1/2	16	25'	—	10	0.625/0.645	0.860/0.920	3
5602-24-00	1/2	16	50'	—	10	0.625/0.645	0.860/0.920	3
5602-30-00	1/2	16	100'	—	10	0.625/0.645	0.860/0.920	3
5602-45-00	1/2	16	—	500'	10	0.625/0.645	0.860/0.920	3
5602-60-00	1/2	16	—	1000'	10	0.625/0.645	0.860/0.920	3
5603-2-00	3/4	21	25'	—	12	0.812/0.835	1.045/1.105	4
5603-24-00	3/4	21	50'	—	12	0.812/0.835	1.045/1.105	4
5603-30-00	3/4	21	100'	—	12	0.812/0.835	1.045/1.105	4
5603-45-00	3/4	21	—	500'	12	0.812/0.835	1.045/1.105	4
5603-60-00	3/4	21	—	1000'	12	0.812/0.835	1.045/1.105	4
5604-24-00	1	27	50'	—	18	1.000/1.040	1.300/1.380	5
5604-80-00	1	27	—	300'	18	1.000/1.040	1.300/1.380	5
5605-24-00	1¼	35	50'	—	22	1.250/1.300	1.550/1.630	6.25
5605-40-00	1¼	35	—	200'	22	1.250/1.300	1.550/1.630	6.25
5606-22-00	1½	41	25'	—	26	1.500/1.575	1.850/1.950	7.50
5607-22-00	2	53	25'	—	35	2.000/2.080	2.350/2.450	10
5608-22-00	2½	63	25'	—	57	2.500/—	2.860/3.060	12.50
5609-22-00	3	78	25'	—	68	3.000/—	3.360/3.560	15
5610-22-00	3½	91	25'	—	80	3.500/—	3.860/4.060	17.50
5611-22-00	4	103	25'	—	91	4.000/—	4.360/4.560	20

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.

*CSA certified

Review NEC® 250.118(6) for grounding requirements.



TOOLS & SUPPLIES

LOCKOUT/TAGOUT

Safety Lockout Hasps

- Allow up to six workers to lock out a single energy source
- Rustproofed, plated and vinyl-coated
- Labeled hasps feature anodized aluminum alloy construction for long-term durability
- Permanent "Do Not Operate" labels accept pens, pencils and permanent markers

Safety Lockout Hasps

Jaw Diameter	Qty.	Cat. No.
1 in.	3	44-800
1-1/2 in.	2	44-801

Labeled Safety Lockout Hasps

Legend	Color	Qty.	Cat. No.
Do Not Operate	Blue	1	44-790
	Red	1	44-791
	Red	50	44-1791

~~Non-Detectable Underground Tapes~~

- For protection, location and identification of underground utility installations
- Formulated to resist degradation from acid and alkali found in soils
- Lead-free pigments and organic lead-free ink



Property	Method	Value
Thickness	ASTMD2103	4.0 Mils
Elongation	ASTMD882-75B	500%
Composition	IDEAL Specs.	LDPE
Tensile Strength	ASTMD882	2,750 PSI

Recommended Burial Depth

3 in. Tape – 4 in. to 6 in.

6 in. Tape – less than 12 in.

Legend	Color	Size	Cat. No.
Caution Buried Electric Line Below	Red	3 in. x 1,000 ft.	42-101
	Yellow	3 in. x 1,000 ft.	42-102
Caution Buried Telephone Line Below	Orange	3 in. x 1,000 ft.	42-103
Caution Buried Fiber Optic Line Below	Orange	3 in. x 1,000 ft.	42-104
Caution Buried Electric Line Below	Red	6 in. x 1,000 ft.	42-151
	Yellow	6 in. x 1,000 ft.	42-152

Detectable Underground Tapes

- Solid aluminum foil core tapes for protection, location and identification of underground utility installations
- Meets or exceeds industry standards including the American Public Works Association (APWA) color code
- Formulated to resist degradation from acid and alkali found in soils
- Lead-free pigments and organic lead-free ink

42-251

Property	Method	Value
Thickness	ASTMD2103	5.0 Mils
Elongation	ASTMD882-75B	80%
Composition	IDEAL Specs.	Bottom Layer PE Top layer PET Foil industry standard
Tensile Strength	ASTMD882	35 lbs./in. (15,000 PSI)

Legend	Color	Size	Cat. No.
Caution Buried Electric Line Below	Red	3 in. x 1,000 ft.	42-201
		6 in. x 1,000 ft.	42-251
Caution Buried Fiber Optic Line Below	Orange	6 in. x 1,000 ft.	42-252

Barricade Tapes

- High-visibility safety yellow or red polyethylene construction with bold black letters
- Meets OSHA specifications Section 1010.144 for marking physical hazards



Property	Method	Value
Elongation	ASTMD882-75B	≥ 400%
Composition	IDEAL Specs.	LDPE
Tensile Strength	ASTMD882	2,350 PSI TD 1,893 PSI MD

Legend	Color	Size	Thickness	Cat. No.
Caution	Yellow	3 in. x 1,000 ft.	4.0 Mils	42-001
Caution Do Not Enter	Yellow		4.0 Mils	42-002
Caution High Voltage	Yellow		4.0 Mils	42-003
Danger	Red		4.0 Mils	42-051
Danger High Voltage Keep Out	Red		4.0 Mils	42-052
			2.0 Mils	42-011
Caution	Yellow	3 in. x 1,000 ft.	2.0 Mils	42-011
Caution Do Not Enter	Yellow		2.0 Mils	42-012
Danger	Red		2.0 Mils	42-015

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
SCHEDULE 40 & 80 FITTINGS							
COUPLINGS							
0008CPL	6141629	E940D	EC10	30088700950200	X	1/2-CONDUIT-SCH-40-CPLG	200
075CPL	6141624	E940E	EC15	30088700958198	3/4"	3/4-CONDUIT-SCH-40-CPLG	125
100CPL	6141625	E940F	EC20	30088700958204	1"	1-IN-CONDUIT-SCH-40-CPLG	70
125CPL	6141626	E940G	EC25	30088700958211	1 1/4"	1-1/4-CONDUIT-SCH-40-CPLG	40
150CPL	6141627	E940H	EC30	30088700958228	1 1/2"	1-1/2-CONDUIT-SCH-40-CPLG	30
200CPL	6141628	E940J	EC35	30088700958235	2"	2-IN-CONDUIT-SCH-40-CPLG	40
250CPL	6141629	E940K	EC40	30088700567345	2 1/2"	2-1/2-CONDUIT-SCH-40-CPLG	20
300CPL	6141630	E940L	EC45	30088700569516	3"	3-IN-CONDUIT-SCH-40-CPLG	40
350CPL	6141631	E940M	EC50	30088700061096	3 1/2"	3-1/2-CONDUIT-SCH-40-CPLG	30
400CPL	6141632	E940N	EC55	30088700547361	4"	4-IN-CONDUIT-SCH-40-CPLG	20
500CPL	6141633	E940P	EC60	30088700547378	5"	5-IN-CONDUIT-SCH-40-CPLG	10
600CPL	6141634	E940R	EC65	30088700547385	6"	6-IN-CONDUIT-SCH-40-CPLG	8
800CPL	6141635D	N/A	N/A	30088700035950	8"	8-IN-CONDUIT-SCH-40-CPLG	1
FEMALE ADAPTERS							
050FA	5140043	E942D	FA10	30088700060027	X	1/2-FEMALE-SCH-40-ADPT	200
075FA	5140044	E942E	FA15	30088700958334	3/4"	3/4-FEMALE-SCH-40-ADPT	125
100FA	5140045	E942F	FA20	30088700958341	1"	1-IN-FEMALE-SCH-40-ADPT	70
125FA	5140046	E942G	FA25	30088700958358	1 1/4"	1-1/4-FEMALE-SCH-40-ADPT	40
150FA	5140047	E942H	FA30	30088700958365	1 1/2"	1-1/2-FEMALE-SCH-40-ADPT	30
200FA	5140048	E942J	FA35	30088700958372	2"	2-IN-FEMALE-SCH-40-ADPT	40
250FA	5140049	E942K	FA40	30088700567512	2 1/2"	2-1/2-FEMALE-SCH-40-ADPT	20
300FA	5140050	E942L	FA45	30088700527738	3"	3-IN-FEMALE-SCH-40-ADPT	40
350FA	5140051	E942M	FA50	30088700527745	3 1/2"	3-1/2-FEMALE-SCH-40-ADPT	30
400FA	5140052	E942N	FA55	30088700527752	4"	4-IN-FEMALE-SCH-40-ADPT	20
500FA	5140053	E942P	FA60	30088700527769	5"	5-IN-FEMALE-SCH-40-ADPT	10
600FA	5140054	E942R	FA65	30088700527776	6"	6-IN-FEMALE-SCH-40-ADPT	8
800FA	5140055D	N/A	N/A	30088700036339	8"	8-IN-FEMALE-SCH-40-ADPT	2
TERMINAL ADAPTERS							
050MA	5140103	E943D	TA10	30088700950259	X	1/2-SCH-40-TERMINAL-ADPT	200
075MA	5140104	E943E	TA15	30088700958266	3/4"	3/4-SCH-40-TERMINAL-ADPT	125
100MA	5140105	E943F	TA20	30088700958273	1"	1-IN-SCH-40-TERMINAL-ADPT	70
125MA	5140106	E943G	TA25	30088700958297	1 1/4"	1-1/4-SCH-40-TERMINAL-ADPT	40
150MA	5140107	E943H	TA30	30088700958303	1 1/2"	1-1/2-SCH-40-TERMINAL-ADPT	30
200MA	5140108	E943J	TA35	30088700958310	2"	2-IN-SCH-40-TERMINAL-ADPT	40
250MA	5140109	E943K	TA40	30088700567420	2 1/2"	2-1/2-SCH-40-TERMINAL-ADPT	20
300MA	5140110	E943L	TA45	30088700568649	3"	3-IN-SCH-40-TERMINAL-ADPT	40
350MA	5140111	E943M	TA50	30088700527790	3 1/2"	3-1/2-SCH-40-TERMINAL-ADPT	30
400MA	5140112	E943N	TA55	30088700527806	4"	4-IN-SCH-40-TERMINAL-ADPT	20
500MA	5140113	E943P	TA60	30088700527813	5"	5-IN-SCH-40-TERMINAL-ADPT	10
600MA	5140114	E943R	TA65	30088700527820	6"	6-IN-SCH-40-TERMINAL-ADPT	8
800MA	5140115D	N/A	N/A	30088700036230	8"	8-IN-SCH-40-TERMINAL-ADPT	2
SCHEDULE 40 STANDARD RADIUS ELBOWS							
90° ELBOWS PLAIN END							
05090ELB	5133823	UA9AD	N/A	30088700950003	X	1/2-90D-ELL	50
07590ELB	5133824	UA9AE	N/A	30088700958396	3/4"	3/4-90D-SCH-40-ELL	35
10090ELB	5133825	UA9AF	N/A	30088700958402	1"	1-IN-90D-SCH-40-ELL	20
12590ELB	5133826	UA9AG	N/A	30088700958419	1 1/4"	1-1/4-90D-SCH-40-ELL	30
15090ELB	5133827	UA9AH	N/A	30088700958426	1 1/2"	1-1/2-90D-SCH-40-ELL	30
20090ELB	5133828	UA9AJ	N/A	30088700958433	2"	2-IN-90D-SCH-40-ELL	15
25090ELB	5133829	UA9AK	N/A	30088700568199	2 1/2"	2-1/2-90D-SCH-40-ELL	18
30090ELB	5133830	UA9AL	N/A	30088700568526	3"	3-IN-90D-SCH-40-ELL	14
35090ELB	5133831	UA9AM	N/A	30088700518835	3 1/2"	3-1/2-90D-SCH-40-ELL	12
40090ELB	5133832	UA9AN	N/A	30088700518842	4"	4-IN-90D-SCH-40-ELL	10
50090ELB	5133835	UA9AP	N/A	30088700518866	5"	5-IN-90D-SCH-40-ELL	30
60090ELB	5133834	UA9AR	N/A	30088700518859	6"	6-IN-90D-SCH-40-ELL	25

Comparisons relate to function only. Items may not be identical. While information provided has been carefully prepared, we do not assume responsibility for errors.

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
45° ELBOWS PLAIN END							
05045ELB	5133763	UA7AD	N/A	30088700958518	3/4"	1/2-45D-SCH-40-ELL	50
07545ELB	5133764	UA7AE	N/A	30088700958525	3/4"	3/4-45D-SCH-40-ELL	25
10045ELB	5133765	UA7AF	N/A	30088700958532	1"	1-IN-45D-SCH-40-ELL	20
12545ELB	5133766	UA7AG	N/A	30088700958556	1 1/4"	1-1/4-45D-SCH-40-ELL	25
15045ELB	5133767	UA7AH	N/A	30088700958563	1 1/2"	1-1/2-45D-SCH-40-ELL	20
20045ELB	5133768	UA7AJ	N/A	30088700958570	2"	2-IN-45D-SCH-40-ELL	10
25045ELB	5133769	UA7AK	N/A	30088700569318	2 1/2"	2-1/2-45D-SCH-40-ELL	20
30045ELB	5133770	UA7AL	N/A	30088700568519	3"	3-IN-45D-SCH-40-ELL	8
35045ELB	5133771	UA7AM	N/A	30088700518309	3 1/2"	3-1/2-45D-SCH-40-ELL	5
40045ELB	5133772	UA7AN	N/A	30088700518316	4"	4-IN-45D-SCH-40-ELL	20
50045ELB	5133773	UA7AP	N/A	30088700518323	5"	5-IN-45D-SCH-40-ELL	60
60045ELB	5133774	UA7AR	N/A	30088700518330	6"	6-IN-45D-SCH-40-ELL	25
30° ELBOWS PLAIN END							
05030ELB	5133753	UA6AD	EE1030	30088700518240	3/4"	1/2-30D-SCH-40-ELL	50
07530ELB	5133744	UA6AE	EE1530	30088700518132	3/4"	3/4-30D-SCH-40-ELL	25
10030ELB	5133745	UA6AF	EE2030	30088700518149	1"	1-IN-30D-SCH-40-ELL	20
12530ELB	5133746	UA6AG	EE2530	30088700518156	1 1/4"	1-1/4-30D-SCH-40-ELL	25
15030ELB	5133747	UA6AH	EE3030	30088700518163	1 1/2"	1-1/2-30D-SCH-40-ELL	50
20030ELB	5133748	UA6AJ	EE3530	30088700518170	2"	2-IN-30D-SCH-40-ELL	10
25030ELB	5133749	UA6AK	EE4030	30088700518187	2 1/2"	2-1/2-30D-SCH-40-ELL	20
30030ELB	5133750	UA6AL	EE4530	30088700518194	3"	3-IN-30D-SCH-40-ELL	8
35030ELB	5133751	UA6AM	EE5030	30088700518200	3 1/2"	3-1/2-30D-SCH-40-ELL	5
40030ELB	5133775	UA6AN	EE5530	30088700518347	4"	4-IN-30D-SCH-40-ELL	20
50030ELB	5133753	UA6AP	EE6030	30088700518224	5"	5-IN-30D-SCH-40-ELL	30
60030ELB	5133754	UA6AR	EE6530	30088700518231	6"	6-IN-30D-SCH-40-ELL	25
22 1/2° ELBOWS PLAIN END							
1252212ELB	5136403	UA5AG	N/A	30088700031655	1 1/4"	1-1/4-22-1/2D-SCH-40-ELL	25
1502212ELB	5134094	UA5AH	N/A	30088700028433	1 1/2"	1-1/2-22-1/2D-SCH-40-ELL	20
2002212ELB	5134067	UA5AJ	N/A	30088700010612	2"	2-IN-22-1/2D-SCH-40-ELL	10
2502212ELB	5134096	UA5AK	N/A	30088700028457	2 1/2"	2-1/2-22-1/2D-SCH-40-ELL	20
3002212ELB	5134068	UA5AL	N/A	30088700010629	3"	3-IN-22-1/2D-SCH-40-ELL	8
3502212ELB	5134095	UA5AM	N/A	30088700028440	3 1/2"	3-1/2-22-1/2D-SCH-40-ELL	5
4002212ELB	5133757	UA5AN	N/A	30088700020468	4"	4-IN-22-1/2D-SCH-40-ELL	20
5002212ELB	5134037	UA5AP	N/A	30088700028303	5"	5-IN-22-1/2D-SCH-40-ELL	60
6002212ELB	5133901	UA5AR	N/A	30088700028082	6"	6-IN-22-1/2D-SCH-40-ELL	50
90° ELBOWS BELL END							
05090ELBBE	5233823	UA9ADB	N/A	30088700958440	1/2"	1/2-90D-SCH-40-BELL-END-ELL	50
07590ELBBE	5233824	UA9AEB	N/A	30088700958457	3/4"	3/4-90D-SCH-40-BELL-END-ELL	35
10090ELBBE	5233825	UA9AFB	N/A	30088700958464	1"	1-IN-90D-SCH-40-BELL-END-ELL	20
12590ELBBE	5233826	UA9AGB	N/A	30088700958471	1 1/4"	1-1/4-90D-SCH-40-BELL-END-ELL	30
15090ELBBE	5233827	UA9AHB	N/A	30088700958488	1 1/2"	1-1/2-90D-SCH-40-BELL-END-ELL	30
20090ELBBE	5233828	UA9AJB	N/A	30088700958501	2"	2-IN-90D-SCH-40-BELL-END-ELL	15
25090ELBBE	5233829	UA9AKB	N/A	30088700537690	2 1/2"	2-1/2-90D-SCH-40-BELL-END-ELL	18
30090ELBBE	5233830	UA9ALB	N/A	30088700537706	3"	3-IN-90D-SCH-40-BELL-END-ELL	14
35090ELBBE	5233831	UA9AMB	N/A	30088700537713	3 1/2"	3-1/2-90D-SCH-40-BELL-END-ELL	12
40090ELBBE	5233832	UA9ANB	N/A	30088700537720	4"	4-IN-90D-SCH-40-BELL-END-ELL	10
50090ELBBE	5233835	UA9APB	N/A	30088700537744	5"	5-IN-90D-SCH-40-BELL-END-ELL	30
60090ELBBE	5233834	UA9ARB	N/A	30088700537737	6"	6-IN-90D-SCH-40-BELL-END-ELL	25
45° ELBOWS BELL END							
05045ELBBE	5233763	UA7ADB	N/A	30088700958648	1/2"	1/2-45D-SCH-40-BELL-END-ELL	50
07545ELBBE	5233764	UA7AEB	N/A	30088700958624	3/4"	3/4-45D-SCH-40-BELL-END-ELL	25
10045ELB80	5233765	UA7AFB	N/A	30088700958587	1"	1-IN-45D-SCH-40-BELL-END-ELL	20
12545ELBBE	5233766	UA7AGB	N/A	30088700958594	1 1/4"	1-1/4-45D-SCH-40-BELL-END-ELL	25
15045ELBBE	5233767	UA7AHB	N/A	30088700958662	1 1/2"	1-1/2-45D-SCH-40-BELL-END-ELL	20
20045ELBBE	5233768	UA7AJB	N/A	30088700958600	2"	2-IN-45D-SCH-40-BELL-END-ELL	10
25045ELBBE	5233769	UA7AKB	N/A	30088700537423	2 1/2"	2-1/2-45D-SCH-40-BELL-END-ELL	20
30045ELBBE	5233770	UA7ALB	N/A	30088700537430	3"	3-IN-45D-SCH-40-BELL-END-ELL	8
35045ELBBE	5233771	UA7AMB	N/A	30088700537447	3 1/2"	3-1/2-45D-SCH-40-BELL-END-ELL	5
40045ELBBE	5233772	UA7ANB	N/A	30088700537454	4"	4-IN-45D-SCH-40-BELL-END-ELL	20
50045ELBBE	5233773	UA7APB	N/A	30088700537461	5"	5-IN-45D-SCH-40-BELL-END-ELL	30
60045ELBBE	5233774	UA7ARB	N/A	30088700537478	6"	6-IN-45D-SCH-40-BELL-END-ELL	25



45°



30°



22 1/2°



90°



45°

PVC Conduit & Adapters (RXP)



30°

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
30° ELBOWS BELL END							
20030ELBBE	5233748	UA6AJB	N/A	30088700029782	2"	2-IN-30D-SCH-40-BELL-END-ELL	10
30030ELBBE	5233750	UA6ALB	N/A	30088700029799	3"	3-IN-30D-SCH-40-BELL-END-ELL	8
35030ELBBE	5233751	UA6AMB	N/A	30088700023919	3½"	3-1/2-30D-SCH-40-BELL-END-ELL	5
40030ELBBE	5233776	UA6ANB	N/A	30088700023940	4"	4-IN-30D-SCH-40-BELL-END-ELL	20
50030ELBBE	5233753	UA6APB	N/A	30088700029805	5"	5-IN-30D-SCH-40-BELL-END-ELL	30
60030ELBBE	5233754	UA6ARB	N/A	30088700029812	6"	6-IN-30D-SCH-40-BELL-END-ELL	25



22 1/2°

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
22 1/2° ELBOWS BELL END							
0752212ELBBE	5234097	N/A	N/A	30088700040091	¾"	3/4-22-1/2D-SCH-40-BELL-END-ELL	25
1002212ELBBE	5236402	N/A	N/A	30088700031730	1"	1-IN-22-1/2D-SCH-40-BELL-END-ELL	20
1252212ELBBE	5236403	N/A	N/A	30088700031747	1¼"	1-1/4-22-1/2D-SCH-40-BELL-END-ELL	25
1502212ELBBE	5234094	N/A	N/A	30088700031662	1½"	1-1/2-22-1/2D-SCH-40-BELL-END-ELL	20
2002212ELBBE	5234067	UA5AJB	N/A	30088700022097	2"	2-IN-22-1/2D-SCH-40-BELL-END-ELL	10
2502212ELBBE	5234096	N/A	N/A	30088700030320	2½"	2-1/2-22-1/2D-SCH-40-BELL-END-ELL	10
3002212ELBBE	5234068	UA5ALB	N/A	30088700022103	3"	3-IN-22-1/2D-SCH-40-BELL-END-ELL	8
3502212ELBBE	5234095	N/A	N/A	30088700031617	3½"	3-1/2-22-1/2D-SCH-40-BELL-END-ELL	5
4002212ELBBE	5233867	UA5ANB	N/A	30088700010643	4"	4-IN-22-1/2D-SCH-40-BELL-END-ELL	20
5002212ELBBE	5234037	UA5APB	N/A	30088700030276	5"	5-IN-22-1/2D-SCH-40-BELL-END-ELL	60
600221236ELBBE	5233901	UA5ARB	N/A	30088700018946	6"	6-IN-22-1/2D-SCH-40-BELL-END-ELL	25

SCHEDULE 40 & 80 SPECIAL FITTINGS



BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
TWO-HOLE PIPE STRAPS							
050CONDCLMP2HOLE	5133736	E977DC	PC10	30088700567040	¾"	1/2-2-HOLE-PVC-CONDUIT-CLAMP	300
075CONDCLMP2HOLE	5133737	E977EC	PS15	30088700567956	¾"	3/4-2-HOLE-PVC-CONDUIT-CLAMP	200
100CONDCLMP2HOLE	5133738	E977FC	PS20	30088700567963	1"	1-IN-2-HOLE-PVC-CONDUIT-CLAMP	200
125CONDCLMP2HOLE	5133733	E977GC	PS25	30088700567970	1¼"	1-1/4-2-HOLE-PVC-CONDUIT-CLAMP	200
150CONDCLMP2HOLE	5133734	E977HC	PS30	30088700567987	1½"	1-1/2-2-HOLE-PVC-CONDUIT-CLAMP	200
200CONDCLMP2HOLE	5133735	E977JC	PS35	30088700567994	2"	2-IN-2-HOLE-PVC-CONDUIT-CLAMP	200
250CONDCLMP2HOLE	5133739	N/A	N/A	30088700567000	2½"	2-1/2-2-HOLE-PVC-CONDUIT-CLAMP	100
300CONDCLMP2HOLE	5133740	N/A	N/A	30088700518125	3"	3-IN-2-HOLE-PVC-CONDUIT-CLAMP	100
400CONDCLMP2HOLE	5133353	N/A	N/A	30088700517265	4"	4-IN-2-HOLE-PVC-CONDUIT-CLAMP	100



BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
EXPANSION COUPLINGS ONE PIECE							
050X400EXPCPL	5144026	N/A	OPEJ10	30088700528476	½"	1/2-EXPANSION-CPLG-4-IN-MAX	50
075X400EXPCPL	5144015	N/A	OPEJ15	30088700528360	¾"	3/4-EXPANSION-CPLG-4-IN-MAX	50
100X500EXPCPL	5144016	N/A	OPEJ20	30088700528377	1"	1-IN-EXPANSION-CPLG-5-IN-MAX	50
125X500EXPCPL	5144017	N/A	OPEJ25	30088700528384	1¼"	1-1/4-EXPANSION-CPLG-5-IN-MAX	25
150X500EXPCPL	5144018	N/A	OPEJ30	30088700528391	1½"	1-1/2-EXPANSION-CPLG-5-IN-MAX	25
200X600EXPCPL	5144019	N/A	OPEJ35	30088700528407	2"	2-IN-EXPANSION-CPLG-6-IN-MAX	25
250X600EXPCPL	5144020	N/A	N/A	30088700528414	2½"	2-1/2-EXPANSION-CPLG-6-IN-MAX	5
300X600EXPCPL	5144021	N/A	N/A	30088700528421	3"	3-IN-EXPANSION-CPLG-6-IN-MAX	10
400X700EXPCPL	5144023	N/A	N/A	30088700528445	4"	4-IN-EXPANSION-CPLG-7-IN-MAX	5



BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
EXPANSION COUPLINGS TWO PIECE							
050X400EXPCPL	5144031	E945D	EJ10	30088700547729	¾"	1/2-EXP-CPLG-2PC-4-IN-MAX	25
075X400EXPCPL	5144032	E945E	EJ15	30088700547736	¾"	3/4-EXP-CPLG-2PC-4-IN-MAX	10
100X400EXPCPL	5144033	E945F	EJ20	30088700547743	1"	1-IN-EXP-CPLG-2PC-4-IN-MAX	10
125X400EXPCPL	5144034	E945G	EJ25	30088700547750	1¼"	1-1/4-EXP-CPLG-2PC-4-IN-MAX	5
150X400EXPCPL	5144035	E945H	EJ30	30088700547767	1½"	1-1/2-EXP-CPLG-2PC-4-IN-MAX	5
200X400EXPCPL	5144036	E945J	EJ35	30088700547774	2"	2-IN-EXP-CPLG-2PC-4-IN-MAX	25
250X800EXPCPL	5144037	E945K	N/A	30088700547781	2½"	2-1/2-EXP-CPLG-2PC-8-IN-MAX	12
300X800EXPCPL	5144038	E945L	EJ45	30088700547798	3"	3-IN-EXP-CPLG-2PC-8-IN-MAX	12
350X800EXPCPL	5144039	E945M	N/A	30088700016263	3½"	3-1/2-IN-EXP-CPLG-2PC-8-IN-MAX	6
400X800EXPCPL	5144040	E945N	EJ55	30088700547811	4"	4-IN-EXP-CPLG-2PC-8-IN-MAX	6
500X800EXPCPL	5144041	E945P	EJ60	30088700547828	5"	5-IN-EXP-CPLG-2PC-8-IN-MAX	1
600X800EXPCPL	5144042	E945R	EJ65	30088700547835	6"	6-IN-EXP-CPLG-2PC-8-IN-MAX	1



BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
EXPANSION COUPLINGS TWO PIECE W/MOLDED MALE ADAPTER							
250X800EXPCPLWTA	5144029	N/A	EJ40TA	30088700042019	2½"	2-1/2-EXP-CPLG-2PC-8-IN-MAX-WTA	135

Comparisons relate to function only. Items may not be identical. While information provided has been carefully prepared, we do not assume responsibility for errors.

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
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SCHEDULE 40 & 80 SPECIAL RADIUS ELBOWS

SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 1"

1009018ELB	5133846	UA9CF	N/A	30088700014634	1"	1-IN-90DEG-18RAD-ELL	EA
1009024ELB	5133859	UA9DF	N/A	30088700014740	1"	1-IN-90DEG-24RAD-ELL	EA
1009030ELB	5136340	UA9EF	N/A	30088700028785	1"	1-IN-90DEG-30RAD-ELL	EA
1009036ELB	5133852	UA9FF	N/A	30088700014696	1"	1-IN-90DEG-36RAD-ELL	EA
1009048ELB	5133864	UA9HF	N/A	30088700014771	1"	1-IN-90DEG-48RAD-ELL	EA
1004512ELB	5134008	UA7CF	N/A	30088700018120	1"	1-IN-45DEG-18RAD-ELL	EA
1004524ELB	5133875	UA7DF	N/A	30088700014863	1"	1-IN-45DEG-24RAD-ELL	EA
1004536ELB	5133919	UA7FF	N/A	30088700015136	1"	1-IN-45DEG-36RAD-ELL	EA
1004548ELB	5133940	UA7HF	N/A	30088700023223	1"	1-IN-45DEG-48RAD-ELL	EA
1003018ELB	5133916	UA6CF	N/A	30088700015105	1"	1-IN-30DEG-18RAD-ELL	EA
1003024ELB	5136435	N/A	N/A	30088700944511	1"	1-IN-30DEG-24RAD-ELL	EA
1003048ELB	5136343	N/A	N/A	30088700028792	1"	1-IN-30DEG-48RAD-ELL	EA
100221218ELB	5133944	N/A	N/A	30088700017956	1"	1-IN-22-1/2DEG-18RAD-ELL	EA
100221224ELB	5136420	N/A	N/A	30088700018250	1"	1-IN-22-1/2DEG-24RAD-ELL	EA
100221230ELB	5136421	N/A	N/A	30088700033710	1"	1-IN-22-1/2DEG-30RAD-ELL	EA
100221236ELB	5133975	UA5FF	N/A	30088700015327	1"	1-IN-22-1/2DEG-36RAD-ELL	EA

SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 1 1/4"

1259018ELB	5133923	UA9CG	N/A	30088700015167	1 1/4"	1-1/4IN-90DEG-18RAD-ELL	EA
1259024ELB	5133883	UA9DG	N/A	30088700014948	1 1/4"	1-1/4IN-90DEG-24RAD-ELL	EA
1259030ELB	5133878	UA9EG	N/A	30088700014894	1 1/4"	1-1/4IN-90DEG-30RAD-ELL	EA
1259036ELB	5133884	UA9FG	N/A	30088700014955	1 1/4"	1-1/4IN-90DEG-36RAD-ELL	EA
1259048ELB	5133871	UA9HG	N/A	30088700014825	1 1/4"	1-1/4IN-90DEG-48RAD-ELL	EA
1254512ELB	5136344	UA7CG	N/A	30088700018243	1 1/4"	1-1/4IN-45DEG-18RAD-ELL	EA
1254524ELB	5133941	UA7DG	N/A	30088700015242	1 1/4"	1-1/4IN-45DEG-24RAD-ELL	EA
1254536ELB	5133956	UA7FG	N/A	30088700018007	1 1/4"	1-1/4IN-45DEG-36RAD-ELL	EA
1254548ELB	5133942	UA7HG	N/A	30088700015259	1 1/4"	1-1/4IN-45DEG-48RAD-ELL	EA
1253018ELB	5133794	UA6CG	N/A	30088700014283	1 1/4"	1-1/4IN-30DEG-18RAD-ELL	EA
1253024ELB	5133913	UA6DG	N/A	30088700015075	1 1/4"	1-1/4IN-30DEG-24RAD-ELL	EA
1253036ELB	5136347	N/A	N/A	30088700953896	1 1/4"	1-1/4IN-30DEG-36RAD-ELL	EA
1253048ELB	5133943	N/A	N/A	30088700023230	1 1/4"	1-1/4IN-30DEG-48RAD-ELL	EA
125221218ELB	5136424	N/A	N/A	30088700018267	1 1/4"	1-1/4IN-22-1/2DEG-18RAD-ELL	EA
125221224ELB	5136425	N/A	N/A	30088700018274	1 1/4"	1-1/4IN-22-1/2DEG-24RAD-ELL	EA
125221236ELB	5133997	UA5FG	N/A	30088700015358	1 1/4"	1-1/4IN-22-1/2DEG-36RAD-ELL	EA

SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 1 1/2"

1509018ELB	5133839	UA9CH	N/A	30088700014566	1 1/2"	1-1/2IN-90DEG-18RAD-ELL	EA
1509024ELB	5133873	UA9DH	N/A	30088700014849	1 1/2"	1-1/2IN-90DEG-24RAD-ELL	EA
1509030ELB	5133921	UA9EH	N/A	30088700015150	1 1/2"	1-1/2IN-90DEG-30RAD-ELL	EA
1509036ELB	5133866	UA9FH	N/A	30088700014795	1 1/2"	1-1/2IN-90DEG-36RAD-ELL	EA
1509048ELB	5133865	UA9HH	N/A	30088700014788	1 1/2"	1-1/2IN-90DEG-48RAD-ELL	EA
1504512ELB	5133840	UA7CH	N/A	30088700014573	1 1/2"	1-1/2IN-45DEG-18RAD-ELL	EA
1504524ELB	5133874	UA7DH	N/A	30088700014856	1 1/2"	1-1/2IN-45DEG-24RAD-ELL	EA
1504530ELB	5136348	UA7EH	N/A	30088700035585	1 1/2"	1-1/2IN-45DEG-30RAD-ELL	EA
1504536ELB	5133810	UA7FH	N/A	30088700014412	1 1/2"	1-1/2IN-45DEG-36RAD-ELL	EA
1504548ELB	5133811	UA7HH	N/A	30088700014429	1 1/2"	1-1/2IN-45DEG-48RAD-ELL	EA
1503018ELB	5133917	UA6CH	N/A	30088700015112	1 1/2"	1-1/2IN-30DEG-18RAD-ELL	EA
1503024ELB	5133803	UA6DH	N/A	30088700014368	1 1/2"	1-1/2IN-30DEG-24RAD-ELL	EA
1503036ELB	5133974	UA6FH	N/A	30088700015310	1 1/2"	1-1/2IN-30DEG-36RAD-ELL	EA
1503048ELB	5133982	UA6HH	N/A	30088700015334	1 1/2"	1-1/2IN-30DEG-48RAD-ELL	EA
150221218ELB	5133908	UA5CH	N/A	30088700015068	1 1/2"	1-1/2IN-22-1/2-DEG-18RAD-ELL	EA
150221224ELB	5136428	N/A	N/A	30088700018281	1 1/2"	1-1/2IN-22-1/2-DEG-24RAD-ELL	EA
150221236ELB	5134103	UA5FH	N/A	30088700028464	1 1/2"	1-1/2IN-22-1/2-DEG-36RAD-ELL	EA



90°



45°



30°



22 1/2°

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 2"							
2009018ELB	5133844	UA9CJ	N/A	30088700014610	2"	2-IN--90DEG-18RAD-ELL	EA
2009024ELB	5133836	UA9DJ	N/A	30088700014535	2"	2-IN--90DEG-24RAD-ELL	EA
2009030ELB	5133920	UA9EJ	N/A	30088700015143	2"	2-IN-90DEG-30RAD-ELL	EA
2009036ELB	5133848	UA9FJ	N/A	30088700014658	2"	2-IN-90DEG-36RAD-ELL	EA
2009048ELB	5133876	UA9HJ	N/A	30088700014870	2"	2-IN-90DEG-48RAD-ELL	EA
2009060ELB	5133786	N/A	N/A	30088700017819	2"	2-IN-90DEG-60RAD-ELL	EA
2004524ELB	5133797	UA7CJ	N/A	30088700014313	2"	2-IN-45DEG-18RAD-ELL	EA
2004524ELB	5133815	UA7DJ	N/A	30088700014467	2"	2-IN-45DEG-24RAD-ELL	EA
2004530ELB	5133918	UA7EJ	N/A	30088700015129	2"	2-IN-45DEG-30RAD-ELL	EA
2004536ELB	5133778	UA7FJ	N/A	30088700014184	2"	2-IN-45DEG-36RAD-ELL	EA
2004548ELB	5133798	UA7HJ	N/A	30088700014320	2"	2-IN-45DEG-48RAD-ELL	EA
2003018ELB	5133789	UA6CJ	N/A	30088700014238	2"	2-IN-30DEG-18RAD-ELL	EA
2003024ELB	5133796	UA6DJ	N/A	30088700014306	2"	2-IN-30DEG-24RAD-ELL	EA
2003036ELB	5133792	UA6FJ	N/A	30088700014269	2"	2-IN-30DEG-36RAD-ELL	EA
2003048ELB	5133805	UA6HJ	N/A	30088700014375	2"	2-IN-30DEG-48RAD-ELL	EA
200221218ELB	5133879	UA5CJ	N/A	30088700014900	2"	2-IN 22-1/2 DEG 18RAD ELL	EA
200221224ELB	5133915	UA5DJ	N/A	30088700015099	2"	2-IN 22-1/2 DEG 24RAD-ELL	EA
200221236ELB	5133851	UA5FJ	N/A	30088700014689	2"	2-IN-22-1/2DEG-36RAD-ELL	EA
200221248ELB	5133984	UA5HJ	N/A	30088700015341	2"	2-IN-22-1/2DEG-48RAD-ELL	EA
200221260ELB	5134013	N/A	N/A	30088700040909	2"	2-IN-22-1/2DEG-60RAD-ELL	EA
SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 2½"							
2509018ELB	5133856	UA9CK	N/A	30088700014719	2½"	2-1/2-90DEG-18RAD-ELL	EA
2509024ELB	5133847	UA9DK	N/A	30088700014641	2½"	2-1/2-90DEG-24RAD-ELL	EA
2509030ELB	5133981	UA9FK-UPC	N/A	30088700018076	2½"	2-1/2-90DEG-30RAD-ELL	EA
2509036ELB	5133857	UA9FK	N/A	30088700014726	2½"	2-1/2-90DEG-36RAD-ELL	EA
2509048ELB	5133849	UA9HK	N/A	30088700014665	2½"	2-1/2-90DEG-48RAD-ELL	EA
2509060ELB	5134046	N/A	N/A	30088700028334	2½"	2-1/2-90DEG-60RAD-ELL	EA
2504524ELB	5133973	UA7CK	N/A	30088700018052	2½"	2-1/2-45DEG-18RAD-ELL	EA
2504524ELB	5133935	UA7DK	N/A	30088700015211	2½"	2-1/2-45DEG-24RAD-ELL	EA
2504536ELB	5133801	UA7FK	N/A	30088700014344	2½"	2-1/2-45DEG-36RAD-ELL	EA
2504548ELB	5134010	UA7HK	N/A	30088700018137	2½"	2-1/2-45DEG-48RAD-ELL	EA
2504560ELB	5134111	N/A	N/A	30088700028471	2½"	2-1/2-45DEG-60RAD-ELL	EA
2503018ELB	5133752	UA6CK	N/A	30088700014153	2½"	2-1/2-30DEG-18RAD-ELL	EA
2503024ELB	5133957	UA6DK	N/A	30088700015280	2½"	2-1/2-30DEG-24RAD-ELL	EA
2503036ELB	5133807	N/A	N/A	30088700023186	2½"	2-1/2-30DEG-36RAD-ELL	EA
2503048ELB	5136435	N/A	N/A	30088700944511	2½"	2-1/2-30DEG-48RAD-ELL	EA
250221218ELB	5133936	UA5CK	N/A	30088700015228	2½"	2-1/2-22-1/2-DEG-18RAD-ELL	EA
250221224ELB	5134019	UA5DK	N/A	30088700018151	2½"	2-1/2-22-1/2-DEG-24RAD-ELL	EA
250221230ELB	5136433	UA5EK	N/A	30088700034656	2½"	2-1/2-22-1/2-DEG-30RAD-ELL	EA
20221236ELB	5133937	UA5FK	N/A	30088700023209	2½"	2-1/2-22-1/2-DEG-36RAD-ELL	EA
250221248ELB	5136434	UA5FK	N/A	30088700018298	2½"	2-1/2-22-1/2-DEG-48RAD-ELL	EA
SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 3"							
3009018ELB	5133858	UA9CL	N/A	30088700014733	3"	3-IN-90DEG-18RAD-ELL	EA
3009024ELB	5133837	UA9DL	N/A	30088700014542	3"	3-IN-90DEG-24RAD-ELL	EA
3009030ELB	5133867	UA9EL	N/A	30088700014801	3"	3-IN-90DEG-30RAD-ELL	EA
3009036ELB	5133820	UA9FL	N/A	30088700014504	3"	3-IN-90DEG-36RAD-ELL	EA
3009048ELB	5133817	UA9HL	N/A	30088700014481	3"	3-IN-90DEG-48RAD-ELL	EA
3009060ELB	5133819	N/A	N/A	30088700017857	3"	3-IN-90DEG-60RAD-ELL	EA
3004518ELB	5133799	UA7CL	N/A	30088700017833	3"	3-IN-45DEG-18RAD-ELL	EA
3004524ELB	5133800	UA7DL	N/A	30088700014337	3"	3-IN-45DEG-24RAD-ELL	EA
3004530ELB	5133897	UA7EL	N/A	30088700017918	3"	3-IN-45DEG-30RAD-ELL	EA
3004536ELB	5133779	UA7FL	N/A	30088700014191	3"	3-IN-45DEG-36RAD-ELL	EA
3004548ELB	5133781	UA7HL	N/A	30088700014214	3"	3-IN-45DEG-48RAD-ELL	EA
3004560ELB	5134006	N/A	N/A	30088700040893	3"	3-IN-45DEG-60RAD-ELL	EA
3003018ELB	5133969	UA6CL	N/A	30088700018038	3"	3-IN-30DEG-18RAD-ELL	EA
3003024ELB	5133958	UA6DL	N/A	30088700015297	3"	3-IN-30DEG-24RAD-ELL	EA
3003030ELB	5136495	UA6EL	N/A	30088700018304	3"	3-IN-30DEG-30RAD-ELL	EA
3003036ELB	5133793	UA6FL	N/A	30088700014276	3"	3-IN-30DEG-36RAD-ELL	EA
3003048ELB	5133809	UA6HL	N/A	30088700014405	3"	3-IN-30DEG-48RAD-ELL	EA

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BIZLINE RX# PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
30021218ELB	5133845	UA5CL	N/A	30088700014627	3"	3-IN-22-1/2DEG-18RAD-ELL	EA
30021224ELB	5133903	UA5DL	N/A	30088700015037	3"	3-IN-22-1/2DEG-24RAD-ELL	EA
300221230ELB	5133929	UA5EL	N/A	30088700015174	3"	3-IN-22-1/2DEG-30RAD-ELL	EA
300221236ELB	5133904	UA5FL	N/A	30088700015044	3"	3-IN-22-1/2DEG-36RAD-ELL	EA
300221248ELB	5133971	UA5HL	N/A	30088700023247	3"	3-IN-22-1/2DEG-48RAD-ELL	EA

90°



SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 3 1/2"

3509024ELB	5133893	UA9DM	N/A	30088700014979	3 1/2"	3-1/2-90DEG-24RAD-ELL	EA
3509030ELB	5133948	UA9EM	N/A	30088700017987	3 1/2"	3-1/2-90DEG-30RAD-ELL	EA
3509036ELB	5133818	UA9FM	N/A	30088700014498	3 1/2"	3-1/2-90DEG-36RAD-ELL	EA
3509042ELB	5133892	UA9HM	N/A	30088700014962	3 1/2"	3-1/2-90DEG-48RAD-ELL	EA
3509048ELB	5133925	N/A	N/A	30088700028112	3 1/2"	3-1/2-90DEG-60RAD-ELL	EA
3504524ELB	5133802	UA7DM	N/A	30088700014351	3 1/2"	3-1/2-45DEG-24RAD-ELL	EA
3504530ELB	5134002	UA7EM	N/A	30088700031365	3 1/2"	3-1/2-45DEG-30RAD-ELL	N/A
3504536ELB	5133939	UA7FM	N/A	30088700015235	3 1/2"	3-1/2-45DEG-36RAD-ELL	EA
3504548ELB	5133979	N/A	N/A	30088700023254	3 1/2"	3-1/2-45DEG-48RAD-ELL	EA
3503024ELB	5136439	UA6DM	N/A	30088700033727	3 1/2"	3-1/2-30DEG-24RAD-ELL	EA
3503036ELB	5133938	UA6FM	N/A	30088700023216	3 1/2"	3-1/2-30DEG-36RAD-ELL	EA
3503048ELB	5134026	UA6HM	N/A	30088700028273	3 1/2"	3-1/2-30DEG-48RAD-ELL	EA
350221224ELB	5133902	UA5DM	N/A	30088700015020	3 1/2"	3-1/2-22-1/2-DEG-24RAD-ELL	EA
350221236ELB	5136437	UA5FM	N/A	30088700028808	3 1/2"	3-1/2-22-1/2-DEG-36RAD-ELL	EA
350221248ELB	5136438	UA5HM	N/A	30088700028815	3 1/2"	3-1/2-22-1/2-DEG-48RAD-ELL	EA

45°



SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 4"

4009024ELB	5133822	UA9DN	N/A	30088700014528	4"	4-IN-90DEG-24RAD-ELL	EA
4009030ELB	5133850	UA9EN	N/A	30088700014672	4"	4-IN-90DEG-30RAD-ELL	EA
4009036ELB	5133821	UA9FN	N/A	30088700014511	4"	4-IN-90DEG-36RAD-ELL	EA
4009048ELB	5133843	UA9HN	N/A	30088700014603	4"	4-IN-90DEG-48RAD-ELL	EA
4009060ELB	5133854	UA9IN	N/A	30088700017864	4"	4-IN-90DEG-60RAD-ELL	EA
4004524ELB	5133812	UA7DN	N/A	30088700014436	4"	4-IN-45DEG-24RAD-ELL	EA
4004530ELB	5133953	UA7EN	N/A	30088700015266	4"	4-IN-45DEG-30RAD-ELL	EA
4004536ELB	5133777	UA7FN	N/A	30088700014177	4"	4-IN-45DEG-36RAD-ELL	EA
4004548ELB	5133776	UA7HN	N/A	30088700014160	4"	4-IN-45DEG-48RAD-ELL	EA
4004560ELB	5133946	N/A	N/A	30088700028143	4"	4-IN-45DEG-60RAD-ELL	EA
4003024ELB	5133788	UA6DN	N/A	30088700014221	4"	4-IN-30DEG-24RAD-ELL	EA
4003030ELB	5133898	UA6EN	N/A	30088700014993	4"	4-IN-30DEG-30RAD-ELL	EA
4003036ELB	5133790	UA6FN	N/A	30088700014245	4"	4-IN-30DEG-36RAD-ELL	EA
4003048ELB	5133838	UA6HN	N/A	30088700014559	4"	4-IN-30DEG-48RAD-ELL	EA
4003060ELB	5133999	N/A	N/A	30088700018106	4"	4-IN-30DEG-60RAD-ELL	EA
400221224ELB	5133869	UA5DN	N/A	30088700014818	4"	4-IN-22-1/2DEG-24RAD-ELL	EA
400221230ELB	5133882	UA5EN	N/A	30088700014931	4"	4-IN-22-1/2DEG-30RAD-ELL	EA
400221236ELB	5133853	UA5FN	N/A	30088700014702	4"	4-IN-22-1/2DEG-36RAD-ELL	EA
400221248ELB	5133932	UA5HN	N/A	30088700015204	4"	4-IN-22-1/2DEG-48RAD-ELL	EA
400221260ELB	5134012	UA5IN	N/A	30088700028266	4"	4-IN-22-1/2DEG-60RAD-ELL	EA

30°

22 1/2°



SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 5"

5009030ELB	5133872	UA9EP	N/A	30088700014832	5"	5-IN-90DEG-30RAD-ELL	EA
5009036ELB	5133841	UA9FP	N/A	30088700014580	5"	5-IN-90DEG-36RAD-ELL	EA
5009048ELB	5133842	UA9HP	N/A	30088700014597	5"	5-IN-90DEG-48RAD-ELL	EA
5009060ELB	5133885	UA9IP	N/A	30088700017888	5"	5-IN-90DEG-60RAD-ELL	EA
5004530ELB	5133954	UA7EP	N/A	30088700015273	5"	5-IN-45DEG-30RAD-ELL	EA
5004536ELB	5133780	UA7FP	N/A	30088700014207	5"	5-IN-45DEG-36RAD-ELL	EA
5004548ELB	5133814	UA7HP	N/A	30088700014450	5"	5-IN-45DEG-48RAD-ELL	EA
5004560ELB	5133947	N/A	N/A	30088700017970	5"	5-IN-45DEG-60RAD-ELL	EA
5003030ELB	5133899	UA6EP	N/A	30088700015006	5"	5-IN-30DEG-30RAD-ELL	EA
5003036ELB	5133931	UA6FP	N/A	30088700015198	5"	5-IN-30DEG-36RAD-ELL	EA
5003048ELB	5133959	UA6HP	N/A	30088700015303	5"	5-IN-30DEG-48RAD-ELL	EA
5003060ELB	5133962	N/A	N/A	30088700028167	5"	5-IN-30DEG-60RAD-ELL	EA
500221230ELB	5133900	UA6EP	N/A	30088700015013	5"	5-IN-22-1/2DEG-30-RAD-ELL	EA
500221236ELB	5133881	UA6FP	N/A	30088700014924	5"	5-IN-22-1/2DEG-36-RAD-ELL	EA
500221248ELB	5133930	UA6HP	N/A	30088700015181	5"	5-IN-22-1/2DEG-48-RAD-ELL	EA
500221260ELB	5134020	N/A	N/A	30088700018168	5"	5-IN-22-1/2DEG-60-RAD-ELL	EA



BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 6"							
6009036ELB	5133877	UA9FR	N/A	30088700014887	6"	6-IN-90DEG-36RAD-ELL	EA
6009048ELB	5133816	UA9HR	N/A	30088700014474	6"	6-IN-90DEG-48RAD-ELL	EA
6009060ELB	5133886	UA9IR	N/A	30088700017895	6"	6-IN-90DEG-60RAD-ELL	EA
6004536ELB	5133880	UA7FR	N/A	30088700014917	6"	6-IN-45DEG-36RAD-ELL	EA
6004548ELB	5133813	UA7HR	N/A	30088700014443	6"	6-IN-45DEG-48RAD-ELL	EA
6004560ELB	5133806	UA5CF	N/A	30088700014382	6"	6-IN-45DEG-60RAD-ELL	EA
6003036ELB	5133791	UA6FR	N/A	30088700014252	6"	6-IN-30DEG-36RAD-ELL	EA
6003048ELB	5133861	UA6HR	N/A	30088700014757	6"	6-IN-30DEG-48RAD-ELL	EA
6003060ELB	5133782	N/A	N/A	30088700017802	6"	6-IN-30DEG-60RAD-ELL	EA
600221236ELB	5133905	UA5FR	N/A	30088700015051	6"	6-IN-22-1/2D-36RAD-ELL	EA
600221248ELB	5133862	UA5HR	N/A	30088700014764	6"	6-IN-22-1/2D-48RAD-ELL	EA
600221260ELB	5134065	UZ5IR	N/A	30088700028402	6"	6-IN-22-1/2D-60RAD-ELL	EA
SCHEDULE 40 SPECIAL RADIUS ELBOWS — PLAIN END 8"							
8009048ELB	5133993D	UA9HT	N/A	30088700036186	8"	8-IN-90DEG-48RAD-ELL	EA
8004536ELB	5133988D	N/A	N/A	30088700036162	8"	8-IN-45DEG-36RAD-ELL	EA
8004548ELB	5133989D	N/A	N/A	30088700036179	8"	8-IN-45DEG-48RAD-ELL	EA
8003048ELB	5133870D	N/A	N/A	30088700036254	8"	8-IN-30DEG-48RAD-ELL	EA
SCHEDULE 40 SPECIAL RADIUS ELBOWS — BELLED END — SIZE 2"							
2009018ELBBE	5233846	UA9CJB	N/A	30088700015372	2"	2-IN-90DEG-18RAD-ELL-BE	EA
2009024ELBBE	5133924	UA9DJB	NSL 2-24	30088700015426	2"	2-IN-90DEG-24RAD-ELL-BE	EA
2009036ELBBE	5233848	UA9FJB	NSL 2-36	30088700015525	2"	2-IN-90DEG-36RAD-ELL-BE	EA
2009048ELBBE	5233876	UA9HJB	N/A	30088700015662	2"	2-IN-90DEG-48RAD-ELL-BE	EA
2004518ELBBE	5233797	UA7CJB	N/A	30088700015389	2"	2-IN-45DEG-18RAD-ELL-BE	EA
2004524ELBBE	5233815	UA7DJB	N/A	30088700015433	2"	2-IN-45DEG-24RAD-ELL-BE	EA
2004536ELBBE	5233778	UA7FJB	N/A	30088700015532	2"	2-IN-45DEG-36RAD-ELL-BE	EA
2004548ELBBE	5133759	UA7HJB	N/A	30088700015679	2"	2-IN-45DEG-48RAD-ELL-BE	EA
SCHEDULE 40 SPECIAL RADIUS ELBOWS — BELLED END — SIZE 2½"							
2509018ELBBE	5233856	UA9CKB	N/A	30088700015396	2½"	2-1/2-IN-90DEG-18RAD-ELL-BE	EA
2509024ELBBE	5233847	UA9DKB	N/A	30088700015440	2½"	2-1/2-IN-90DEG-24RAD-ELL-BE	EA
2509036ELBBE	5233857	UA9FKB	N/A	30088700015549	2½"	2-1/2-IN-90DEG-36RAD-ELL-BE	EA
2509048ELBBE	5233849	UA9HKB	N/A	30088700015686	2½"	2-1/2-IN-90DEG-48RAD-ELL-BE	EA
2504518ELBBE	5233973	N/A	N/A	30088700019189	2½"	2-1/2-IN-45DEG-18RAD-ELL-BE	EA
2504524ELBBE	5233935	UA7DKB	N/A	30088700015457	2½"	2-1/2-IN-45DEG-24RAD-ELL-BE	EA
2504536ELBBE	5233801	UA7FKB	N/A	30088700015556	2½"	2-1/2-IN-45DEG-36RAD-ELL-BE	EA
2504548ELBBE	5233785	N/A	N/A	30088700018687	2½"	2-1/2-IN-45DEG-48RAD-ELL-BE	EA
SCHEDULE 40 SPECIAL RADIUS ELBOWS — BELLED END — SIZE 3"							
3009018ELBBE	5233850	UA9CLB	N/A	30088700015402	3"	3-IN-90DEG-18RAD-ELL-BE	EA
3009024ELBBE	5233837	UA9DLB	NSL 3-24	30088700015464	3"	3-IN-90DEG-24RAD-ELL-BE	EA
3009036ELBBE	5233930	UA9FLB	NSL 3-36	30088700015563	3"	3-IN-90DEG-36RAD-ELL-BE	EA
3009048ELBBE	5233817	UA9HLB	N/A	30088700015693	3"	3-IN-90DEG-48RAD-ELL-BE	EA
3004518ELBBE	5233799	UA7CLB	N/A	30088700015419	3"	3-IN-45DEG-18RAD-ELL-BE	EA
3004524ELBBE	5233800	UA7DLB	N/A	30088700015471	3"	3-IN-45DEG-24RAD-ELL-BE	EA
3004536ELBBE	5233779	UA7FLB	N/A	30088700015570	3"	3-IN-45DEG-36RAD-ELL-BE	EA
3004548ELBBE	5233782	UA7HLB	N/A	30088700015709	3"	3-IN-45DEG-48RAD-ELL-BE	EA
SCHEDULE 40 SPECIAL RADIUS ELBOWS — BELLED END — SIZE 3½"							
3509024ELBBE	5233893	UA9DMB	N/A	30088700015488	3½"	3-1/2-IN-90DEG-24RAD-ELL-BE	EA
3509036ELBBE	5233818	UA9FMB	N/A	30088700015587	3½"	3-1/2-IN-90DEG-36RAD-ELL-BE	EA
3509048ELBBE	5233892	N/A	N/A	30088700015716	3½"	3-1/2-IN-90DEG-48RAD-ELL-BE	EA
3504518ELBBE	5233802	N/A	N/A	30088700015495	3½"	3-1/2-IN-45DEG-24RAD-ELL-BE	EA
3504536ELBBE	5233939	N/A	N/A	30088700015594	3½"	3-1/2-IN-45DEG-36RAD-ELL-BE	EA
3504548ELBBE	5233943	N/A	N/A	30088700015723	3½"	3-1/2-IN-45DEG-48RAD-ELL-BE	EA
SCHEDULE 40 SPECIAL RADIUS ELBOWS — BELLED END — SIZE 4"							
4009024ELBBE	5233822	UA9DNB	N/A	30088700015501	4"	4-IN-90DEG-24RAD-ELL-BE	EA
4009036ELBBE	5233842	UA9FNB	NSL 4-36	30088700015600	4"	4-IN-90DEG-36RAD-ELL-BE	EA
4009048ELBBE	5233843	UA9HNB	NSL 4-48	30088700015730	4"	4-IN-90DEG-48RAD-ELL-BE	EA
4004518ELBBE	5233812	UA7DNB	N/A	30088700015518	4"	4-IN-45DEG-24RAD-ELL-BE	EA
4004536ELBBE	5233777	UA7FNB	N/A	30088700015617	4"	4-IN-45DEG-36RAD-ELL-BE	EA
4004548ELBBE	5133761	UA7HNB	N/A	30088700015747	4"	4-IN-45DEG-48RAD-ELL-BE	EA

Comparisons relate to function only. Items may not be identical. While information provided has been carefully prepared, we do not assume responsibility for errors.

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
SCHEDULE 40 SPECIAL RADIUS ELBOWS — BELLED END — SIZE 5							
5009036ELBBE	5233841	UA9FPB	NSL 5-36	30088700015624	5"	5-IN-90DEG-36RAD-ELLBE	
5009048ELBBE	5233868	UA9HPB	N/A	30088700015754	5"	5-IN-90DEG-48RAD-ELLBE	
5004536ELBBE	5233780	UA7FPB	N/A	30088700015631	5"	5-IN-45DEG-36RAD-ELLBE	
5004548ELBBE	5233781	UA7HPB	N/A	30088700015761	5"	5-IN-45DEG-48RAD-ELLBE	
SCHEDULE 40 SPECIAL RADIUS ELBOWS — BELLED END — SIZE 6							
6009036ELBBE	5233877	UA9FRB	NSL 6-36	30088700015648	6"	6-IN-90DEG-36RAD-ELL-BE	
6009048ELBBE	5233816	UA9HRB	N/A	30088700015778	6"	6-IN-90DEG-48RAD-ELL-BE	
6004536ELBBE	5133894	UA7FRB	N/A	30088700017901	6"	6-IN-45DEG-36RAD-ELL-BE	
6004548ELBBE	5233813	UA7HRB	N/A	30088700015785	6"	6-IN-45DEG-48RAD-ELL-BE	

SCH 40 SPLIT SWEEPS & ACCESSORIES

SCH 40 SPLIT ELBOW (FABRICATED)							
2004524SPDUCT	5133815S	UA7DJSD	N/A	30088700039927	2"	2-IN-45DEG-24RAD-SPDUCT	
2004536SPDUCT	5133778S	UA7FJSD	N/A	30088700040978	2"	2-IN-45DEG-36RAD-SPDUCT	
3004536SPDUCT	5133779S	UA7FLSD	N/A	30088700039934	3"	3-IN-45DEG-36RAD-SPDUCT	
2004548SPDUCT	5133798S	UA7HJSD	N/A	30088700039941	2"	2-IN-45DEG-48RAD-SPDUCT	
3004548SPDUCT	5133781S	UA7HLSD	N/A	30088700039958	3"	3-IN-45DEG-48RAD-SPDUCT	
2004548SPDUCT	5133808S	UA7IJS	N/A	30088700039965	2"	2-IN-45DEG-48RAD-SPDUCT	
3004560SPDUCT	5134006S	UA7ILSD	N/A	30088700039972	3"	3-IN-45DEG-60RAD-SPDUCT	
4004560SPDUCT	5133946S	UA7INS	N/A	30088700039859	4"	4-IN-45DEG-60RAD-SPDUCT	
400221260SPDUCT	5134012S	UA5INS	N/A	30088700039842	4"	4-IN-22-1/2DEG-60RAD-SPDUCT	
200111460SPDUCT	5133966S	UA3IJS	N/A	30088700039989	2"	2-IN-11-1/4DEG-60RAD-SPDUCT	
300111460SPDUCT	5134083S	UA3ILSD	N/A	30088700039996	3"	3-IN-11-1/4DEG-60RAD-SPDUCT	
400111460SPDUCT	5134157S	UA3INS	N/A	30088700039835	4"	4-IN-11-1/4DEG-60RAD-SPDUCT	

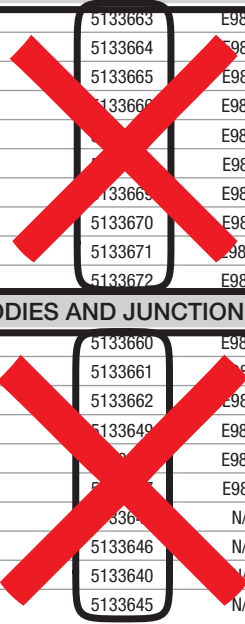
SCH 40 SPLIT SLEEVE COUPLING (FABRICATED)							
200SPDUCTCPLG	6141684	E200JS6	N/A	30088700010704	2"	2IN-SPLITDUCT-CPLG	20
400SPDUCTCPLG	6141690	E200NS8	N/A	30088700010711	4"	4IN-SPLITDUCT-CPLG	15
500SPDUCTCPLG	6141692	E200PS9	N/A	30088700010759	5"	5IN-SPLITDUCT-CPLG	8
600SPDUCTCPLG	6141693	E200RSI	N/A	30088700010766	6"	6IN-SPLITDUCT-CPLG	4

EB - DB DUCT SPLIT SLEEVE COUPLING (FABRICATED)							
200DBSPCPLG	6151783	N/A	N/A	30088700041371	2"	2IN-SPLITDUCT-CPLG-DB	20
400DBSPCPLG	6151785	N/A	N/A	30088700026361	4"	4IN-SPLITDUCT-CPLG-DB	15
500DBSPCPLG	6151786	N/A	N/A	30088700041364	5"	5IN-SPLITDUCT-CPLG-DB	8
600DBSPCPLG	6151787	N/A	N/A	30088700041395	6"	6IN-SPLITDUCT-CPLG-DB	4

PVC CONDUIT BODIES AND JUNCTION BOXES

CONDUIT BODIES AND JUNCTION BOXES — TYPE LB							
050LB	5133663	E986D	SLB10S	30088700567642	1/2"	1/2-TYPE-LB	25
075LB	5133664	E986E	SLB20S	30088700567659	3/4"	3/4-TYPE-LB	15
100LB	5133665	E986F	SLB30S	30088700567666	1"	1-IN-TYPE-LB	10
125LB	5133666	E986G	SLB40S	30088700567673	1 1/4"	1-1/4-TYPE-LB	10
150LB	5133667	E986H	SLB50S	30088700567017	1 1/2"	1-1/2-TYPE-LB	10
200LB	5133668	E986J	SLB60S	30088700567680	2"	2-IN-TYPE-LB	5
250LB	5133669	E986K	SLB70S	30088700065476	2 1/2"	2-1/2-TYPE-LB	5
300LB	5133670	E986L	SLB80S	30088700065483	3"	3-IN-TYPE-LB	5
350LB	5133671	E986M	SLB90S	30088700065490	3 1/2"	3-1/2-TYPE-LB	4
400LB	5133672	E986N	SLB100S	30088700065506	4"	4-IN-TYPE-LB	4

CONDUIT BODIES AND JUNCTION BOXES — TYPE LL							
050LL	5133660	E984D	SLL10S	30088700567697	1/2"	1/2-TYPE-LL	25
075LL	5133661	E984E	SLL20S	30088700567703	3/4"	3/4-TYPE-LL	15
100LL	5133662	E984F	SLL30S	30088700567710	1"	1-IN-TYPE-LL	10
125LL	5133663	E984G	SLL40S	30088700065643	1 1/4"	1-1/4-TYPE-LL	10
150LL	5133664	E984H	SLL50S	30088700065650	1 1/2"	1-1/2-TYPE-LL	10
200LL	5133665	E984J	SLL60S	30088700567727	2"	2-IN-TYPE-LL	5
250LL	5133666	N/A	SLL70S	30088700517562	2 1/2"	2-1/2-TYPE-LL	5
300LL	5133667	N/A	SLL80S	30088700517586	3"	3-IN-TYPE-LL	5
350LL	5133668	N/A	SLL90S	30088700517555	3 1/2"	3-1/2-TYPE-LL	4
400LL	5133669	N/A	SLL100S	30088700517579	4"	4-IN-TYPE-LL	4





90°



45°

30°

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
SCHEDULE 80 STANDARD RADIUS ELBOWS							
90° ELBOWS PLAIN END							
05090ELB80	5121053	UB9AD	N/A	30088700063212	½"	1/2-90D-SCH-80-ELL	50
07590ELB80	5121054	UB9AF	N/A	30088700063229	¾"	3/4-90D-SCH-80-ELL	35
10090ELB80	5121055	UB9AF	N/A	30088700063236	1"	1-IN-90D-SCH-80-ELL	20
12590ELB80	5121056	UB9AG	N/A	30088700063243	1¼"	1-1/4-90D-SCH-80-ELL	30
15090ELB80	5121057	UB9AH	N/A	30088700567529	1½"	1-1/2-90D-SCH-80-ELL	30
20090ELB80	5121058	UB9AJ	N/A	30088700567536	2"	2-IN-90D-SCH-80-ELL	15
25090ELB80	5121059	UB9AK	N/A	30088700567543	2½"	2-1/2-90D-SCH-80-ELL	18
30090ELB80	5121060	UB9AL	N/A	30088700567550	3"	3-IN-90D-SCH-80-ELL	14
40090ELB80	5121061	UB9AN	N/A	30088700507457	4"	4-IN-90D-SCH-80-ELL	10
50090ELB80	5121062	UB9AP	N/A	30088700507464	5"	5-IN-90D-SCH-80-ELL	30
60090ELB80	5121063	UB9AR	N/A	30088700507471	6"	6-IN-90D-SCH-80-ELL	25
45° ELBOWS PLAIN END							
05045ELB80	5121003	UB7AD	N/A	30088700063410	½"	1/2-45D-SCH-80-ELL	50
07590ELB80	5121004	UB7AE	N/A	30088700063427	¾"	3/4-45D-SCH-80-ELL	25
10045ELB80	5121005	UB7AF	N/A	30088700063434	1"	1IN-45D-SCH-80-ELL	20
12545ELB80	5121006	UB7AG	N/A	30088700063441	1¼"	1-1/4-45D-SCH-80-ELL	25
15045ELB80	5121007	UB7AH	N/A	30088700063458	1½"	1/1/2-45D-SCH-80-ELL	20
20045ELB80	5121008	UB7AJ	N/A	30088700063465	2"	2IN-45D-SCH-80-ELL	10
25045ELB80	5121009	UB7AK	N/A	30088700063472	2½"	2-1/2-45D-SCH-80-ELL	20
30045ELB80	5121010	UB7AL	N/A	30088700507082	3"	3IN-45D-SCH-80-ELL	8
40045ELB80	5121011	UB7AN	N/A	30088700507099	4"	4IN-45D-SCH-80-ELL	20
50045ELB80	5121012	UB7AP	N/A	30088700507105	5"	5IN-45D-SCH-80-ELL	30
60045ELB80	5121013	UB7AR	N/A	30088700507112	6"	6IN-45D-SCH-80-ELL	25
30° ELBOWS PLAIN END							
05030ELB80	5121000	UB6AD	N/A	30088700507051	½"	1/2-30D-SCH-80-ELL	50
07530ELB80	5121001	UB6AE	N/A	30088700507068	¾"	3/4-30D-SCH-80-ELL	25
10030ELB80	5121002	UB6AF	N/A	30088700507075	1"	1IN-30D-SCH-80-ELL	20
12530ELB80	5121106	UB6AG	N/A	30088700507761	1¼"	1-1/4-30D-SCH-80-ELL	25
15030ELB80	5121850	UB6AH	N/A	30088700507884	1½"	1/1/2-30D-SCH-80-ELL	20
20030ELB80	5121108	UB6AJ	N/A	30088700507778	2"	2IN-30D-SCH-80-ELL	10
25030ELB80	5121109	UB6AK	N/A	30088700507785	2½"	2-1/2-30D-SCH-80-ELL	20
30030ELB80	5121110	UB6AL	N/A	30088700507792	3"	3IN-30D-SCH-80-ELL	8
40030ELB80	5121111	UB6AN	N/A	30088700507808	4"	4IN-30D-SCH-80-ELL	20
50030ELB80	5121112	UB6AP	N/A	30088700507815	5"	5IN-30D-SCH-80-ELL	30
60030ELB80	5121113	UB6AR	N/A	30088700507822	6"	6IN-30D-SCH-80-ELL	25
SCHEDULE 80 SPECIAL RADIUS ELBOWS							
SCHEDULE 80 SPECIAL RADIUS ELBOWS — PLAIN END — SIZE 1							
1009018ELB80	5121846	UB9CF	N/A	30088700013453	1"	1-IN-90DEG-18RAD-SCH80-ELL	EA
1009024ELB80	5121018	UB9DF	N/A	30088700013101	1"	1-IN-90DEG-24RAD-SCH80-ELL	EA
1009036ELB80	5121080	UB9FF	N/A	30088700013293	1"	1-IN-90DEG-36RAD-SCH80-ELL	EA
1009048ELB80	5121065	UB9HF	N/A	30088700023339	1"	1-IN-90DEG-48RAD-SCH80-ELL	EA
1004518ELB80	5121971	UB7CF	N/A	30088700013507	1"	1-IN-45DEG-18RAD-SCH80-ELL	EA
1004524ELB80	5136500	UB7DF	N/A	30088700018311	1"	1-IN-45DEG-24RAD-SCH80-ELL	EA
1004536ELB80	5136502	UB7FF	N/A	30088700028822	1"	1-IN-45DEG-36RAD-SCH80-ELL	EA
1003024ELB80	5136505	N/A	N/A	30088700018328	1"	1-IN-30DEG-24RAD-SCH80-ELL	EA
100221218ELB80	5136630	N/A	N/A	30088700028945	1"	1-IN-22-1/2-DEG-18RAD-SCH80-ELL	EA
100221224ELB80	5136631	N/A	N/A	30088700033536	1"	1-IN-22-1/2-DEG-24RAD-SCH80-ELL	EA
SCHEDULE 80 SPECIAL RADIUS ELBOWS — PLAIN END — SIZE 1¼							
1259018ELB80	5119822	UB9CG	N/A	30088700016478	1¼"	1-1/4-90DEG-18RAD-SCH80-ELL	EA
1259024ELB80	5119824	UB9DG	N/A	30088700023292	1¼"	1-1/4-90DEG-24RAD-SCH80-ELL	EA
1259036ELB80	5121084	UB9FG	N/A	30088700013330	1¼"	1-1/4-90DEG-36RAD-SCH80-ELL	EA
1259048ELB80	5136510	UB9HG	N/A	30088700028839	1¼"	1-1/4-90DEG-48RAD-SCH80-ELL	EA
1254518ELB80	5136511	N/A	N/A	30088700018335	1¼"	1-1/4-45DEG-18RAD-SCH80-ELL	EA
1254524ELB80	5136512	UB7DG	N/A	30088700041685	1¼"	1-1/4-45DEG-24RAD-SCH80-ELL	EA
1254536ELB80	5136514	UB7FG	N/A	30088700028846	1¼"	1-1/4-45DEG-36RAD-SCH80-ELL	EA
1254548ELB80	5136515	UB7HG	N/A	30088700028853	1¼"	1-1/4-45DEG-48RAD-SCH80-ELL	EA
1253018ELB80	5136516	N/A	N/A	30088700018342	1¼"	1-1/4-30-DEG-18RAD-SCH80-ELL	EA
125221218ELB80	5136640	N/A	N/A	30088700028952	1¼"	1-1/4-22-1/2-DEG-18RAD-SCH80-ELL	EA

Comparisons relate to function only. Items may not be identical. While information provided has been carefully prepared, we do not assume responsibility for errors.

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
SCHEDULE 80 SPECIAL RADIUS ELBOWS — PLAIN END — SIZE 1½							
1509018ELB80	5121848	UB9CH	N/A	30088700023377	1½"	1-1/2-90DEG-18RAD-SCH80-ELL	EA
1509024ELB80	5121015	UB9DH	N/A	30088700013071	1½"	1-1/2-90DEG-24RAD-SCH80-ELL	EA
1509036ELB80	5121100	UB9FH	N/A	30088700013408	1½"	1-1/2-90DEG-36RAD-SCH80-ELL	EA
1509048ELB80	5121076	UB9HH	N/A	30088700013255	1½"	1-1/2-90DEG-48RAD-SCH80-ELL	EA
1509060ELB80	5121102	N/A	N/A	30088700013422	1½"	1-1/2-90DEG-60RAD-SCH80-ELL	EA
1504518ELB80	5121037	UB7CH	N/A	30088700023308	1½"	1-1/2-45DEG-18RAD-SCH80-ELL	EA
1504524ELB80	5163533	UB7DH	N/A	30088700029102	1½"	1-1/2-45DEG-24RAD-SCH80-ELL	EA
1504536ELB80	5136533	UB7FH	N/A	30088700033550	1½"	1-1/2-45DEG-36RAD-SCH80-ELL	EA
1504560ELB80	5136840	N/A	N/A	30088700947703	1½"	1-1/2-45DEG-60RAD-SCH80-ELL	EA
1503018ELB80	5136535	N/A	N/A	30088700028860	1½"	1-1/2-30-DEG-18RAD-SCH80-ELL	EA
1503024ELB80	5136536	N/A	N/A	30088700942951	1½"	1-1/2-30DEG-24RAD-SCH80-ELL	EA
150221218ELB80	5136650	N/A	N/A	30088700028969	1½"	1-1/2-22-1/2-DEG-18RAD-SCH80-ELL	EA
150221224ELB80	5136651	N/A	N/A	30088700028976	1½"	1-1/2-22-1/2-DEG-24RAD-SCH80-ELL	EA
150221236ELB80	5136652	N/A	N/A	30088700018373	1½"	1-1/2-22-1/2-DEG-36RAD-SCH80-ELL	EA
SCHEDULE 80 SPECIAL RADIUS ELBOWS — PLAIN END — SIZE 2							
2009018ELB80	5121099	UB9CJ	N/A	30088700013392	2"	2IN-90DEG-18RAD-SCH80-ELL	EA
2009024ELB80	5121019	UB9DJ	N/A	30088700013118	2"	2IN-90DEG-24RAD-SCH80-ELL	EA
2009036ELB80	5121021	UB9FJ	N/A	30088700013132	2"	2IN-90DEG-36RAD-SCH80-ELL	EA
2009048ELB80	5121075	UB9HJ	N/A	30088700013248	2"	2IN-90DEG-48RAD-SCH80-ELL	EA
2009060ELB80	5121086	N/A	N/A	30088700023346	2"	2IN-90DEG-60RAD-SCH80-ELL	EA
2004518ELB80	5136551	UB7CJ	N/A	30088700023261	2"	2IN-45DEG-18RAD-SCH80-ELL	EA
2004524ELB80	5121101	UB7DJ	N/A	30088700013415	2"	2IN-45DEG-24RAD-SCH80-ELL	EA
2004536ELB80	5121098	UB7FJ	N/A	30088700013385	2"	2IN-45DEG-36RAD-SCH80-ELL	EA
2004548ELB80	5121093	UB7HJ	N/A	30088700016591	2"	2IN-45DEG-48RAD-SCH80-ELL	EA
2004560ELB80	5136850	N/A	N/A	30088700018397	2"	2IN-45DEG-60RAD-SCH80-ELL	EA
2003018ELB80	5136553	N/A	N/A	30088700033574	2"	2IN-30DEG-18RAD-SCH80-ELL	EA
2003024ELB80	5136554	N/A	N/A	30088700028877	2"	2IN-30DEG-24RAD-SCH80-ELL	EA
2003036ELB80	5121094	UB6FJ	N/A	30088700013378	2"	2IN-30DEG-36RAD-SCH80-ELL	EA
2003060ELB80	5136750	N/A	N/A	30088700947765	2"	2IN-30DEG-60RAD-SCH80-ELL	EA
200221218ELB80	5136660	N/A	N/A	30088700018380	2"	2IN-22-1/2-DEG-18RAD-SCH80-ELL	EA
200221224ELB80	5136661	N/A	N/A	30088700028983	2"	2IN-22-1/2-DEG-24RAD-SCH80-ELL	EA
200221236ELB80	5136662	N/A	N/A	30088700028990	2"	2IN-22-1/2-DEG-36RAD-SCH80-ELL	EA
SCHEDULE 80 SPECIAL RADIUS ELBOWS — PLAIN END — SIZE 2½							
2509018ELB80	5121027	N/A	N/A	30088700013194	2½"	2-1/2-90DEG-18RAD-SCH80-ELL	EA
2509024ELB80	5121028	N/A	N/A	30088700013200	2½"	2-1/2-90DEG-24RAD-SCH80-ELL	EA
2509036ELB80	5121016	UB9FK	N/A	30088700013088	2½"	2-1/2-90DEG-36RAD-SCH80-ELL	EA
2509048ELB80	5121030	UB9HK	N/A	30088700013217	2½"	2-1/2-90DEG-48RAD-SCH80-ELL	EA
2504524ELB80	5121943	UB7DK	N/A	30088700013484	2½"	2-1/2-45DEG-24RAD-SCH80-ELL	EA
2504536ELB80	5121150	UB7FK	N/A	30088700013446	2½"	2-1/2-45DEG-36RAD-SCH80-ELL	EA
2504560ELB80	5136860	N/A	N/A	30088700947741	2½"	2-1/2-45DEG-60RAD-SCH80-ELL	EA
2503018ELB80	5121064	N/A	N/A	30088700023322	2½"	2-1/2-30DEG-18RAD-SCH80-ELL	EA
250221218ELB80	5136670	N/A	N/A	30088700029003	2½"	2-1/2-22-1/2-DEG-18RAD-SCH80-ELL	EA
250221236ELB80	5136672	N/A	N/A	30088700029010	2½"	2-1/2-22-1/2-DEG-36RAD-SCH80-ELL	EA
250221260ELB80	5123728	N/A	N/A	30088700016850	2½"	2-1/2-22-1/2-DEG-60RAD-SCH80-ELL	EA
SCHEDULE 80 SPECIAL RADIUS ELBOWS — PLAIN END — SIZE 3							
3009018ELB80	5121079	UB9DL	N/A	30088700013286	3"	3IN-90DEG-18RAD-SCH80-ELL	EA
3009024ELB80	5121020	UB9FLB	N/A	30088700013125	3"	3IN-90DEG-24RAD-SCH80-ELL	EA
3009036ELB80	5121081	UB9FLB	N/A	30088700013309	3"	3IN-90DEG-36RAD-SCH80-ELL	EA
3009048ELB80	5121082	N/A	N/A	30088700013316	3"	3IN-90DEG-48RAD-SCH80-ELL	EA
3009060ELB80	5136970	N/A	N/A	30088700029089	3"	3IN-90DEG-60RAD-SCH80-ELL	EA
3004518ELB80	5121032	UB7CL	N/A	30088700016492	3"	3IN-45DEG-18RAD-SCH80-ELL	EA
3004524ELB80	5121014	UB7DL	N/A	30088700013064	3"	3IN-45DEG-24RAD-SCH80-ELL	EA
3004536ELB80	5121077	UB7FL	N/A	30088700013262	3"	3IN-45DEG-36RAD-SCH80-ELL	EA
3004548ELB80	5121078	UB7HL	N/A	30088700013279	3"	3IN-45DEG-48RAD-SCH80-ELL	EA
3004560ELB80	5136810	N/A	N/A	30088700947727	3"	3IN-45DEG-60RAD-SCH80-ELL	EA
3003018ELB80	5136572	N/A	N/A	30088700033734	3"	3IN-30DEG-18RAD-SCH80-ELL	EA
3003024ELB80	5136573	N/A	N/A	30088700028884	3"	3IN-30DEG-24RAD-SCH80-ELL	EA
3003036ELB80	5136575	N/A	N/A	30088700018359	3"	3IN-30DEG-36RAD-SCH80-ELL	EA
300221218ELB80	5136680	N/A	N/A	30088700029027	3"	3IN-22-1/2-DEG-18RAD-SCH80-ELL	EA
300221224ELB80	5136681	N/A	N/A	30088700029034	3"	3IN-22-1/2-DEG-24RAD-SCH80-ELL	EA
300221236ELB80	5121039	N/A	N/A	30088700023315	3"	3IN-22-1/2-DEG-36RAD-SCH80-ELL	EA



90°



45°



30°



22½°



BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
SCHEDULE 80 SPECIAL RADIUS ELBOWS — PLAIN END — SIZE 4							
4009024ELB80	5121022	UB9DN	N/A	30088700013149	4"	4IN-90DEG-24RAD-SCH80-ELL	EA
4009036ELB80	5121023	UB9FN	N/A	30088700013156	4"	4IN-90DEG-36RAD-SCH80-ELL	EA
4009048ELB80	5121024	UB9HN	N/A	30088700013163	4"	4IN-90DEG-48RAD-SCH80-ELL	EA
4009060ELB80	5121085	N/A	N/A	30088700013347	4"	4IN-90DEG-60RAD-SCH80-ELL	EA
4004524ELB80	5121089	UB7DN	N/A	30088700013354	4"	4IN-45DEG-24RAD-SCH80-ELL	EA
4004536ELB80	5119821	UB7FN	N/A	30088700013040	4"	4IN-45DEG-36RAD-SCH80-ELL	EA
4004548ELB80	5121091	UB7HN	N/A	30088700013361	4"	4IN-45DEG-48RAD-SCH80-ELL	EA
4004560ELB80	5121122	N/A	N/A	30088700016638	4"	4IN-45DEG-60RAD-SCH80-ELL	EA
4003024ELB80	5136582	N/A	N/A	30088700028907	4"	4IN-30DEG-24RAD-SCH80-ELL	EA
4003036ELB80	5121114	N/A	N/A	30088700016614	4"	4IN-30DEG-36RAD-SCH80-ELL	EA
4003048ELB80	5121123	N/A	N/A	30088700016645	4"	3IN-30DEG-48RAD-SCH80-ELL	EA
400221224ELB80	5121869	N/A	N/A	30088700016669	4"	4IN-22-1/2-DEG-24RAD-SCH80-ELL	EA
400221236ELB80	5121870	N/A	N/A	30088700016676	4"	4IN-22-1/2-DEG-36RAD-SCH80-ELL	EA
400221248ELB80	5121872	N/A	N/A	30088700016683	4"	4IN-22-1/2-DEG-48RAD-SCH80-ELL	EA
400221260ELB80	5136686	N/A	N/A	30088700029041	4"	4IN-22-1/2-DEG-60RAD-SCH80-ELL	EA
SCHEDULE 80 SPECIAL RADIUS ELBOWS — PLAIN END — SIZE 5							
5009036ELB80	5121083	UB9FP	N/A	30088700013323	5"	5IN-90DEG-36RAD-SCH80-ELL	EA
5009048ELB80	5121025	UB9HP	N/A	30088700013170	5"	5IN-90DEG-48RAD-SCH80-ELL	EA
5009060ELB80	5121017	N/A	N/A	30088700013095	5"	5IN-90DEG-60RAD-SCH80-ELL	EA
5004536ELB80	5119820	UB7FP	N/A	30088700013033	5"	5IN-45DEG-36RAD-SCH80-ELL	EA
5004548ELB80	5121948	UB7HP	N/A	30088700013491	5"	5IN-45DEG-48RAD-SCH80-ELL	EA
5003036ELB80	5136587	N/A	N/A	30088700028914	5"	5IN-30DEG-36RAD-SCH80-ELL	EA
5003048ELB80	5121115	N/A	N/A	30088700016621	5"	5IN-30DEG-48RAD-SCH80-ELL	EA
500221236ELB80	5121871	N/A	N/A	30088700023384	5"	5IN-22-1/2-DEG-36RAD-SCH80-ELL	EA
500221248ELB80	5136690	N/A	N/A	30088700029058	5"	5IN-22-1/2-DEG-48RAD-SCH80-ELL	EA
500221260ELB80	5136691	N/A	N/A	30088700943842	5"	5IN-22-1/2-DEG-60RAD-SCH80-ELL	EA
SCHEDULE 80 SPECIAL RADIUS ELBOWS — PLAIN END — SIZE 6							
6009036ELB80	5121073	N/A	N/A	30088700013231	6"	6IN-90DEG-36RAD-SCH80-ELL	EA
6009048ELB80	5121026	UB9HR	N/A	30088700013187	6"	6IN-90DEG-48RAD-SCH80-ELL	EA
6009060ELB80	5121087	N/A	N/A	30088700023353	6"	6IN-90DEG-60RAD-SCH80-ELL	EA
6004536ELB80	5121072	UB7FR	N/A	30088700013224	6"	6IN-45DEG-36RAD-SCH80-ELL	EA
6004548ELB80	5119830	UB7HR	N/A	30088700013057	6"	6IN-45DEG-48RAD-SCH80-ELL	EA
6004560ELB80	5121117	N/A	N/A	30088700013439	6"	6IN-45DEG-60RAD-SCH80-ELL	EA
6003036ELB80	5136595	N/A	N/A	30088700028921	6"	6IN-30DEG-36RAD-SCH80-ELL	EA
6003048ELB80	5136596	N/A	N/A	30088700028938	6"	6IN-30DEG-48RAD-SCH80-ELL	EA
600221236ELB80	5136695	N/A	N/A	30088700029065	6"	6IN-22-1/2-DEG-36RAD-SCH80-ELL	EA
600221248ELB80	5136696	N/A	N/A	30088700029072	6"	6IN-22-1/2-DEG-48RAD-SCH80-ELL	EA
600221260ELB80	5121118	N/A	N/A	30088700023360	6"	6IN-22-1/2-DEG-60RAD-SCH80-ELL	EA

CONDUIT FITTINGS FOR TYPE EB & DB DUCT



TC-6 COUPLING WITH CENTER STOP (FABRICATED)							
150CPLCSFABDB60	6121617	N/A	N/A	30088700539366	1-1/2"	1-1/2-CPLG-DB60	30
200CPLFCFABDB60	6121628	E242J	N/A	30088700539410	2"	2IN-CPLG-DB60FAB	20
300CPLCSFABDB60	6121630	E242L	N/A	30088700539427	3"	3IN-CPLG-DB60FAB	25
400CPLCSFABDB60	6121632	E242N	N/A	30088700539441	4"	4IN-CPLG-DB60FAB	15
500CPLCSFABDB60	6121633	E242P	N/A	30088700539458	5"	5IN-CPLG-DB60FAB	8
600CPLCSFABDB60	6121634	E242R	N/A	30088700539465	6"	6IN-CPLG-DB60FAB	4
TC-6 COUPLING WITH CENTER STOP (MOLDED)							
200CPLCSDB60	6121636	E940J	N/A	30088700547897	2"	2IN-CPLG-DB60	50
300CPLCSDB60	6121637	E240L	N/A	30088700547903	3"	3IN-CPLG-DB60	25
400CPLCSDB60	6121638	E240N	N/A	30088700547910	4"	4IN-CPLG-DB60	20
500CPLCSDB60	6121639	E240P	N/A	30088700547927	5"	5IN-CPLG-DB60	8
600CPLCSDB60	6121640	E240R	N/A	30088700547934	6"	6IN-CPLG-DB60	8
TC-6 LONGLINE SLEEVE COUPLING (FABRICATED)							
150LNGCPLFABDB60	6121622	E941H	N/A	30088700547880	1 1/2"	1-1/2-SLIPCPLG-DB60FAB	30
200LNGCPLFABDB60	6121623	E941J	N/A	30088700539373	2"	2IN-SLIPCPLG-DB60FAB	20
300LNGCPLFABDB60	6121625	E241L	N/A	30088700539380	3"	3IN-SLIPCPLG-DB60FAB	25
400LNGCPLFABDB60	6121626	E241N	N/A	30088700539397	4"	4IN-SLIPCPLG-DB60FAB	15
500LNGCPLFABDB60	6121627	E241P	N/A	30088700539403	5"	5IN-SLIPCPLG-DB60FAB	8
600LNGCPLFABDB60	6121635	E241R	N/A	30088700539472	6"	6IN-SLIPCPLG-DB60FAB	4

Comparisons relate to function only. Items may not be identical. While information provided has been carefully prepared, we do not assume responsibility for errors.

Allied E-Z PULL[®] EMT Specifications

MANUFACTURED FOR LONG LIFE

Allied EMT is precision manufactured from high grade mild strip steel for exceptional durability and long-lasting life.

Allied EMT is hot galvanized using Allied's patented in-line Flo-Coat[®] process. This process combines zinc, a conversion coating, and a clear organic polymer top-coat to form a triple layer of protection against corrosion and abrasion.

EMI SHIELDING

Allied EMT greatly reduces electromagnetic fields, effectively shielding computers and sensitive electronic equipment from the electromagnetic interference caused by power distribution systems. For further information, visit our website for a free download of the **GEMI** (Grounding and ElectroMagnetic Interference) analysis software and related research papers.

FULL CODES AND STANDARDS COMPLIANCE

Allied EMT is listed to Underwriters Laboratories Safety Standard UL 797 and meets ANSI C80.3, which have been adopted as federal specifications in lieu of WWC 563. EMT is recognized as an equipment grounding conductor by NEC Section 250-118. Documentation for compliance with NEC Article 250 is also available in the **GEMI** (Grounding and ElectroMagnetic Interference) analysis software and related research studies found at the www.alliedeg.com website.

Installation of EMT shall be in accordance with the National Electrical Code and the UL listing information. Allied EMT is listed in category FJMX.

Master bundles conform to NEMA Standard RN2.

SPECIFICATION DATA

To specify Allied EMT, include the following: Electrical Metallic Tubing shall be equal to that manufactured by Allied Tube & Conduit Corporation. EMT shall be hot galvanized steel O.D. with an organic corrosion resistant I.D. coating and shall be produced in accordance with U.L. Safety Standard #797 and ANSI C80.3 and shall be listed by a nationally recognized testing laboratory with follow-up service. Where **Kwik-Fit EMT** is used it shall also meet U.L. Safety Standard #514-B. It is noted that these U.L. and ANSI standards have been adopted by the federal government and separate military specifications no longer exist.

Weights and Dimensions for Electrical Metallic Tubing

Trade Size Designator		Approx. Wt. Per 100 Ft. (30.5M)		Nominal Outside Diameter ¹		Nominal Wall Thickness		Quantity In Master Bundle	
U.S.	Metric	lb.	kg.	in.	mm	in.	mm	ft.	m
1/2	16	38	17.0	0.700	17.8	0.042	1.07	7000	2135.0
3/4	21	46	20.9	0.922	23.4	0.049	1.25	5000	1525.0
1	27	67	30.4	1.163	29.5	0.057	1.45	3000	915.0
1-1/4	35	101	45.8	1.510	38.4	0.065	1.65	2000	610.0
1-1/2	41	116	52.6	1.740	44.2	0.065	1.65	1500	457.5
2	53	148	67.1	2.197	55.8	0.065	1.65	1200	366.0
2-1/2	63	216	98.0	2.875	73.0	0.072	1.83	610	186.1
3	78	263	119.3	3.500	88.9	0.072	1.83	510	155.6
3-1/2	91	240	108.8	3.000	76.2	0.080	2.11	370	112.8
4	100	300	136.1	4.500	114.3	0.080	2.11	300	91.4

SUBMITTAL REQUIRED FOR EMT AS NOTED IN SPEC SECTION 16110 PARA 2.02.P

(53mm);

+/- .020 in. (.51mm) for trade sizes 3-1/2 (91mm) and 4 (103mm).

NOTE: Length = 10 ft. (3.05m) with a tolerance of ± .25 in. (6.35 mm)

Weights and Dimensions for Kwik-Fit EMT

Trade Size Designator		Approx. Wt. Per 100 Ft. (30.5M)		Nominal Outside Diameter ¹		Nominal Wall Thickness		Quantity In Master Bundle	
U.S.	Metric	lb.	kg.	in.	mm	in.	mm	ft.	m
2	53	148	67.1	2.197	55.8	0.065	1.65	500	152.4
2-1/2	63	216	98.0	2.875	73.0	0.072	1.83	650	198.0
3	78	263	119.3	3.500	88.9	0.072	1.83	600	182.9
3-1/2	91	240	108.8	3.000	76.2	0.080	2.11	250	76.2
4	100	300	136.1	4.500	114.3	0.080	2.11	250	76.2

¹Outside diameter tolerances:

+/- .005 in. (.13mm) for trade size 2 (53mm);
 +/- .010 in. (.25mm) for trade size 2-1/2 (63mm);
 +/- .015 in. (.38mm) for trade size 3 (78mm);
 +/- .020 in. (.51mm) for trade sizes 3-1/2 (91mm) and 4 (103mm).

NOTE: Length = 10 ft. (3.05m) with a tolerance of ± .25 in. (6.35 mm)

For more information, contact Allied at (800) 882-5543, or visit our website at www.alliedeg.com



Allied Tube & Conduit
 Registered to ISO 9001:2000
 File Numbers A2106, A1654, A12768

ALLIED ELECTRICAL GROUP

• Allied Tube & Conduit • AFC Cable Systems[®] • Cope[®] Cable Tray • Power-Strut[®] Metal & Fiberglass Framing

www.alliedeg.com

Conduit Bodies With Cover & Gasket PC 5720

LB's, LL's, and LR's (lined through items not used)



- UL Listed
- Die Cast Copper Free Aluminum
- With Covers
- With Neoprene Gaskets

Threaded Conduit Bodies with cover and gasket are used with rigid conduit to provide access to the interior of a conduit system. They are available as bodies only, or as bodies assembled with covers and gaskets. The flat back design allows the unit to be mounted close to the wall. They are die cast from high strength, copper free aluminum.

CAT NO	UPC		SIZE	STD	MSTR	WT/STD	UNIT
LB50CG	10722		1/2"	10	100	2.98#	C
LB75CG	10724		3/4"	10	50	4.10#	C
LB100CG	10726		1"	5	25	3.58#	C
LB125CG	10728		1-1/4"	2	10	2.96#	C
LB150CG	10730		1-1/2"	2	10	3.25#	C
LB200CG	10732	LB	2"	1	5	2.80#	C
LB250CG	10734		2-1/2"	1	1	5.10#	C
LB300CG	10736		3"	1	1	6.20#	C
LB350CG	10738		3-1/2"	1	1	9.54#	C
LB400CG	10740		4"	1	1	10.09#	C
LR50CG	10762		1/2"	10	100	2.98#	C
LR75CG	10764		3/4"	10	50	5.21#	C
LR100CG	10766		1"	5	25	3.62#	C
LR125CG	10768		1-1/4"	2	10	3.06#	C
LR150CG	10770		1-1/2"	2	10	3.33#	C
LR200CG	10772	LR	2"	1	5	2.80#	C
LR250CG	10774		2-1/2"	1	1	6.43#	C
LR300CG	10776		3"	1	1	9.60#	C
LR350CG	10778		3-1/2"	1	1	11.39#	C
LR400CG	10780		4"	1	1	12.00#	C
LL50CG	10742		1/2"	10	100	6.06#	C
LL75CG	10744		3/4"	10	50	5.17#	C
LL100CG	10746		1"	5	25	3.52#	C
LL125CG	10748		1-1/4"	2	10	2.93#	C
LL150CG	10750		1-1/2"	2	10	3.22#	C
LL200CG	10752	LL	2"	1	5	2.84#	C
LL250CG	10754		2-1/2"	1	1	5.26#	C
LL300CG	10756		3"	1	1	7.02#	C
LL350CG	10758		3-1/2"	1	1	10.35#	C
LL400CG	10760		4"	1	1	10.80#	C
G50CG	10702		1/2"	10	100	2.92#	C
G75CG	10704		3/4"	10	50	1.70#	C
G100CG	10706		1"	5	25	2.97#	C
G125CG	10708		1-1/4"	2	10	2.99#	C
G150CG	10710		1-1/2"	2	10	2.99#	C
G200CG	10712	G	2"	1	5	2.95#	C
G250CG	10714		2-1/2"	1	1	5.97#	C
G300CG	10716		3"	1	1	6.20#	C
G350CG	10718		3-1/2"	1	1	9.99#	C
G400CG	10720		4"	1	1	10.95#	C
T50CG	10702		1/2"	10	100	6.06#	C
T75CG	10704		3/4"	10	50	1.25#	C
T100CG	10706		1"	5	25	3.63#	C
T125CG	10708		1-1/4"	2	10	1.99#	C
T150CG	10700		1-1/2"	2	10	3.55#	C
T200CG	10702	T	2"	2	2	5.95#	C
T250CG	10704		2-1/2"	1	1	7.06#	C
T300CG	10706		3"	1	1	7.69#	C
T350CG	10708		3-1/2"	1	1	12.52#	C
T400CG	10802		4"	1	1	10.95#	C
TB50CG	81526		1/2"	10	100	6.06#	C
TB75CG	81527		3/4"	10	50	1.25#	C
TB100CG	81528	TB	1"	5	25	6.06#	C
TB125CG	81529		1-1/4"	2	10	1.99#	C
TB150CG	81530		1-1/2"	2	10	3.55#	C
TB200CG	81531		2"	2	2	5.95#	C
X50CG	81532		1/2"	10	100	3.99#	C
X75CG	81533		3/4"	10	50	4.25#	C
X100CG	81534	X	1"	5	25	6.06#	C
X125CG	81535		1-1/4"	2	10	1.99#	C
X150CG	81536		1-1/2"	2	10	3.55#	C
X200CG	81537		2"	2	2	5.95#	C

FITTINGS & STAMPINGS > CONDUIT BODIES WITH COVER AND GASKET

NEW

B52

Liquidtight Connectors (lined through items not used)

LIQUIDTIGHT CONDUIT AND CORD CONNECTORS

STEEL/MALLEABLE IRON - STRAIGHT CONNECTORS

RACO COMMERCIAL FITTINGS

Applications

- For use in outdoor or indoor locations on flexible metallic liquidtight conduit and Type B flexible nonmetallic liquidtight conduit
- Use to positively bond the conduit to a box or enclosure
- RACO® liquidtight connectors are suitable for use in Class 1, Division 2; Class 2, Division 1 and 2; and Class 3, Division 1 and 2 hazardous locations

Product Features

- Patented split gland-ring is designed to slip onto the conduit quickly and to grip the jacket of the conduit, speeding installation, assuring a perfect seal, and preventing pullouts
- All components are reusable — RACO® liquidtight connectors may be easily disassembled and reused after years of service
- Sealing washer (included) provides a liquidtight seal when terminating the connector in a threadless opening
- Heavy duty locknut included with every RACO® liquidtight connector assures continuity of ground
- All metallic components are zinc electro plated for added corrosion protection
- UPC bar coded fittings are individually polybagged with a preprinted UPC-A bar code and packaged in pre-scored tear top cartons for an attractive presentation
- **Bodies**
3/8" to 1" Steel
1-1/4" to 4" Malleable Iron
- **Nuts**
3/8" to 1" Steel
1-1/4" to 4" Malleable Iron

Compliances

- – Standard 514B
- – C22.2 #18



Straight - Insulated Steel/Malleable Iron



Straight - Uninsulated Steel/Malleable Iron

ORDERING INFORMATION - DIMENSIONS

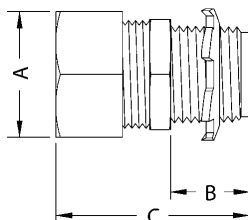
STRAIGHT - INSULATED AND UNINSULATED - STEEL/MALLEABLE IRON

INSULATED IRON CATALOG NUMBER	UNINSULATED IRON CATALOG NUMBER	TRADE SIZE	UNIT CTN. QTY.	SHIP CTN. QTY.	UPC BAR CODE
3511RAC*		3/8"	25	100	
	3401*	3/8"	50	200	
	3401-8*	3/8"	1	15	
3512RAC	3402	1/2"	50	200	
3512-8	3402-8	1/2"	1	15	
3513RAC	3403	3/4"	25	100	—
3513-8	3403-8	3/4"	1	10	
3514RAC	3404	1"	—	10	—
3514-8	3404-8	1"	1	5	
3515RAC	3405	1-1/4"	—	10	—
3516	3406	1-1/2"	—	5	—
3518	3408	2"	—	5	—
3520	3410	2 1/2"		1	
3522	3412	3"		1	
3524	3414	3 1/2"		1	
3526	3416	4"		1	

*1/2" Trade size hub

DIMENSIONS

TRADE SIZE	A	B	THD. SPEC.	C
3/8"	1 1/16"	1/2"	1/2"-14 NPT	1 29/64"
1/2"	1 3/16"	1/2"	1/2"-14 NPT	1 15/32"
3/4"	1-13/32"	9/16"	3/4"-14 NPT	1-31/64"
1"	1-45/64"	19/32"	1"-11-1/2 NPT	1-51/64"
1-1/4"	2-3/16"	43/64"	1-1/4"-11-1/2 NPT	1-7/8"
1-1/2"	2-13/32"	47/64"	1-1/2"-11-1/2 NPT	2-11/64"
2"	3-1/32"	21/32"	2"-11-1/2 NPT	2-9/32"
2 1/2"	3 5/8"	1"	2 1/2"-8 NPT	3 5/16"
3"	3 3/8"	1 3/64"	3"-8 NPT	3 1/2"
3 1/2"	3 31/32"	1 1/8"	3 1/2"-8 NPT	3 5/8"
4"	5 35/64"	1 5/32"	4"-8 NPT	3 5/8"



A = Nut Flats
B = Thread length and thread spec.
C = Overall Length





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EMT Rain Tight Compression Connectors

New!

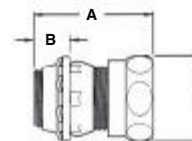
UL/CSA listed rain tight and concrete tight. Steel.



CATALOG NUMBER	UPC/DCI/NAED MFG #01 8997	TRADE SIZE	KO SIZE	UNIT PKG	STD PKG	DIM A	DIM B	DIM C
820RT	82020	1/2	1/2	50	50	1.688	.487	1.125
821RT	82021	3/4	3/4	50	50	1.657	.427	1.375
822RT	82022	1	1	25	25	1.823	.500	1.688
823RT	82023	1-1/4	1-1/4	10	10	2.102	.625	2.063
824RT	82024	1-1/2	1-1/2	10	10	2.101	.625	2.250
825RT	82025	2	2	10	10	2.309	.625	2.750
826RT	82026	2-1/2	2-1/2	12	12	2.548	.750	3.625
827RT	82027	3	3	12	12	3.020	.875	4.250
828RT	82028	3-1/2	3-1/2	6	6	3.824	.887	4.688
829RT	82029	4	4	6	6	4.185	.887	5.188



E20643 LR49636



EMT Rain Tight Compression Connectors with Insulated Throat

New!

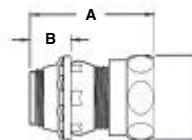
UL/CSA listed rain tight and concrete tight. Steel.



CATALOG NUMBER	UPC/DCI/NAED MFG #01 8997	TRADE SIZE	KO SIZE	UNIT PKG	STD PKG	DIM A	DIM B	DIM C
820ART	82045	1/2	1/2	50	50	1.876	.500	1.125
821ART	82046	3/4	3/4	50	50	1.719	.500	1.375
822ART	82047	1	1	25	25	1.885	.563	1.688
823ART	82048	1-1/4	1-1/4	10	10	2.166	.688	2.063
824ART	82049	1-1/2	1-1/2	10	10	2.253	.688	2.250
825ART	82050	2	2	10	10	2.360	.750	2.750
826ART	83000	2-1/2	2-1/2	12	12	3.610	.813	3.625
827ART	83001	3	3	12	12	3.690	.938	4.250
828ART	83002	3-1/2	3-1/2	6	6	3.886	1.000	4.688
829ART	83003	4	4	6	6	4.187	1.000	5.188



E20643 LR49636



EMT Rain Tight Compression Couplings

New!

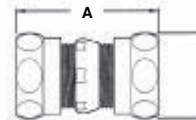
UL/CSA listed rain tight and concrete tight. Steel.



CATALOG NUMBER	UPC/DCI/NAED MFG #01 8997	TRADE SIZE	UNIT PKG	STD PKG	DIM A	DIM B
830RT	82030	1/2	50	50	1.880	1.125
831RT	82031	3/4	50	50	2.052	1.375
832RT	82032	1	25	25	2.219	1.688
833RT	82033	1-1/4	10	10	2.558	2.063
834RT	82034	1-1/2	10	10	2.587	2.250
835RT	82035	2	10	10	2.746	2.750
836RT	00865	2-1/2	12	12	4.207	3.625
837RT	00866	3	12	12	4.500	4.250
838RT	00867	3-1/2	6	6	5.025	4.688
839RT	00868	4	6	6	5.488	5.188



E20643 LR49636



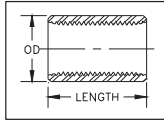
Rigid Conduit Couplings



CONDUIT COUPLINGS

Galvanized Steel, Aluminum and Stainless Steel 304

Size	Threads per inch	OD	Min. Length
1/2	14	1.315	1-3/8
3/4	14	1.250	1-41/64
1	11-1/2	1.525	1-31/32
1-1/4	11-1/2	1.869	2-1/32
1-1/2	11-1/2	2.155	2-1/16
2	11-1/2	2.650	2-1/8
2-1/2	8	3.250	3-3/16
3	8	3.870	3-5/16
3-1/2	8	4.500	3-13/32
4	8	4.875	3-33/64
5	8	6.000	3-61/64
6	8	7.100	4-1/4

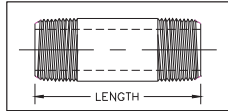


Notes:

Galvanized Couplings meet UL6 and C80.1
 Stainless Steel 304 Couplings meet UL6A
 Stainless Steel 304 Couplings available only upto 4" size
 OD for Stainless Steel Couplings may be larger than shown

CONDUIT NIPPLES

Galvanized Steel, Aluminum and Stainless Steel 304



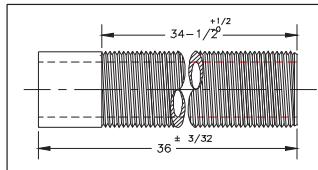
Size	Close Length	Length													
		1-1/2	2	2-1/2	3	3-1/2	4	4-1/2	5	5-1/2	6	8	10	12	
1/2	1-1/8														
3/4	1-3/8														
1	1-1/2														
1-1/4	1-5/8														
1-1/2	1-3/4														
2	2														
2-1/2	2-1/2														
3	2-5/8														
3-1/2	2-3/4														
4	2-7/8														
5	3														
6	3-1/8														

Notes:

Sizes shown in yellow are available from stock
 Lengths longer than 12" and Special Threading available upon request
 Both ends NPT threads conform to ANSI B1.20.1

RUNNING THREAD

Size	Threads per inch	OD
1/2	14	1.034
3/4	14	1.034
1	11-1/2	1.293
1-1/4	11-1/2	1.638
1-1/2	11-1/2	1.877
2	11-1/2	2.351
2-1/2	8	2.841
3	8	3.467
3-1/2	8	3.968
4	8	4.466
5	8	5.528
6	8	6.585



Notes:

Running Threads have NPSM Threads
 Running Threads are Galvanized

Conduit Pipe Products Company
 A Member of The Phoenix Forge Group
 1501 West Main Street
 West Jefferson, OH 43162

Phone: 614 879-9114
 Toll Free: 800 848-6125
 Fax: 614 879-5185
 Website: www.conduitpipe.com

Carlton® Rigid Nonmetallic Conduit (RNC), Fittings & Accessories

Carlton® manufactures the most complete line of nonmetallic conduits and fittings in the electrical industry. Carlton Schedule 40 and Schedule 80 conduits are designed for use aboveground and underground as described in the National Electrical Code. Specify only Carlton conduits and fittings to insure raceway system integrity.

Features

Ease of Installation Nonmetallic conduits are 1/4 to 1/5 the weight of metallic systems, can be installed in less than half the time, and are easily fabricated on the job.

Safety Nonmetallic conduits are nonconductive, assuring a safe system.

Impact Resistant Carlton Schedule 40 and Schedule 80 nonmetallic conduits are resistant to sunlight and are listed for exposed or outdoor usage. The use of expansion fittings allows the system to expand and contract with temperature variations.

Corrosion Resistant Carlton conduits and fittings are nonmetallic and will not rust or corrode.

Carlton nonmetallic Schedule 40 and Schedule 80 conduits and elbows are manufactured to NEMA TC-2, Federal specification WC1094A and UL 651 specifications. Fittings are manufactured to NEMA TC-3, Federal specification WC1094A and UL514B. Both conduit and fittings carry respective UL or ETL Listings and UL or ETL labels.

Schedule 40 PVC Rigid Nonmetallic Conduit (RNC). (Heavy Wall EPC)

Listed for underground applications encased in concrete or direct burial. Also for use in exposed or concealed applications aboveground.

- Sunlight resistant
- Rated for use with 90°C conductors
- Superior weathering characteristics



RUS Listed

Schedule 40 Heavy Wall

With Integral Bell*



Part No.		Nom. Size	Std. Crate Qty.		Wt. Per 100'	Dimensions		
10'	20'		10'	20'		O.D.	I.D.	Wall
49005-010		3/8"	6000'		17	.840	.622	.109
49007-010	49007-020	3/4"	4400'	8800'	23	1.050	.824	.113
49008-010	49008-020	1"	3600'	7200'	34	1.315	1.049	.133
49009-010	49009-020	1 1/4"	3300'	6600'	46	1.660	1.380	.140
49010-010	49010-020	1 1/2"	2250'	4500'	55	1.900	1.610	.145
49011-010	49011-020	2"	1400'	2800'	73	2.375	2.067	.154
49012-010	49012-020	2 1/2"	930'	1860'	124	2.875	2.469	.203
49013-010	49013-020	3"	880'	1760'	163	3.500	3.068	.216
49014-010	49014-020	3 1/2"	630'	1260'	196	4.000	3.548	.226
49015-010	49015-020	4"	570'	1140'	232	4.500	4.026	.237
49016-010	49016-020	5"	380'	760'	315	5.563	5.047	.258
49017-010	49017-020	6"	260'	520'	409	6.625	6.065	.280

Rigid nonmetallic conduit is normally supplied in standard 10' lengths, with one belled end per length. For specific requirements, it may be produced in lengths shorter or longer than 10', with or without belled ends.

Use RNC Fittings with Schedule 40 and Schedule 80 Conduit.

- Notes:**
1. Special fittings and conduit sizes will be quoted on request.
 2. DON'T FORGET TO ORDER CEMENT.
 3. Carlton reserves the right to ship to the nearest unitized quantity.

Schedule 80 PVC Rigid Nonmetallic Conduit (RNC) (Extra Heavy Wall EPC-80)



RUS Listed

Listed for use in aboveground and belowground applications that are subject to physical damage.

- Sunlight resistant • Rated for use with 90°C conductors • Superior weathering characteristics
- For use in areas subject to physical damage

With Integral Bell*



Schedule 80 Extra Heavy Wall

Part No.		Nom. Size	Std. Crate Qty. Wt. Per			Dimensions		
10'	20'		10'	20'	100'	O.D.	I.D.	Wall
49405-010	49405-020	3/4"	6000'	12000'	21	0.840	0.546	.147
49407-010	49407-020	3/4"	4400'	8000'	30	1.050	.742	.154
49408-010	49408-020	1"	3600'	7200'	44	1.315	.957	.179
49409-010	49409-020	1 1/4"	3300'	6600'	60	1.660	1.278	.191
49410-010	49410-020	1 1/2"	2250'	3600'	72	1.900	1.500	.200
49411-010	49411-020	2"	1400'	2800'	101	2.375	1.939	.218
49412-010	49412-020	2 1/2"	930'	1880'	154	2.875	2.323	.276
49413-010	49413-020	3"	880'	1760'	210	3.500	2.900	.300
49415-010	49415-020	4"	570'	1140'	308	4.500	3.826	.337
49416-010	—	5"	380'	—	428	5.563	4.813	.375
49417-010	49417-020	6"	260'	520'	588	6.625	5.761	4.32

Rigid nonmetallic conduit is normally supplied in standard 10' lengths, with one belled end per length. For specific requirements, it may be produced in lengths shorter or longer than 10', with or without belled ends.

Use RNC Fittings with Schedule 40 and Schedule 80 Conduit.

- Notes: 1. Special fittings and conduit sizes will be quoted on request.
2. DON'T FORGET TO ORDER CEMENT.
3. Carlon reserves the right to ship to the nearest unitized quantity.

Support of Carlon Rigid Nonmetallic Conduit in Aboveground Installations

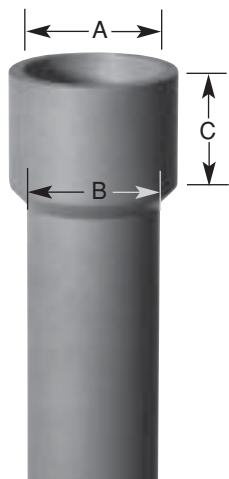
Table 352.30(B) NEC shows the support requirements for Schedule 40 and Schedule 80 rigid PVC nonmetallic conduit.

Plastic conduit should always be installed away from steam lines, etc. Support straps should allow for lineal movement caused by expansion and contraction.

Maximum ambient temperature is 122°F (50°C).

Table 352.30(B), NEC

Trade Size	Maximum Spacing Between Supports (feet)
1/2 - 1	3
1 1/4 - 2	5
2 1/2 - 3	6
3 1/2 - 5	7
6	8



Acceptable Dimensions in Inches of Integral Bell per UL 651

Trade Size	A		B		C
	At Entrance (in.)	Minimum	At Bottom (in.)	Minimum	
1/2	0.860	0.844	0.844	0.828	1.375
3/4	1.074	1.054	1.056	1.036	1.500
1	1.340	1.320	1.320	1.300	1.750
1 1/4	1.689	1.665	1.667	1.643	1.875
1 1/2	1.930	1.906	1.906	1.882	2.750
2	2.405	2.381	2.381	2.357	3.250
2 1/2	2.905	2.875	2.883	2.853	3.250
3	3.530	3.500	3.507	3.477	3.875
3 1/2	4.065	3.965	4.007	3.977	3.875
4	4.565	4.465	4.506	4.476	4.625
5	5.643	5.543	5.583	5.523	5.625
6	6.708	6.608	6.644	6.584	6.375

Typical Properties of Conduit Raw Material Compound

Thermal

	ASTM Test	Typical Values
Co-efficient of Thermal Expansion-inch/inch/°F (properties @ 73.4°F)	D696	3.38 x 10 ⁻⁵
Heat Distortion °F at 264 psi	D648	160°F
Thermal Conductivity BTU (hr.) (ft.) (°F/in.)	N/A	1.3

Electrical

	ASTM Test	Typical Values
Dielectrical Strength volts/mil	D149	1100
Dielectric Constant 60 CPS @ 30°C	D150	4.00
Power Factor 60 CPS @ 30°C	D150	1.93

Mechanical

	ASTM Test	Typical Values
Specific Gravity	D792	1.43 - 1.6
Tensile Strength (psi) @ 73.4°F	D638	5,000-6,500
Izod Impact ft lbs./in. of notch	D256	0.65 - 1.5
Flexural Strength (psi)	D790	12,500
Compressive Strength (psi)	D695	9,000
Hardness (Durometer D)	D2240	85

Impedance (Volts lost per ampere per 100 feet)

	3∅90% P.F.	80% P.F.	1∅90% P.F.	80% P.F.
Steel Conduit	.0118	.0123	.0136	.0142
Schedule 40®	.0105	.0106	.0121	.0122

Using 250 KCMil Cu. conductor. comparable values for other conductor sizes.

Wire Fill

Maximum number of conductors in Schedule 40 PVC conduit

(Based on Table 1, Chapter 9 of the NEC)

Type Letters	Conductor Size AWG, MCM	Trade Size															
		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/4	5	6	8		
THWN	14	13	24	39	69	94	154										
	12	10	18	29	51	79	114	164									
	10	6	11	18	32	44	73	194	160								
	8	3	5	9	19	22	36	51	71	106	136						
THHN	6	1	4	6	11	15	26	37	57	76	98	125	154				
	4	1	2	4	7	9	16	22	35	47	60	75	94	137	236		
FEP (14 thru 2)	3	1	1	3	6	8	13	19	29	39	51	64	90	116	201		
FEPB (14 thru 8)	2	1	1	3	5	7	11	16	25	33	43	54	67	97	169		
	1	1	1	1	3	5	9	12	18	25	32	49	59	72	125		
PFA (14 thru 4/0)	1/0		1	1	3	4	7	10	15	21	27	33	42	61	105		
	2/0		1	1	2	3	6	8	13	17	22	28	35	51	88		
PFAH (14 thru 4/0)	3/0		1	1	1	3	5	7	11	14	18	23	29	42	73		
	4/0		1	1	1	2	4	6	9	12	15	19	24	35	61		
Z (14 thru 4/0)	250			1	1	1	3	4	7	10	12	16	20	28	49		
	300			1	1	1	3	4	6	8	11	13	17	24	42		
	350			1	1	1	2	3	5	7	9	12	15	21	37		
XHHW (4 thru 500MCM)	400			1	1	1	3	5	6	8	10	13	19	33			
	500				1	1	1	2	4	5	7	9	11	16	27		
	600				1	1	1	1	3	4	5	7	9	13	22		
	700					1	1	1	3	4	5	6	8	11	19		
XHHW	750				1	1	1	1	2	3	4	6	7	11	19		
	6	1	3	5	9	13	21	30	47	63	81	102	128	185	320		
	600				1	1	1	1	3	4	5	7	9	13	22		
	700					1	1	1	3	4	5	6	7	11	19		
750					1	1	1	2	3	4	6	7	10	18			

Maximum number of conductors in Schedule 80 PVC conduit

(Based on Table 1, Chapter 9 of the NEC)

Conductor Size AWG, MCM	Trade Size	Trade Size															
		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5						
# 14	THW	4	8	13	24	34	57	82	128								
	THHN	10	19	33	58	81	135	194	0								
12	THW	3	6	11	20	28	47	67	105	183							
	THHN	8	14	24	43	60	100	144	0								
10	THW	3	5	9	16	22	37	54	85	148							
	THHN	5	9	15	27	38	64	92	143	0							
8	THW	1	2	4	8	11	19	28	44	77	121						
	THHN	1	4	7	13	18	31	45	70	123	195						
6	THW	1	1	3	6	8	14	20	32	56	88						
	THHN	1	3	5	9	13	22	32	50	88	140						
4	THW	0	1	2	4	6	10	15	24	42	66						
	THHN	1	1	3	6	8	13	20	31	54	86						
3	THW	0	1	1	4	5	9	13	20	36	57						
	THHN	1	1	2	5	7	11	17	26	46	73						
2	THW	0	1	1	3	4	8	11	17	31	49						
	THHN	1	1	1	4	5	9	14	22	38	61						
1	THW	0	1	1	1	3	5	8	13	22	35						
	THHN	0	1	1	3	4	7	10	16	28	45						
0	THW	0	0	1	1	2	4	7	11	19	30						
	THHN	0	1	1	2	3	6	8	13	24	38						
00	THW	0	0	1	1	1	4	6	9	16	26						
	THHN	0	1	1	1	3	5	7	11	20	32						
000	THW	0	0	1	1	1	3	5	8	14	22						
	THHN	0	0	1	1	2	4	6	9	16	26						
0000	THW	0	0	1	1	1	3	4	6	11	18						
	THHN	0	0	1	1	1	3	5	8	14	22						
250	THW	0	0	0	1	1	1	3	5	9	14						
	THHN	0	0	0	1	1	2	4	6	11	18						
300	THW	0	0	0	1	1	1	3	4	8	13						
	THHN	0	0	0	1	1	1	3	5	9	15						
350	THW	0	0	0	1	1	1	2	4	7	11						
	THHN	0	0	0	1	1	1	3	4	8	13						
400	THW	0	0	0	0	1	1	1	3	6	10						
	THHN	0	0	0	1	1	1	2	4	7	12						
500	THW	0	0	0	0	1	1	1	3	5	8						
	THHN	0	0	0	0	1	1	1	3	6	10						
600	THW	0	0	0	0	0	1	1	1	4	7						
	THHN	0	0	0	0	1	1	1	3	5	8						
700	THW	0	0	0	0	0	1	1	1	3	6						
	THHN	0	0	0	0	0	1	1	1	3	6						

Weight Comparison

Carlson Schedule 40® rigid nonmetallic conduit compared to other rigid conduit in pounds per 100 feet (approx.)

Nom. Size	Carlson Schedule 40® Rigid Nonmetallic Conduit	Carlson Schedule 80® Rigid Nonmetallic Conduit	Aluminum	Electrical Metallic Tubing (EMT)	Inter-mediate Metal Conduit (IMC)	Rigid Metal Conduit (RMC)
1/2	18	22	27	30	57	79
3/4	23	29	36	46	78	105
1	35	43	53	66	112	153
1 1/4	48	60	70	96	114	201
1 1/2	57	72	86	112	176	246
2	76	100	116	142	230	334
2 1/2	125	153	183	230	393	527
3	164	212	239	270	483	690
3 1/2	198		288	350	561	831
4	234	310	340	400	625	982
5	317	431	465	Not Made	Not Made	1344
6	412	592	612	Not Made	Not Made	1770

Expansion and Contraction

Temperature Considerations for Rigid Nonmetallic Conduit Compensation for Linear Expansion

Like all construction materials, PVC will expand or contract with variations in temperatures. The coefficient of linear expansion in PVC conduit is 3.38×10^{-5} in./in./°F as compared to 1.2×10^{-5} for aluminum and 0.6×10^{-5} for steel. An expansion coupling is needed whenever the change in length due to temperature variation will exceed 1/2 in.

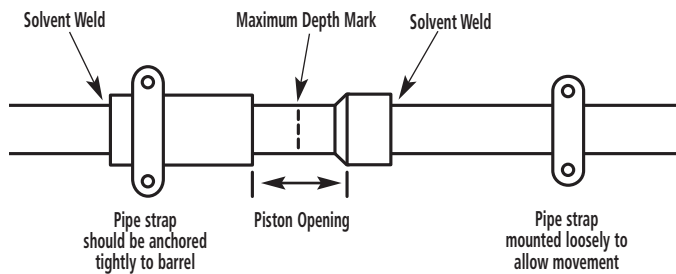
Add 30°F to the estimated temperature range when conduit is installed in direct sunlight to allow for radiant heating.

An expansion coupling consists of two sections of conduit, one telescoping inside another. When installing expansion couplings, alignment of piston and barrel is important. Be sure to mount expansion joint level for best performance.

For a vertical run, the expansion coupling must be installed close to the top of the run with the barrel jointing down, in order that rain water does not run into the opening. The lower end of the conduit run must be secured at the bottom so that any length change due to temperature variation will result in an upward movement.

Expansion Characteristics of PVC Rigid Nonmetallic Conduit Coefficient of Thermal Expansion = 3.38×10^{-5} in./in./°F

Temperature Change in Degrees F	Length Change in inches per 100 Ft. of PVC Conduit	Temperature Change in Degrees F	Length Change in inches per 100 Ft. of PVC Conduit	Temperature Change in Degrees F	Length Change in inches per 100 Ft. of PVC Conduit	Temperature Change in Degrees F	Length Change in inches per 100 Ft. of PVC Conduit
5	0.2	55	2.2	105	4.2	155	6.3
10	0.4	60	2.4	110	4.5	160	6.5
15	0.6	65	2.6	115	4.7	165	6.7
20	0.8	70	2.8	120	4.9	170	6.9
25	1.0	75	3.0	125	5.1	175	7.1
30	1.2	80	3.2	130	5.3	180	7.3
35	1.4	85	3.4	135	5.5	185	7.5
40	1.6	90	3.6	140	5.7	190	7.7
45	1.8	95	3.8	145	5.9	195	7.9
50	2.0	100	4.1	150	6.1	200	8.1



Determine the Piston Opening

The expansion joint must be installed to allow both expansion and contraction of the conduit run. The correct piston opening for any installation condition should use the following formula:

$$O = \left[\frac{T_{\max} - T_{\text{installed}}}{\Delta T} \right] E$$

Where:

- O = Piston opening (in.)
- T max = Maximum anticipated temperature of conduit (°F)
- T inst. = Temperature of conduit at time of installation (°F)
- Δ T = Total change in temperature of conduit (°F)
- E = Expansion allowance built into each expansion coupling (in.)

Example

380 ft. of conduit is to be installed on the outside of a building exposed to the sun in a single straight run. It is expected that the conduit will vary in temperature from 0°F in the winter to 140°F in the summer (this includes the 30°F for radiant heating from the sun.) The installation is to be made at a conduit temperature of 90°F. From the table, a 140°F temperature change will cause a 5.7 in. length change in 100 ft. of conduit. The total change for this example is $5.7 \times 3.8 = 21.67$ " which should be rounded to 22". The number of expansion couplings will be $22 \times$ coupling range (4" for Carlon trade sizes 1/2" through 1-1/2", and 8" for sizes 2" through 6"). If the E945D coupling is used, the number will be $22 \times 4 = 5.50$ which should be rounded to 6. The coupling should be placed at 62 ft. intervals (380 x 6). the proper piston setting at the time of installation is calculated as explained above.

$$O = \left[\frac{140 - 90}{140} \right] 4.0 = 1.4 \text{ in.}$$

Insert the piston into the barrel to the maximum depth. Place a mark on the piston at the end of the barrel. To properly set the piston, pull the piston out of the barrel to correspond to the 2.1 in. calculated above. See drawing at lower left.

Summary

1. Anticipate expansion and contraction of PVC conduit in aboveground, exposed installation.
2. Use an expansion coupling when length change due to temperature variation will exceed 1/2".
3. PVC conduit expands 4.1" for each 100 feet of run and a 100°F temperature change.
4. Align expansion coupling with the conduit run to prevent binding.
5. Follow the instructions to set the piston opening.
6. Rigidly fix the outer barrel of the expansion coupling so it cannot move. Mount the conduit connected to the piston loosely enough to allow the conduit to move as the temperature changes.

Corrosion Resistance of Carlon Schedule 40 and Schedule 80 PVC Conduit and Fittings

Carlon Schedule 40 and Schedule 80 are generally acceptable for use in environments containing the chemicals below. These environmental resistance ratings are based upon tests where the specimens were placed in complete submergence in the reagent listed. Schedule 40 and Schedule 80 can be used in many process areas where

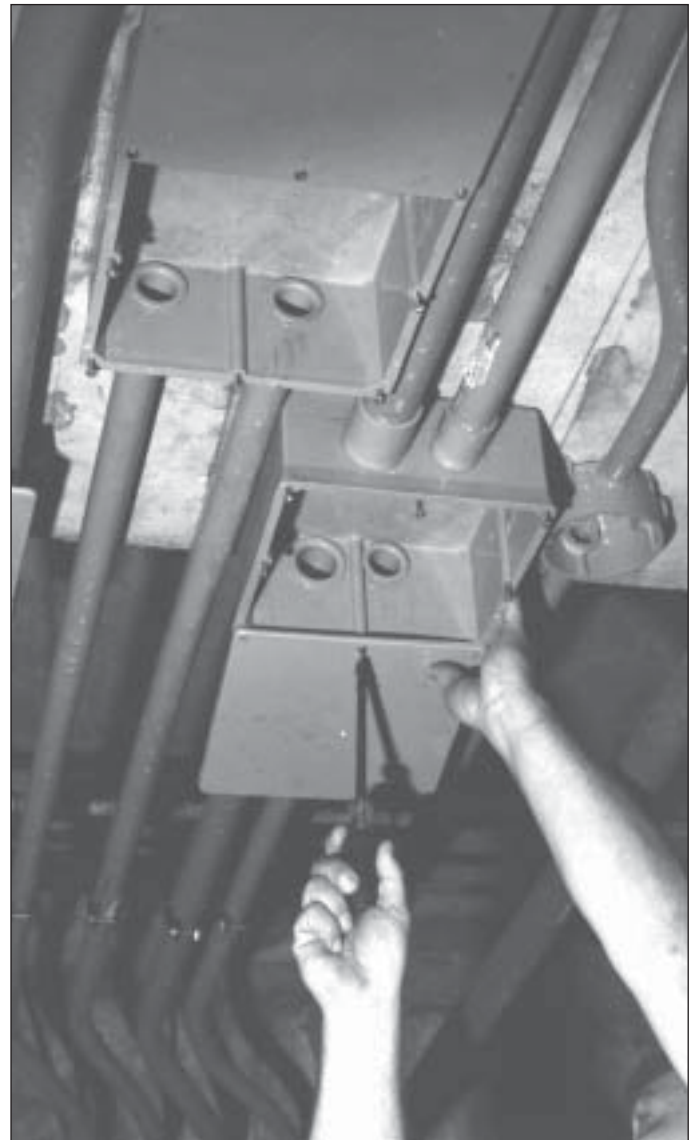
chemicals not on this list are manufactured or used because worker safety requirements dictate that any air presence or splashing be at a very low level.

If there are any questions for specific suitability in a given environment, prototype samples should be tested under actual conditions.

Acetic Acid 0-20%	Butyl Alcohol	Fluorine Gas – Wet	Mercurous Nitrate	Sodium Arsenite
Acetic Acid 20-30%	Butyl Phenol	Fluorine Gas – Dry	Mercury	Sodium Benzoate
Acetic Acid 30-60%	Butylene	Fluoroboric Acid	Methyl Sulfate	Sodium Bicarbonate
Acetic Acid 80%	Butyric Acid	Fluorosilicic Acid	Methylene Chloride	Sodium Bisulfate
Acetic Acid – Glacial	Calcium Bisulfite	Formaldehyde	Mineral Oils	Sodium Bisulfite
Acetic Acid Vapors	Calcium Carbonate	Formic Acid	Naphthalene	Sodium Bromide
Acetylene	Calcium Chlorate	Fructose	Nickel Chloride	Sodium Chlorate
Adipic Acid	Calcium Chloride	Gallic Acid	Nickel Nitrate	Sodium Chloride
Alum	Calcium Hydroxide	Gas – Coke Oven	Nitric Acid, Anhydrous	Sodium Cyanide
Aluminum Chloride	Calcium Hypochlorite	Gas – Natural (Dry)	Nitric Acid 20%	Sodium Dichromate
Aluminum Fluoride	Calcium Nitrate	Gas – Natural (Wet)	Nitric Acid 40%	Sodium Ferricyanide
Aluminum Hydroxide	Calcium Sulfate	Gasoline – Sour	Nitric Acid 60%	Sodium Ferrocyanide
Aluminum Oxychloride	Carbonic Acid	Gasoline – Refined	Nitrobenzene	Sodium Fluoride
Aluminum Nitrate	Carbon Dioxide Gas – Wet	Glucose	Nitrous Oxide	Sodium Hydroxide
Aluminum Sulfate	Carbon Dioxide – Aqueous Solution	Glycerine (Glycerol)	Oils and Fats	Sodium Hypochlorite
Ammonia-Dry Gas	Carbon Monoxide	Glycol	Oils – Petroleum – (See Type)	Sodium Nitrate
Ammonium Bifluoride	Caustic Potash	Glycolic Acid	Oleic Acid	Sodium Nitrite
Ammonium Carbonate	Caustic Soda	Green Liquor (Paper Industry)	Oxalic Acid	Sodium Sulfate
Ammonium Chloride	Chloracetic Acid	Heptane	Palmitic Acid 10%	Sodium Sulfide
Ammonium Hydroxide 28%	Chloral Hydrate	Hexanol, Tertiary	Perchloric Acid 10%	Sodium Sulfite
Ammonium Metaphosphate	Chlorine Gas (Dry)	Hydrobromic Acid 20%	Phenylhydrazine Hydrochloride	Sodium Thiosulfate (Hypo)
Ammonium Nitrate	Chlorine Gas (Moist)	Hydrochloric Acid 0% - 25%	Phosgene, Gas	Stannic Chloride
Ammonium Persulfate	Chlorine Water	Hydrochloric Acid 25% - 40%	Phosphoric Acid – 0-25%	Stannous Chloride
Ammonium Phosphate – Neutral	Chlorosulfonic Acid	Hydrocyanic Acid or Hydrogen Cyanide	Phosphoric Acid – 25-50%	Stearic Acid
Ammonium Sulfate	Chrome Alum	Hydrofluoric Acid 10%	Phosphoric Acid – 50-85%	Sulfur
Ammonium Sulfide	Chromic Acid 10%	Hydrofluorosilicic Acid	Photographic Chemicals	Sulfur Dioxide – Gas Dry
Ammonium Thiocyanate	Chromic Acid 30%	Hydrogen Phosphide	Plating Solutions	Sulfur Trioxide
Amyl Alcohol	Chromic Acid 40%	Hydrogen Sulfide – Dry	Potassium Bicarbonate	Sulfuric Acid – 0-10%
Antraquinone	Chromic Acid 50%	Hydrogen Sulfide – Aqueous Solution	Potassium Bichromate	Sulfuric Acid – 10-75%
Antraquinonesulfonic Acid	Citric Acid	Hydroquinone	Potassium Borate	Sulfuric Acid – 75-90%
Antimony Trichloride	Copper Chloride	Hydroxylamine Sulfate	Potassium Bromide	Sulfurous Acid
Aqua Regia	Copper Cyanide	Iodine	Potassium Carbonate	Tannic Acid
Arsenic Acid 80%	Copper Fluoride	Kerosene	Potassium Chloride	Tanning Liquors
Arylsulfonic Acid	Copper Nitrate	Lactic Acid 28%	Potassium Chromate	Tartaric Acid
Barium Carbonate	Copper Sulfate	Lauric Acid	Potassium Cyanide	Titanium Tetrachloride
Barium Chloride	Cottonseed Oil	Lauryl Chloride	Potassium Dichromate	Triethanolamine
Barium Hydroxide	Cresylic Acid 50%	Lauryl Sulfate	Potassium Ferricyanide	Trimethyl Propane
Barium Sulfate	Crude Oil – Sour	Lead Acetate	Potassium Ferrocyanide	Trisodium Phosphate
Barium Sulfide	Crude Oil – Sweet	Lime Sulfur	Potassium Fluoride	Turpentine
Beet – Sugar Liquor	Deminerzalized Water	Linoleic Acid	Potassium Hydroxide	Urea
Benzene Sulfonic Acid 10%	Dextrin	Linseed Oil	Potassium Nitrate	Vinegar
Benzoic Acid	Dextrose	Lubricating Oils	Potassium Perborate	Whiskey
Bismuth Carbonate	Diglycolic Acid	Magnesium Carbonate	Potassium Perchlorite	White Liquor (Paper Industry)
Black Liquor (Paper Industry)	Disodium Phosphate	Magnesium Chloride	Potassium Permanganate 10%	Wines
Bleach – 12.5% Active CL ₂	Ethyl Alcohol	Magnesium Hydroxide	Potassium Persulfate	Zinc Chloride
Borax	Ethylene Glycol	Magnesium Nitrate	Potassium Sulfate	Zinc Chromate
Boric Acid	Fatty Acids	Magnesium Sulfate	Propane	Zinc Cyanide
Brine	Ferric Chloride	Maleic Acid	Propyl Alcohol	Zinc Nitrate
Breeder Pellets – Dane. Fish	Ferric Nitrate	Malic Acid	Silicic Acid	Zinc Sulfate
Bromic Acid	Ferric Sulfate	Mercuric Chloride	Silver Cyanide	
Bromine – Water	Ferrous Chloride	Mercuric Cyanide	Silver Nitrate	
Butane	Ferrous Sulfate		Silver Plating Solutions	
Butadiene			Sodium Acetate	

Suggested Format for Specifying Carlon Nonmetallic Conduit, Conduit Fittings and Junction Boxes

- A.** The Carlon rigid nonmetallic conduit system shall be installed as indicated on the drawings and as specified herein.
- B.** All wiring shall be installed in Carlon rigid nonmetallic conduit. All conduit shall be secured by means of proper fittings. All fittings shall be Carlon.
- C.** Carlon outlet boxes, fittings and junction boxes shall be used for all outlets, pull boxes and junction points. (Lighting fixtures shall not be supported or hung from PVC junction boxes but be supported in position by other means.)
- D.** Exposed conduits shall be mounted securely by suitable hangers or straps with the maximum spacing of points of supports not greater than indicated by Section 352.30 of the NEC.
- E.** Except where embedded in concrete or direct buried, Carlon conduit shall be supported to permit adequate lineal movement to allow for expansion and contraction of conduit due to temperature change.
- F.** For aboveground installations where temperature change in excess of 14°C (25°F) is anticipated, expansion joints shall be installed. See Table 352.44(A) NEC for expansion characteristics.
- G.** Proper care shall be taken when field bending is employed to maintain the internal diameter and wall thickness of the conduit.



Type UA

UL Listed, CSA Certified
Liquid-Tight Flexible Metal Conduit (LFMC)



Construction

- Constructed of continuously interlocked hot dipped zinc galvanized steel core for exceptional crush and corrosion resistance.
- Durable, sunlight resistant and flame retardant thermoplastic PVC jacket that resists heat, oil and chemical breakdown.
- Convenient markings in feet for easy measurement.

Installation

- Conduit used with standard liquid-tight connector for easy installation. IP 67 Rated when installed with approved connectors.
- Approved for both exposed and concealed locations. Rated for temperature ranges -4°F to + 140°F (-20°C to +60°C).
- Approved as an equipment grounding conductor in sizes 3/8" through 1-1/4" if the total grounding path is 6 ft. or less and the circuit conductors are protected by over 20 amps for 3/8" and 1/2" and 60 amps or less for 3/4" through 1-1/4".
- Suitable for use in hazardous locations per NEC Articles 501 Class I Div. 2, Article 502 Class II Div. 1 & 2, Article 503 Class III Div. 1 & 2.
- Manufactured in a full range of trade sizes from 3/8" through 4".
- Approved for direct burial and in concrete trade sizes 3/8" through 4".
- Complies with UL Standard 360 File No. E18917; CSA C22.2 File No. 158897; and NEC Article 350.



Square-Locked Design with integral bonding wire 3/8" through 1-1/4"



Interlocked Design 1-1/2" through 4" with no bonding wire

NEC Articles

- Article 250.118 (6) Equipment Grounding
- Article 300.22 (D) Information Technology Equipment
- Article 350 Liquid-Tight Flexible Metal Conduit (LFMC)
- Article 501.10 (B) (2) Class I Div. 2
- Article 502.10 (A) (2) and (B) (2) Class II Div. 1 & 2
- Article 503.10 (A) (3) and (B) Class III Div. 1 & 2
- Article 620.21 Elevator Wiring Methods
- Article 645.5 (E) (2) Under Raised Floors

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Type UA

Gray or Black thermoplastic PVC jacket with integral bonding wire 3/8" through 1-1/4"



Product Specifications

Ordering Information

Electrical Trade Size	Inside Diameter		Outside Diameter		Approx Inside Bend Radius	Approx Weight lbs.	Small Carton		Standard Carton		Small Reels		Standard Reels		
	Inches	mm	MIN.	MAX.			MIN.	MAX.	Length	NAED	Length	NAED	Length	NAED	Length
3/8	12	1.04	.504	.600	.710	3.0	25	100	34200	200	34204	200	34204	1500	34200
1/2	16	1.022	.842	.822	.840	3.5	20	100	34212	200	34214	500	34214	1000	34210
3/4	21	.820	.840	1.030	1.050	5.0	44	100	34222	150	34221	500	34228	1000	34229
1	27	1.041	1.066	1.290	1.315	6.0	73			100	34231	400	34238		
1-1/4	35	1.380	1.410	1.630	1.660	7.0	100			50	34241	250	34248		
1-1/2	41	1.575	1.600	1.865	1.900	5.5	112			50	34251	150	34254		
2	53	2.020	2.045	2.340	2.375	7.0	148			50	34261	100	34268		
2-1/2	68	2.420	2.505	2.940	2.975	9.5	180			25	34272			400	34274
3	78	2.670	2.700	3.460	3.500	15	255			25	34284			400	34284
3-1/2	94	3.500	3.540	3.960	4.000	16	344			25	34294			400	34294
4	100	4.000	4.040	4.460	4.500	17	382			25	34294			400	34294

Note: 1. Gray - Specification above.
2. Black - Change third number in NAED code to "0".
3. Other Colors are available upon request.

TYPICAL SPECIFICATION:

Conduit shall be Anaconda SEALTITE® Type UA. Conduit shall provide a flexible liquid-tight raceway for wiring and shall be constructed of continuously interlocked hot dipped zinc galvanized steel core with an integral bonding wire in sizes 3/8" thru 1-1/4". Conduit shall have a sunlight resistant and flame retardant PVC jacket in electrical trade sizes 3/8" thru 4". Conduit shall be UL listed, CSA certified and IP 67 rated when installed with approved end connectors.

Dimensions – Base Spacers

Part No.	Size*	A	C	D (Dia.)	Std. Ctn. Qty.
S288JHN	2x1½	4.25	4.12	2.50	100
S288JJN	2x2	4.25	4.62	2.50	100
S288JLN	2x3	4.25	5.62	2.50	100
S288LHN	3x1½	4.81	5.25	3.63	90
S288LJN	3x2	4.81	5.75	3.63	80
S288LLN	3x3	4.81	6.75	3.63	60
S288NFN	4x1	4.50	5.75	4.63	70
S288NHN	4x1½	5.31	6.25	4.63	50
S288NJN	4x2	5.31	6.75	4.63	50
S288NLN	4x3	5.31	7.75	4.63	60
S288PHN	5x1½	5.84	7.31	5.69	50
S288PJN	5x2	5.84	7.81	5.69	60
S288PLN	5x3	5.84	8.81	5.69	50
S288RHN	6x1½	6.38	8.38	6.75	50
S288RJN	6x2	6.38	8.88	6.75	50
S288RLN	6x3	6.38	9.88	6.75	40
S288SHN	8x1½	7.38	10.30	8.75	30
S288SJN	8x2	7.38	10.76	8.75	30

Dimensions – Intermediate Spacers

Part No.	Size*	B	C	D (Dia.)	Std. Ctn. Qty.
S289JHN	2x1½	3.88	4.12	2.50	120
S289JJN	2x2	4.38	4.62	2.50	100
S289JLN	2x3	5.38	5.62	2.50	80
S289LHN	3x1½	5.01	5.25	3.63	100
S289LJN	3x2	5.51	5.75	3.63	80
S289LLN	3x3	6.51	6.75	3.63	60
S289NFN	4x1	5.51	5.73	4.63	70
S289NHN	4x1½	6.01	6.25	4.63	60
S289NJN	4x2	6.51	6.75	4.63	60
S289NLN	4x3	7.51	7.75	4.63	50
S289PHN	5x1½	7.07	7.31	5.69	50
S289PJN	5x2	7.57	7.81	5.69	50
S289PLN	5x3	8.57	8.81	5.69	30
S289RHN	6x1½	8.14	8.38	6.75	50
S289RJN	6x2	8.64	8.88	6.75	40
S289RLN	6x3	9.64	9.88	6.75	30
S289SHN	8x1½	10.14	10.30	8.75	30
S289SJN	8x2	10.64	10.76	8.75	30

*First number indicates trade size of duct, second number indicates separation between conduits or ducts.

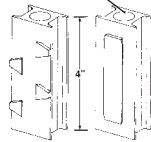
Accessories



Snap-Loc® Reducer

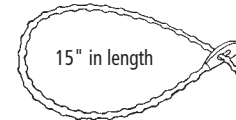
Part No.	Size	Std. Ctn. Qty.
S287F	1"	100
S287J	2"	100

Hole Dia. = .688 min.
.750 max.



Rebar Holder

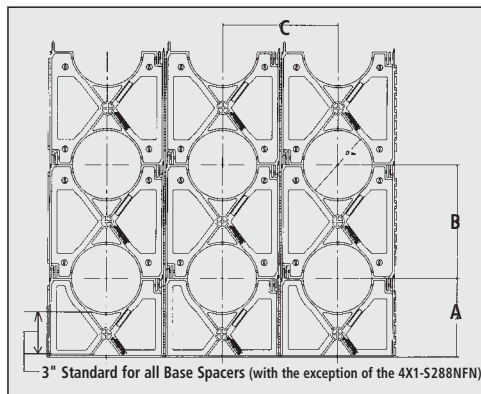
Part No.	Std. Ctn. Qty.
S258RH	100



Beaded Strap

Part No.	Std. Ctn. Qty.
S28612	1 Bag of 250

Specifications



Suggested Specification

(Duct) (Conduit) bank shall be encased in concrete with at least three inches of concrete at the top and bottom and two inches on each side. A horizontal and vertical separation between the ducts of ____* inches shall be maintained by installing Carlon high impact spacers with horizontal and vertical locking intervals of ____** feet.

*Standard Separations of 1", 1½", 2", and 3" are available.

**Preferred interval between spacer assemblies is 8 to 10 feet.

Installation note

The Spacers and Rebar Holder are designed with a dovetail tongue and groove feature for easy installation.

If required to permanently fix the position of a group of Spacers and/or Rebar Holder, the following are recommended procedures:

1. Use Carlon Quick-set Cement glue during assembly or spot glue after assembly to secure.
2. During assembly, deform the edge of the tongue or groove portion of the dovetail slide with a pair of pliers or similar tool. This deformation will create an interference, restricting movement.
3. An assembled system may be wired together for additional support.

IMPORTANT:

1. The use of duct spacers for direct burial may result in excessive point deflections unless proper design engineering is applied, such as the proper compaction of the appropriate backfill material.
2. Carlon is not responsible for Snap-Loc Spacers used in direct bury applications... design engineers and contractors are responsible for the design of the installation.



STRAIGHT SQUEEZE CONNECTORS - MALLEABLE IRON



Straight Squeeze Connectors
Insulated



Straight Squeeze Connectors
Uninsulated

CATALOG NUMBER	TRADE SIZE	UNIT CARTON QTY.	SHIP CARTON QTY.	UPC BAR CODE
Straight Squeeze Connector, Insulated – Malleable Iron				
3301	3/8"*		50	
3302	1/2"		50	
3302-8	1/2"	1	25	
3303	3/4"	—	25	—
3303-8	3/4"	1	20	
3304	1"	—	25	—
3304-8	1"	1	5	
3305	1-1/4"	—	25	—
3306	1-1/2"	—	25	—
3308	2"	—	10	—
3310	2-1/2"		1	
3312	3"		1	
3314	3-1/2"		1	
3316	4"		1	
Straight Squeeze Connector, Uninsulated – Malleable Iron				
2101	3/8"*		50	
2102	1/2"		50	
2102-8	1/2"	1	25	
2103	3/4"		25	
2103-8	3/4"	1	20	
2104	1"		25	
2104-8	1"	1	5	
2105	1-1/4"		25	
2106	1-1/2"		25	
2108	2"		10	
2110	2-1/2"		1	
2112	3"		1	
2114	3-1/2"		1	
2116	4"		1	



APPLICATIONS

- For use in dry locations to bond flexible metal conduit to a box or enclosure

PRODUCT FEATURES

- All malleable construction insures mechanical protection for the raceway
- Electro zinc plated for added corrosion protection
- UPC bar coded fittings are individually polybagged with a preprinted UPC-A bar code and packaged in pre-scored tear top cartons for an attractive presentation

COMPLIANCE

- UL Listed E195969

* For 1/2" knockout

PVC Cement

BIZLINE RXP PART#	CANTEX PART#	CARLON PART #	IPEX Part#	I2of5	SIZE	BIZLINE DESCRIPTION	STD. PKG.
SOLVENT CEMENT FOR CONDUIT AND FITTINGS							
CONDUIT CEMENT NO. 99 LOW VOC							
✓ CEMENT050PTLV	7210611	N/A	N/A	30088700012128	½ PINT	PVC CEMENT LOW VOC 1/2PT	24
✓ CEMENTPTLV	7210612	N/A	N/A	30088700012135	PINT	PVC CEMENT LOW VOC PT	12
✓ CEMENTQTLV	7210613	N/A	N/A	30088700012142	QUART	PVC CEMENT LOW VOC QT	12
✓ CEMENT1GALLV	7210615	N/A	N/A	30088700012159	GALLON	PVC CEMENT LOW VOC GAL	6
CONDUIT CEMENT GRAY							
✓ CEMENTPTGRAY	7210502	N/A	N/A	30088700012265	PINT	PVC CEMENT GRAY PT	12
✓ CEMENTQTGRAY	7210503	N/A	N/A	30088700012272	QUART	PVC CEMENT GRAY QT	12
CONDUIT CEMENT ALL WEATHER FAST-DRY							
✓ CEMENT050PTAW	7210411	VC9984	N/A	30088700015808	½ PINT	CEMENT ALL WEATHER 1/2PT	24
✓ CEMENTPTAW	7210412	VC9983	N/A	30088700158154	PINT	CEMENT ALL WEATHER PT	12
✓ CEMENTQTAW	7210413	VC9982	N/A	30088700015822	QUART	CEMENT ALL WEATHER QT	12
PRIMER NO. 10							
✓ PRIMER050PT	7211301	VC9904	C100PT5	30088700547125	½ PINT	PRIMER 1/2PT	24
✓ PRIMERPT	7211302	VC9903	C100PT	30088700547132	PINT	PRIMER PT	12
✓ PRIMERQT	7211303	VC9902	C100QT	30088700547149	QUART	PRIMER QT	12
✓ PRIMERGAL	7211305	N/A	N/A	30088700547156	GALLON	PRIMER GAL	6
SOLVENT CEMENT FOR EZ-FLEX ENT							
ENT NO. 50 CEMENT							
CEMENTENT#50PT	7210411	VC9993	N/A	30088700010209	PINT	CEMENT ENT PINT	12
CEMENTENT#50QT	7210413	VC9992	N/A	30088700010216	QUART	CEMENT ENT GAL	12



SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CANTEX #99 GRY Low VOC PVC Plastic Pipe Cement

PRODUCT USE: Low VOC Solvent Cement for PVC Plastic Pipe

SUPPLIER:

MANUFACTURER: IPS Corporation
17109 South Main Street, Gardena, CA 90248-3127
P.O. Box 379, Gardena, CA 90247-0379
Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

Medical: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION**GHS CLASSIFICATION:**

Health	Environmental	Physical
Acute Toxicity: Category 4	Acute Toxicity: None Known	Flammable Liquid Category 2
Skin Irritation: Category 3	Chronic Toxicity: None Known	
Skin Sensitization: NO		
Eye: Category 2		

GHS LABEL:

Signal Word:
DangerWHMIS CLASSIFICATION: CLASS B, DIVISION 2
CLASS D, DIVISION 2B**Hazard Statements**

H225: Highly flammable liquid and vapor
H319: Causes serious eye irritation
H332: Harmful if inhaled
H335: May cause respiratory irritation
H336: May cause drowsiness or dizziness
H351: Suspected of causing cancer
EUH019: May form explosive peroxides

Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P261: Avoid breathing dust/fume/gas/mist/vapors/spray
P280: Wear protective gloves/protective clothing/eye protection/face protection
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P403+P233: Store in a well ventilated place. Keep container tightly closed
P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH	CONCENTRATION
			Pre-registration Number	% by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	10 - 30
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	20 - 40
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	5 - 15
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	15 - 35

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog. HMIS NFPFA 0-Minimal

Unsuitable Extinguishing Media: Water spray or stream. Health 2 2 1-Slight

Exposure Hazards: Inhalation and dermal contact. Flammability 3 3 2-Moderate

Combustion Products: Oxides of carbon, hydrogen chloride and smoke. Reactivity 0 0 3-Serious
PPE B 4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.
Prevent contact with skin or eyes (see section 8).

Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.

Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.

Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
Do not eat, drink or smoke while handling.

Storage: Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight.
Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
	Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E
	Acetone	500 ppm	750 ppm	1000 ppm	N/E	N/E	500 ppm	3000 ppm	750 ppm

Engineering Controls: Use local exhaust as needed.**Monitoring:** Maintain breathing zone airborne concentrations below exposure limits.**Personal Protective Equipment (PPE):****Eye Protection:** Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.**Skin Protection:** Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.

Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Gray, medium syrupy liquid	Odor Threshold:	0.88 ppm (Cyclohexanone)
Odor:	Ketone	Boiling Range:	56°C (133°F) to 156°C (313°F)
pH:	Not Applicable	Evaporation Rate:	> 1.0 (BUAC = 1)
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	Flammability:	Category 2
Boiling Point:	56°C (133°F) Based on first boiling component: Acetone	Flammability Limits:	LEL: 1.1% based on Cyclohexanone UEL: 12.8% based on Acetone
Flash Point:	-20°C (-4°F) TCC based on Acetone	Vapor Pressure:	190 mm Hg @ 20°C (68°F) Acetone
Specific Gravity:	0.920 @ 23°C (73°F)	Vapor Density:	>2.0 (Air = 1)
Solubility:	Solvent portion soluble in water. Resin portion separates out.	Other Data: Viscosity:	Medium bodied
Partition Coefficient n-octanol/water:	Not Available		
Auto-ignition Temperature:	321°C (610°F) based on THF		
Decomposition Temperature:	Not Applicable		
VOC Content:	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 510 g/l.		

SECTION 10 - STABILITY AND REACTIVITY

Stability:	Stable
Hazardous decomposition products:	None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.
Conditions to avoid:	Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials:	Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:

Inhalation:	Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact:	Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact:	Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion:	May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects:

Toxicity:	Category 2 Carcinogen	LC ₅₀	Target Organs
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m ³ (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m ³ (rat)	STOT SE3
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)	
Acetone	Oral: 5800 mg/kg (rat)	Inhalation 50,100 mg/m ³ (rat)	STOT SE3

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	None Known
Mobility:	In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 510 g/l.
Degradability:	Not readily biodegradable
Bioaccumulation:	Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name:	Adhesives
Hazard Class:	3
Secondary Risk:	None
Identification Number:	UN 1133
Packing Group:	PG II
Label Required:	Class 3 Flammable Liquid
Marine Pollutant:	NO

EXCEPTION for Ground Shipping

DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" .

TDG INFORMATION

TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information:	Highly Flammable, Irritant, Carc. Cat. 2	Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)
Symbols:	F, Xi	
Risk Phrases:	R11: Highly flammable. R20-Harmful by inhalation. R36/37: Irritating to eyes and respiratory system.	R66: Repeated exposure may cause skin dryness or cracking R67: Vapors may cause drowsiness and dizziness
Safety Phrases:	S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S25: Avoid contact with eyes.	S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33: Take precautionary measures against static discharges. S46: If swallowed, seek medical advice immediately and show this container or label.

SECTION 16 - OTHER INFORMATION

Specification Information:	All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).	
Department issuing data sheet:	Safety Health & Environmental Affairs	
Training necessary:	Yes, training in practices and procedures contained in product literature.	
Reissue date / reason for reissue:	1/2/2015 / Updated GHS Standard Format	
Intended Use of Product:	Solvent Cement for PVC Plastic Pipe	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CANTEX #99 CLEAR Low VOC PVC Plastic Pipe Cement
PRODUCT USE: Low VOC Solvent Cement for PVC Plastic Pipe
SUPPLIER:

MANUFACTURER: IPS Corporation
 17109 South Main Street, Gardena, CA 90248-3127
 P.O. Box 379, Gardena, CA 90247-0379
 Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) **Medical:** CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION**GHS CLASSIFICATION:**

Health	Environmental	Physical
Acute Toxicity: Category 4 Skin Irritation: Category 3 Skin Sensitization: NO Eye: Category 2	Acute Toxicity: None Known Chronic Toxicity: None Known	Flammable Liquid Category 2

GHS LABEL:

Signal Word:
Danger

WHMIS CLASSIFICATION: CLASS B, DIVISION 2
CLASS D, DIVISION 2B

Hazard Statements

H225: Highly flammable liquid and vapor
 H319: Causes serious eye irritation
 H332: Harmful if inhaled
 H335: May cause respiratory irritation
 H336: May cause drowsiness or dizziness
 H351: Suspected of causing cancer
 EUH019: May form explosive peroxides

Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
 P261: Avoid breathing dust/fume/gas/mist/vapors/spray
 P280: Wear protective gloves/protective clothing/eye protection/face protection
 P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P403+P233: Store in a well ventilated place. Keep container tightly closed
 P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH	CONCENTRATION
			Pre-registration Number	% by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	5 - 15
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	30 - 45
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	5 - 15
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	15 - 35

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
 * Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).
 # indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog. **HMIS** **NFPA** **0-Minimal**

Unsuitable Extinguishing Media: Water spray or stream. **Health** **2** **2** **1-Slight**

Exposure Hazards: Inhalation and dermal contact. **Flammability** **3** **3** **2-Moderate**

Combustion Products: Oxides of carbon, hydrogen chloride and smoke. **Reactivity** **0** **0** **3-Serious**

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks. **PPE** **B** **4-Severe**

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
 Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.
 Prevent contact with skin or eyes (see section 8).

Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.

Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.

Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
 Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
 Do not eat, drink or smoke while handling.

Storage: Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight.
 Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
 Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA	CAL/OSHA PEL	CAL/OSHA	CAL/OSHA STEL
						PEL-Ceiling		Ceiling	
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
	Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E
	Acetone	500 ppm	750 ppm	1000 ppm	N/E	N/E	500 ppm	3000 ppm	750 ppm

Engineering Controls: Use local exhaust as needed.

Monitoring: Maintain breathing zone airborne concentrations below exposure limits.

Personal Protective Equipment (PPE):

Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.

Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
 Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.
 With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, regular syrupy liquid	Odor Threshold:	0.88 ppm (Cyclohexanone)
Odor:	Ketone	Boiling Range:	56°C (133°F) to 156°C (313°F)
pH:	Not Applicable	Evaporation Rate:	> 1.0 (BUAC = 1)
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	Flammability:	Category 2
Boiling Point:	56°C (133°F) Based on first boiling component: Acetone	Flammability Limits:	LEL: 1.1% based on Cyclohexanone UEL: 12.8% based on Acetone
Flash Point:	-20°C (-4°F) TCC based on Acetone	Vapor Pressure:	190 mm Hg @ 20°C (68°F) Acetone
Specific Gravity:	0.894 @ 23°C (73°F)	Vapor Density:	>2.0 (Air = 1)
Solubility:	Solvent portion soluble in water. Resin portion separates out.	Other Data: Viscosity:	Regular bodied
Partition Coefficient n-octanol/water:	Not Available		
Auto-ignition Temperature:	321°C (610°F) based on THF		
Decomposition Temperature:	Not Applicable		
VOC Content:	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 510 g/l.		

SECTION 10 - STABILITY AND REACTIVITY

Stability:	Stable
Hazardous decomposition products:	None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.
Conditions to avoid:	Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials:	Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:

Inhalation:	Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact:	Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact:	Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion:	May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects:

Category 2 Carcinogen

Toxicity:

	LD ₅₀	LC ₅₀	Target Organs
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m ³ (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m ³ (rat)	STOT SE3
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)	
Acetone	Oral: 5800 mg/kg (rat)	Inhalation 50,100 mg/m ³ (rat)	STOT SE3

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	None Known
Mobility:	In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 510 g/l.
Degradability:	Not readily biodegradable
Bioaccumulation:	Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name:	Adhesives
Hazard Class:	3
Secondary Risk:	None
Identification Number:	UN 1133
Packing Group:	PG II
Label Required:	Class 3 Flammable Liquid
Marine Pollutant:	NO

EXCEPTION for Ground Shipping**DOT Limited Quantity:** Up to 5L per inner packaging, 30 kg gross weight per package.**Consumer Commodity:** Depending on packaging, these quantities may qualify under DOT as "ORM-D" .**TDG INFORMATION**

TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information:	Highly Flammable, Irritant, Carc. Cat. 2	Ingredient Listings:	USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)
Symbols:	F, Xi	R66:	Repeated exposure may cause skin dryness or cracking
Risk Phrases:	R11: Highly flammable. R20-Harmful by inhalation. R36/37: Irritating to eyes and respiratory system.	R67:	Vapors may cause drowsiness and dizziness
Safety Phrases:	S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S25: Avoid contact with eyes.	S26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
		S33:	Take precautionary measures against static discharges.
		S46:	If swallowed, seek medical advise immediately and show this container or label.

SECTION 16 - OTHER INFORMATION

Specification Information:		All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
Department issuing data sheet:	Safety Health & Environmental Affairs	
Training necessary:	Yes, training in practices and procedures contained in product literature.	
Reissue date / reason for reissue:	1/2/2015 / Updated GHS Standard Format	
Intended Use of Product:	Solvent Cement for PVC Plastic Pipe	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CANTEX ALL WEATHER CLR Low VOC Cement for Plastic Pipe

PRODUCT USE: Low VOC Solvent Cement for PVC Plastic Pipe

SUPPLIER:

MANUFACTURER:

IPS Corporation
17109 South Main Street, Gardena, CA 90248-3127
P.O. Box 379, Gardena, CA 90247-0379
Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

Medical: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION**GHS CLASSIFICATION:**

Health	Environmental	Physical
Acute Toxicity: Category 4	Acute Toxicity: None Known	Flammable Liquid Category 2
Skin Irritation: Category 3	Chronic Toxicity: None Known	
Skin Sensitization: NO		
Eye: Category 2		

GHS LABEL:



Signal Word:

Danger

WHMIS CLASSIFICATION:

CLASS B, DIVISION 2

CLASS D, DIVISION 2B

Hazard Statements	Precautionary Statements
H225: Highly flammable liquid and vapor	P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
H319: Causes serious eye irritation	P261: Avoid breathing dust/fume/gas/mist/vapors/spray
H335: May cause respiratory irritation	P280: Wear protective gloves/protective clothing/eye protection/face protection
H336: May cause drowsiness or dizziness	P337+P313: Get medical advice/attention
H351: Suspected of causing cancer	P403+P233: Store in a well ventilated place. Keep container tightly closed
EUH019: May form explosive peroxides	P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH	CONCENTRATION
			Pre-registration Number	% by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	30 - 50
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	4 - 15
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	8 - 17
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	5 - 15

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes:	Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact:	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation:	Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion:	Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media:	Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.	HMIS	NFPA	0-Minimal
Unsuitable Extinguishing Media:	Water spray or stream.	Health	2	1-Slight
Exposure Hazards:	Inhalation and dermal contact	Flammability	3	2-Moderate
Combustion Products:	Oxides of carbon, hydrogen chloride and smoke	Reactivity	0	3-Serious
		PPE	B	4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions:	Keep away from heat, sparks and open flame. Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment. Prevent contact with skin or eyes (see section 8).
Environmental Precautions:	Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up:	Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
Materials not to be used for clean up:	Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling:	Avoid breathing of vapor, avoid contact with eyes, skin and clothing. Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods. Do not eat, drink or smoke while handling.
Storage:	Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight. Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates. Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
	Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E
	Acetone	500 ppm	750 ppm	1000 ppm	N/E	N/E	500 ppm	3000 ppm	750 ppm

Engineering Controls: Use local exhaust as needed.

Monitoring: Maintain breathing zone airborne concentrations below exposure limits.

Personal Protective Equipment (PPE):

Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.

Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion. Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, medium syrupy liquid	Odor Threshold:	0.88 ppm (Cyclohexanone)
Odor:	Ketone	Boiling Range:	56°C (133°F) to 156°C (313°F)
pH:	Not Applicable	Evaporation Rate:	> 1.0 (BUAC = 1)
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	Flammability:	Category 2
Boiling Point:	56°C (133°F) Based on first boiling component: Acetone	Flammability Limits:	LEL: 1.1% based on Cyclohexanone UEL: 12.8% based on Acetone
Flash Point:	-20°C (-4°F) TCC based on Acetone	Vapor Pressure:	190 mm Hg @ 20°C (68°F) Acetone
Specific Gravity :	0.934 @23°C (73°F)	Vapor Density:	>2.0 (Air = 1)
Solubility:	Solvent portion soluble in water. Resin portion separates out.	Other Data: Viscosity:	Medium bodied
Partition Coefficient n-octanol/water:	Not Available		
Auto-ignition Temperature:	321°C (610°F) based on THF		
Decomposition Temperature:	Not Applicable		
VOC Content:	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 510 g/l.		

SECTION 10 - STABILITY AND REACTIVITY

Stability:	Stable
Hazardous decomposition products:	None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.
Conditions to avoid:	Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials:	Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:

Inhalation:	Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact:	Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact:	Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion:	May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects:

Category 2 Carcinogen

Toxicity:LD₅₀LC₅₀**Target Organs**

Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m ³ (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m ³ (rat)	STOT SE3
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)	
Acetone	Oral: 5800 mg/kg (rat)	Inhalation 50,100 mg/m ³ (rat)	STOT SE3

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	None Known
Mobility:	In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 510 g/l.
Degradability:	Not readily biodegradable
Bioaccumulation:	Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name:	Adhesives
Hazard Class:	3
Secondary Risk:	None
Identification Number:	UN 1133
Packing Group:	PG II
Label Required:	Class 3 Flammable Liquid
Marine Pollutant:	NO

EXCEPTION for Ground Shipping

DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D".

TDG INFORMATION

TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information:	Highly Flammable, Irritant, Carc. Cat. 2	Ingredient Listings:	USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)
Symbols:	F, Xi	R66:	Repeated exposure may cause skin dryness or cracking
Risk Phrases:	R11: Highly flammable. R36/37: Irritating to eyes and respiratory system.	R67:	Vapors may cause drowsiness and dizziness
Safety Phrases:	S2: Keep out of the reach of children S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking.	S25:	Avoid contact with eyes.
		S26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
		S33:	Take precautionary measures against static discharges.

SECTION 16 - OTHER INFORMATION

Specification Information:		All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
Department issuing data sheet:	Safety Health & Environmental Affairs	
Training necessary:	Yes, training in practices and procedures contained in product literature.	
Reissue date / reason for reissue:	1/2/2015 / Updated GHS Standard Format	
Intended Use of Product:	Solvent Cement for PVC Plastic Pipe	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

CANTEX R10 PUR Low VOC Primer for PVC and CPVC Plastic Pipe

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CANTEX R10 PUR Low VOC Primer for PVC and CPVC Plastic Pipe
PRODUCT USE: Low VOC Primer for PVC and CPVC Plastic Pipe
SUPPLIER:

MANUFACTURER: IPS Corporation
 17109 South Main Street, Gardena, CA 90248-3127
 P.O. Box 379, Gardena, CA 90247-0379
 Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) **Medical:** CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health	Environmental	Physical
Acute Toxicity: Category 4 Skin Irritation: Category 3 Skin Sensitization: NO Eye: Category 2	Acute Toxicity: None Known Chronic Toxicity: None Known	Flammable Liquid Category 2

GHS LABEL:



Signal Word:
Danger

WHMIS CLASSIFICATION: CLASS B, DIVISION 2
CLASS D, DIVISION 2B

Hazard Statements

H225: Highly flammable liquid and vapor
 H319: Causes serious eye irritation
 H332: Harmful if inhaled
 H335: May cause respiratory irritation
 H336: May cause drowsiness or dizziness
 H351: Suspected of causing cancer
 EUH019: May form explosive peroxides

Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
 P261: Avoid breathing dust/fume/gas/mist/vapors/spray
 P280: Wear protective gloves/protective clothing/eye protection/face protection
 P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P403+P233: Store in a well ventilated place. Keep container tightly closed
 P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH	CONCENTRATION
			Pre-registration Number	% by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	15 - 25
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	15 - 25
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	10 - 30
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	25 - 40

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
 * Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).
 # indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog. **HMIS** 2 **NFPA** 0-Minimal
Unsuitable Extinguishing Media: Water spray or stream. **Health** 2 **2** 1-Slight
Exposure Hazards: Inhalation and dermal contact **Flammability** 3 **3** 2-Moderate
Combustion Products: Oxides of carbon and smoke **Reactivity** 0 **0** 3-Serious
PPE B **4** 4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
 Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.
 Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
 Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
 Do not eat, drink or smoke while handling.
Storage: Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight.
 Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
 Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
	Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E
	Acetone	500 ppm	750 ppm	1000 ppm	N/E	N/E	500 ppm	3000 ppm	750 ppm

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
 Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.
 With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear or purple, thin liquid	Odor Threshold:	0.88 ppm (Cyclohexanone)
Odor:	Ethereal	Boiling Range:	56°C (133°F) to 156°C (313°F)
pH:	Not Applicable	Evaporation Rate:	> 1.0 (BUAC = 1)
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	Flammability:	Category 2
Boiling Point:	56°C (133°F) Based on first boiling component: Acetone	Flammability Limits:	LEL: 1.1% based on Cyclohexanone UEL: 12.8% based on Acetone
Flash Point:	-20°C (-4°F) TCC based on Acetone	Vapor Pressure:	190 mm Hg @ 20°C (68°F) Acetone
Specific Gravity:	0.842 @23°C (73°F)	Vapor Density:	>2.0 (Air = 1)
Solubility:	Solvent portion soluble in water. Resin portion separates out.	Other Data: Viscosity:	Water-thin
Partition Coefficient n-octanol/water:	Not Available		
Auto-ignition Temperature:	321°C (610°F) based on THF		
Decomposition Temperature:	Not Applicable		
VOC Content:	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 550 g/l.		

SECTION 10 - STABILITY AND REACTIVITY

Stability:	Stable
Hazardous decomposition products:	None in normal use. When forced to burn, this product gives off oxides of carbon and smoke.
Conditions to avoid:	Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials:	Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:

Inhalation:	Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact:	Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact:	Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion:	May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects:

Category 2 Carcinogen

Toxicity:	LD ₅₀	LC ₅₀	Target Organs
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m ³ (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m ³ (rat)	STOT SE3
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)	
Acetone	Oral: 5800 mg/kg (rat)	Inhalation 50,100 mg/m ³ (rat)	STOT SE3

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	None Known
Mobility:	In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 550 g/l.
Degradability:	Not available
Bioaccumulation:	Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name:	Flammable Liquid, n.o.s. (Acetone, Tetrahydrofuran)
Hazard Class:	3
Secondary Risk:	None
Identification Number:	UN 1993
Packing Group:	PG II
Label Required:	Class 3 Flammable Liquid
Marine Pollutant:	NO

EXCEPTION for Ground Shipping

DOT Limited Quantity: Up to 1L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D".

TDG INFORMATION

TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	Flammable Liquid, n.o.s. (Acetone, Tetrahydrofuran)
UN NUMBER/PACKING GROUP:	UN 1993, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information:	Highly Flammable, Irritant, Carc. Cat. 2	Ingredient Listings:	USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCC, Japan MITI (ENCS)
Symbols:	F, Xi		
Risk Phrases:	R11: Highly flammable. R20: Harmful by inhalation. R36/37: Irritating to eyes and respiratory system.	R66: Repeated exposure may cause skin dryness or cracking R67: Vapors may cause drowsiness and dizziness	
Safety Phrases:	S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S25: Avoid contact with eyes.	S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33: Take precautionary measures against static discharges. S46: If swallowed, seek medical advise immediately and show this container or label.	

SECTION 16 - OTHER INFORMATION

Specification Information:	All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).	
Department issuing data sheet:	Safety Health & Environmental Affairs	
Training necessary:	Yes, training in practices and procedures contained in product literature.	
Reissue date / reason for reissue:	1/2/2015 / Updated GHS Standard Format	
Intended Use of Product:	Primer for PVC and CPVC Plastic Pipe	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.