Electrical Nonmetallic Tubing & Fittings









ELECTRICAL SYSTEM

ELECTRICAL NONMETALLIC TUBING & FITTINGS

- Easy installation
- Complete concrete-tight system
- Approved for use in fire-rated floor/ceiling assemblies

We build tough products for tough environments®



KWIKON: AN INTEGRATED ENT SYSTEM THAT



SAVES TIME & MONEY



TUBING

Light and flexible, Kwikon tubing comes with color-coded stripes for easy cable identification. Use Kwikon for communications (yellow), fire alarm and emergencies (red) and power (blue).

PVC. Made rugged and concrete-tight, our fittings require no solvent welding or tape, and can be joined to any UL-listed and CSA ENT.



SLAB BOXES

Available in a variety of styles, Kwikon slab boxes are engineered tough and completely concrete-tight. No more stuffing boxes with paper to keep concrete out.



FORM STUBBIES

Kwikon stubbies are used to hold conduit ends firmly in place until concrete is poured and cured. They eliminate the need to drill holes in plywood forms, and they protect the ENT from possible breakage during the removal of wood forms after the concrete has set.



ACCESSORIES

To round out our fully integrated ENT system, Kwikon also provides a wide range of ENT wall boxes, ceiling boxes, plaster rings and covers for multiple applications.



KWIKON: THE ENT SYSTEM CONTRACTORS D

APPLICATIONS

Since its introduction in 1986, Kwikon has been trusted by electricians, engineers, building owners and general contractors across North America. Thanks largely to its rugged reliability and quick, easy installation, Kwikon has established itself as the market leader.

While metal was the industry's material of choice in the past, Kwikon has proved itself a more versatile, flexible and affordable improvement. Coiled in long convenient reels, it's simple and fast to measure, cut and fit—no special tools or training are needed. Kwikon's corrugated construction is so flexible it can be bent easily by hand. And our patented Kwikon couplings and connectors, with their six locking tab design, provide an instant snap-on, lock-in fit that easily meets UL requirements for conduit pull-out.

What's more, it comes backed by a national sales network of Kwikon specialists dedicated to making sure every job you do turns out right. No wonder so many contractors agree Kwikon is number one.

INSLAB FLOORS

With its concrete-tight design and easy-toinstall angled stubbies, Kwikon offers the perfect ENT solution for inslab floors.

MARKETS

- Residential (Low or High Rise)
- Commercial (Low or High Rise)
- Institutional (Prisons, Schools, Universities)
- Hospitals and Nursing Homes (Only in nonpatient care areas)
- Stadiums and Arenas



WALLS

Kwikon's flexibility and ease of handling in metal, wood or block walls reduce the time and labor needed to install electrical raceways.



FLOOR / CEILING ASSEMBLIES

Kwikon's light weight and versatility make it perfect for slab applications. Integrated with our slab boxes, Kwikon can be used to install lights and ceiling fans.



A CLEAN CONNECTION

Kwikon ENT Stubbies provide a clean 1-1/2" stub of ENT to make your connection while protecting the ENT from the traditional breakage that can occur when the forms are removed.

CODES & STANDARDS

NEC, ARTICLE 362

Rules governing the installation of KWIKON ENT are described in the 2002 National Electrical Code, ANSI/NFPA Article 362. KWIKON ENT systems are recognized for use in places of assembly as referenced in Articles 518 and 520.

KWIKON ENT may be installed and concealed in floors, walls, ceilings and suspended ceilings where a thermal barrier of material has a minimum of fifteen minute finish rating.

KWIKON ENT may be installed and exposed in areas not subject to physical damage and where the building does not exceed three floors above grade [Section 362.10 (1)].

NOTE: KWIKON ENT may penetrate firerated walls, floors or ceilings with a ULlisted or recognized through-penetration fire-stop system.

FIRE-RESISTIVE CONSTRUCTION AND WALL ASSEMBLIES

KWIKON ENT tubing, fittings and slab boxes are approved for use in non-combustible 2 hour and 4 hour fire-rated floor/ceiling assemblies. Normal weight concrete cover must be provided; a minimum of 2-1/8" for 2 hour assemblies and 2-3/8" for 4 hour assemblies.

[ULI File: E 78276 and ULC File: R-19226].

Kwikon Electrical Nonmetallic Tubing and Kwikon fittings have been investigated for use in a non-load-bearing wall and partition assembly. The report (ULC CR2196) concludes the wall assemblies with Kwikon ENT and fittings will provide a 2 hour resistance to the passage of the flame and dangerous transmission of heat.

[ULC File: CR1296 and UL File: E122659]



KWIKON: TOUGHER THAN ANY OTHER ENT S

As everyone knows, accidents happen...especially on construction sites. Workers trip, knock over equipment, drop tools. A good measure of an ENT's strength is how it performs on the job site. Made of heavy-duty, impact-resistant PVC, Kwikon is tough enough to withstand the day-to-day bumps and knocks of any job site. As a result, Kwikon reduces costly construction site damage and saves money by reducing waste.



YSTEM ON THE MARKET

SUITABLE FOR CONCRETE ENCASEMENT

Every contractor's worst nightmare is a product that doesn't work or hold up in poured concrete; the costs of replacement and repair can be tremendous. Every Kwikon product is designed for concrete encasement, requiring no solvent welding or tape around the connections, or paper stuffed inside.

PULL RESISTANT

Once a length of Kwikon tubing is connected to a coupling or connector, it stays connected, thanks to our unique six locking tab design. With a pull-out resistance of up to 175 lbs., our patented snap-on, lock-in system provides a seal that easily meets UL requirements for conduit pull-out.



FIRE RESISTANT

Kwikon ENT tubing, fittings and slab boxes are approved for use in noncombustible 2 hour and 4 hour fire-rated floor/ceiling assemblies.



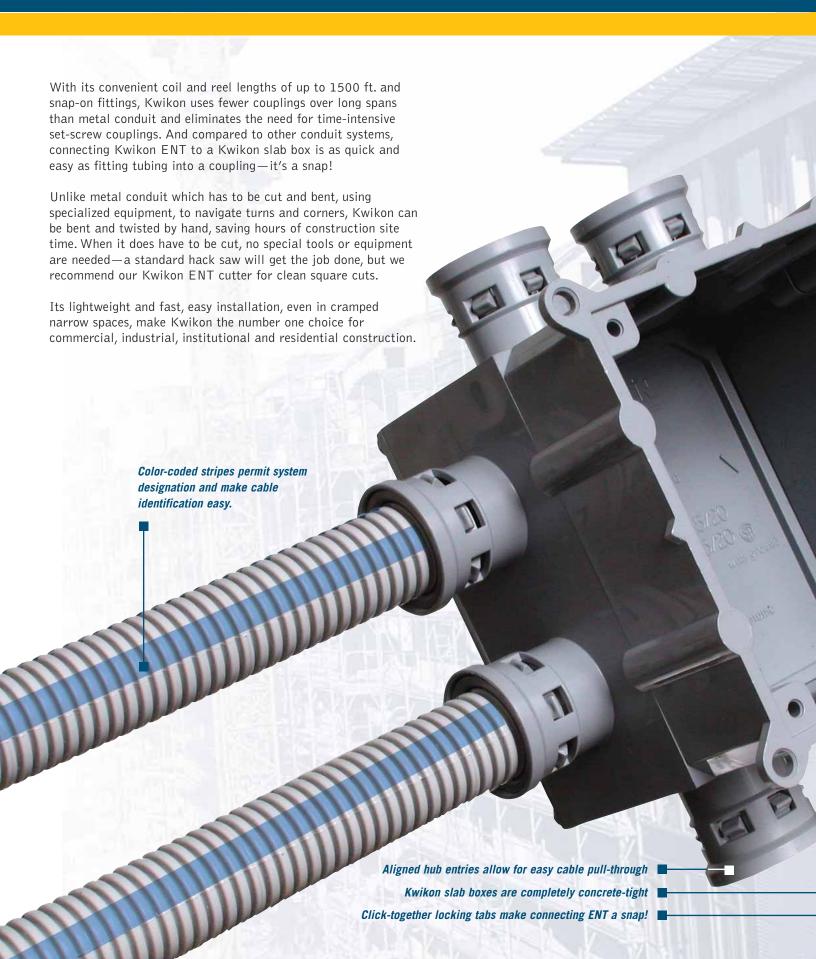
Patented "six locking tab" design creates a strong, pull-out resistant and concrete tight seal

Flexible enough to be bent by hand, yet tough enough to withstand crushing and breaking

IMPACT RESISTANT

Kwikon ENT is made of impact resistant PVC, so it won't break or crack if an object is dropped on it or someone steps on it.

KWIKON: FASTER AND EASIER TO INSTALL T





INSTALLING KWIKON IS THIS EASY

UNROLL KWIKON TO DESIRED LENGTH

Available in convenient coil and reel lengths up to 1,500 ft., Kwikon gives you the flexibility to measure out exactly the amount of tubing you need. Kwikon requires fewer couplings for long spans than metal conduit. It's recommended ENT be securely fastened at 2-3 ft. intervals.



CUT KWIKON WITH AN ENT CUTTER

For straight cuts every time use the Kwikon scissor-style cutting tool. However, no special tools or cutting equipment are necessary. Kwikon can even be cut with a standard utility knife.



MAKE BENDS AND TURNS BY HAND

Unlike metal which has to be cut to fit tight spaces, Kwikon can be bent, turned and manipulated by hand to wind around irregular curves and corners. When bending, ensure the radius of the curve is at least six times the diameter of the tubing.



SIMPLY SNAP CONNECTIONS TOGETHER

With no special tools or equipment needed, Kwikon's unique snap-on fittings quickly and easily join or terminate ENT and provide a concrete-tight connection.



PULL CABLE THROUGH

Kwikon's interior corrugated surface significantly reduces the amount of friction when pulling cables through long runs, even in runs with 90° bends. With Kwikon, you can pull longer runs of cable without worrying about damage.





PRODUCT CATALOG

ENT TUBING

Kwikon ENT Coils - Blue Stripe

Size (inches)	ID (inches)	OD (inches)	Length (feet)	Product Code
1/2	0.574	0.840	200	012031
3/4	0.778	1.050	100	012040
1	1.000	1.315	100	012041
1-1/4	1.340	1.660	500	012046
1-1/2	1.610	1.900	300	012032
2	2.020	2.375	225	012043



Kwikon ENT Reels - Blue Stripe

Size (inches)	ID (inches)	OD (inches)	Length (feet)	Product Code
1/2	0.574	0.840	1500	012002
3/4	0.778	1.050	1000	012011
_ 1	1.000	1.315	750	012021
1-1/4	1.340	1.660	1000	012047
1-1/2	1.610	1.900	750	012033
2	2.020	2.375	500	012044

Kwikon ENT 10' Sticks - Blue Stripe

Size (inches)	Length (feet)	Product Code	Crate Size
1/2	10	012001	3600
3/4	10	012010	2200
1	10	012034	1800

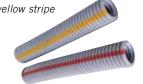


Manufacturer recommends that ENT tubing should not be stored outdoors where subjected to direct sunlight without protective covering, i.e. packaging or tarps.

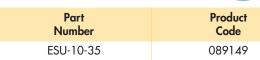
Kwikon ENT Reels - Color Coded

Size	Length	Produc	t Code
(inches)	(feet)	Red	Yellow
1/2	1500	012305	012335
3/4	1000	012307	012337
1	<i>75</i> 0	012310	012340

NOTE: 1-1/4", 1-1/2", 2" red and yellow stripe ENT is available by special order.

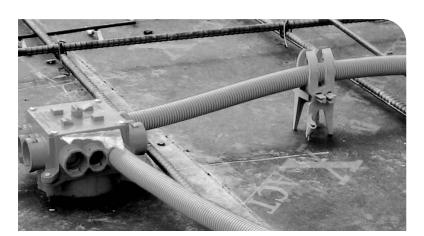


ENT SUPPORT UNIT (ESU)





NEW



DESCRIPTION

The new ENT Support Unit (ESU) is designed to raise the tubing or conduit up off the concrete form during the concrete pour maintaining a level raceway. With its minimal surface contact, the ESU allows for maximum aggregate flow and concrete consolidation.

Easy to use, the ESU snaps around any size of ENT. It is perfect for use in high rise buildings constructed with post-tensioned (PT) concrete slabs.

FEATURES

- One size fits all 1/2" 2"
- Saves time and labor
- Easy locking mechanism
- Securable to the concrete form
- Minimal footprint reduces amount of surface contact





KWIKON FITTINGS

Kwikon Couplings

Size (inches)	Part Number	Product Code
1/2	KC10	089000
3/4	KC15	089001
1	KC20	089002
1-1/4	KC25	189670
1-1/2	KC30	189671
2	KC35	189672

Kwikon Connectors*

	Size (inches)	Part Number	Product Code
	1/2	KTA10	089006
	3/4	KTA15	089007
	1	KTA20	089008
	1-1/4	KTA25	189680
-	1-1/2	KTA30	189681
	2	KTA35	189682

^{*}KTA connectors are supplied with locknuts.

Kwikon Snap-in Connectors

Size (inches)	Part Number	Product Code
1/2	KTS10	089146
3/4	KTS15	089147
1	KTS20	089148



Kwikon Transition Couplings

Size (inches)	Part Number	Product Code
1/2	KTC10	089012
3/4	KTC15	089013
4 1	KTC20	089014

KWIKON ENT STUB DOWN FITTINGS

Kwikon (KT90) Stub Down Fittings (Kwikon x Threaded)

Size (inches)	Part Number	Product Code
1/2	KT90-10	089060
3/4	KT90-15	089059
1	KT90-20	089058



Kwikon (KK90) Stub Down Fittings (Kwikon x Kwikon)

Size (inches)	Part Number	Product Code
1/2	KK90-10	089055
3/4	KK90-15	089056
1	KK90-20	089057



DESCRIPTION

Both styles of stub down fittings are designed for direct connection to ENT on the horizontal by means of our patented six locking tab for concrete encasement Kwikon connection. The flanged base of the threaded 90° stub down offers contractors a NPSC threaded hub connection on the vertical – at the exit point of the slab, allowing for the direct transition to other raceway products.

With our unique Kwikon x Kwikon stub down fitting, the user creates a stub down of ENT without penetrating the form. After the concrete pour the permanently encased fitting will be flush with the bottom of the slab deck, ready to accept the connection of ENT raceway.

Designed to offer the optimal balance of bend radius and overall height in the slab, these fittings provide a bend radius of 2-1/2" while standing less than 3-3/8" tall.

KWIKON

PRODUCT CATALOG

KWIKON STANDARD SLAB BOXES

Kwikon Slab Boxes with Molded Connectors - Volume 44 cu in.

Size (inches)	Part Number	Product Code
8 x 1/2	SMB-H-10	089465
8 x 3/4	SMB-H-15	089462
$4 \times 1/2$, $4 \times 3/4$	SMB-H-10/15	089458
4 x 1/2, 2 x 3/4, 2 x 1	SMB-H-10/20	089466 🎻
4 x 3/4 , 4 x 1	SMB-H-15/20	089464



Kwikon Slab Boxes with Knockouts

(without Molded Connectors) - Volume 44 cu in.

Size (inches)	Part Number	Product Code
8 x 1/2	SMB-10	089460
4 x 1/2, 2 x 3/4, 2 x 1	SMB-10/20	089461

FEATURES

- Approved for support of ceiling fans up to 35 lbs. and luminaries up to 50 lbs.
- Concrete-tight.
- All molded connectors have 360° locking tabs that exceed UL and CSA requirements for pull-out.
- Manufactured from high-impact PVC.
- Nonmetallic/non-conducting/ non-corroding.
- Threaded brass inserts. (10/32 for ceiling fans, 8/32 for luminaries).
- Supplied as a fully assembled one piece unit.
- A polyester film sealing the box opening to prevent possible infiltration during the our.

KWIKON SHALLOW SLAB BOXES

Kwikon Shallow Slab Boxes with Molded Connectors - Volume 36 cu in.

Size (inches)	Part Number	Product Code
8 x 1/2	SMBS-H-10	089480
8 x 3/4	SMBS-H-15	089482
4 x 1/2, 4 x 3/4	SMBS-H-10/15	089481
4 x 1/2, 2 x 3/4 , 2 x 1	SMBS-H-10/20	089483
4 x 3/4 , 4 x 1	SMBS-H-15/20	089484



Kwikon Shallow Slab Boxes with Knockouts

(without Molded Connectors) - Volume 36 cu in.

Size (inches)	Part Number	Product Code
8 x 1/2	SMBS-10	089490
4 x 1/2, 2 x 3/4 , 2 x 1	SMBS-10/20	089491

FEATURES

- Threaded brass inserts (10/32 for ceiling fans, 8/32 for luminaires).
- Approval for support of ceiling fans up to 35 lbs and luminaires up to 50 lbs.
- Overall height of box (2-7/8") allows for use in thinner slabs.
- A polyester film sealing the box opening to prevent possible infiltration during the pour.

KWIKON SQUARE SLAB BOXES

Kwikon Shallow Slab Boxes with Molded Connectors - Volume 44 cu in.

Size (inches)	Part Number	Product Code
8 x 1/2	SSBH-10	089467
8 x 3/4	SSBH-15	089468
4 x 1/2, 4 x 3/4	SSBH-10/15	089469
4 x 1/2, 2 x 3/4, 2 x 1	SSBH-10/20	089474
4 x 3/4 , 4 x 1	SSBH-15/20	089475



FEATURES

- Direct mounting of 4" square covers and plaster rings.
- Mounting feet are located on corners for quicker positioning and securing to form.
- Standard dimension 2-gang cover plates cover all exposed surfaces.
- A polyester film sealing the box opening to prevent possible infiltration during the pour.





SLAB BOXES

KWIKON SLAB BOX ASSEMBLY FOR USE WITH PLASTER RINGS

Kwikon Slab Boxes with Molded Connectors

Size (inches)	Part Number	Product Code
8 x 1/2	MBH-10	089022
8 x 3/4	MBH-15	089018
4 x 1/2, 4 x 3/4	MBH-10/15	089020
4 x 1/2, 2 x 3/4, 2 x 1	MBH-10/20	089019
4 x 3/4 , 4 x 1	MBH-15/20	089021



Kwikon Slab Boxes with Knockouts

Size (inches)	Part Number	Product Code
8 x 1/2	MB-10	089017
$4 \times 1/2$, $2 \times 3/4$, 2×1	MB-10/20	089016

FEATURES

- Approved for support of ceiling fans up to 35 lbs. and luminaries up to 50 lbs.
- Slab box assemblies are supplied without the collar - ready to accept the desired raised cover/plaster ring.
- Plaster rings mount directly to the box opening using the screws supplied.
- Used with raised covers, boxes are perfect for use in shear wall or block construction for wall mounted fixtures and devices.

KWIKON CONCRETE WALL BOXES



3-1/2" Deep Boxes

Size (inches)	Part Number	Product Code
$4 \times 1/2$, $4 \times 3/4$	SVDB-H-10/15	089496
4 x 3/4, 4 x 1	SVDB-H-15/20	089049
4 x 1/2, 2 x 3/4, 2 x 1	SVDB-H-10/20	089052
8 x 3/4	SVDB-H-15	089065



2" Shallow Boxes

Size (inches)	Part Number	Product Code
4 x 1/2	SVSB-H-10	089054
4 x 3/4	SVSB-H-15	089053



FEATURES

- Fully assembled and installation ready
- Perfectly suited for deep or shallow construction preferences
- Kwikon hubs do not protrude inside the box
- Concrete-tight poly film covering the box opening

KWIKON SLAB BOX EXTENSION RING

Adjusts height of SMB/SMBH series slab boxes by 1"

Part	Product
Number	Code
SMBR	089494



EXTENSION RING FEATURES

- Easily installed.
- Quickly adjusts to new height.



PRODUCT CATALOG

ENT FORM STUBBIES

KWIKON ENT FORM STUBBIES

Size (inches)	Part Number	Product Code
1/2	KSTB-10	089330
3/4	KSTB-15	089331
1	KSTB-20	089332
1-1/4	KSTB-25	089333



KWIKON ENT ANGLED FORM STUBBIES

Size (inches)	Part Number	Product Code	
1/2	KASTB-10	089233	100
3/4	KASTB-15	089234	
1	KASTB-20	089235	
1-1/4	KASTB-25	089236	
1-1/2	KASTB-30	089238	



KWIKON ENT MULTI-LINK FORM STUBBIES

Size (inches)	Part Number	Product Code
1/2	MSTB-10	089031
3/4	MSTB-15	089026
1	MSTB-20	089025



KCB-10

DESCRIPTION

Ease and convenience were a priority in the design of Kwikon ENT form stubbies. Contractors use our stubbies to create conduit stub-downs in concrete without needing to drill holes in the plywood form. Available in the original stubby design, the angled version and the Multi-Link, Kwikon form stubbies also protect the ENT from potential damage during the removal of wood forms.

The angled stubby gives you the advantage of positioning the ENT at a lower profile within the slab. It's available in all sizes of ENT up to 1-1/2".

The Multi-Link form stubby is designed in convenient rows of three and feature a snap-together design which enables them to be configured in a variety of tightly grouped formations. It also features a thin removable film over the drop opening that prevents concrete slurry from seeping under the stubby during the concrete pour.

ACCESSORIES

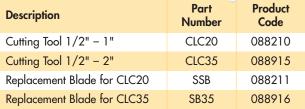
KFC-10

KWBC-10

ENT WALL BOXES, CEILING BOXES, **PLASTER RINGS & COVERS**

Description	Part Number	Product Code
Ceiling Box 2-1/16" Deep	KCB-10	089506
4" Set-Up Box 2-1/16" Deep	KDCB-10/15	089507
Switch Box 3-1/16" Deep	KSB-10/15	089508
4" Square Box 1-1/2" Deep	KDSB-2-10	089509
4" Square Box 2-1/8" Deep	KDSB-2-10/15	089510
Raised 1/2" Single Device	KRC-10	089501
Raised 5/8" Single Device	KRC-15	089502
Raised 1/2" Two Devices	KRCD-2-10	089503
Raised 5/8" Two Devices	KRCD-2-15	089504
Round Flat Cover, 1/2" KO	KFC-10	089505
Square Flat Cover, 1/2" KO	KWBC-10	089500
Voltage Partition	KVP	089512

CUTTING TOOL



KRCD-2-15

KVP



KRCD-2-10







SUGGESTED SPECIFICATIONS

Section 16110 Electrical Raceway Systems

PART 1: GENERAL

1.1 REFERENCES

- A. Standards referred to in this section are:
 - 1. UL 1653 Electrical Nonmetallic Tubing.
 - 2. NEMA TC-13 Electrical Nonmetallic Tubing.



PART 2: PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable manufacturers are listed below
 - Electrical Nonmetallic Tubing: a. Kwikon by IPEX
 - 2. Electrical Nonmetallic Tubing Fittings: a. Kwikon by IPEX
 - 3. Electrical Nonmetallic Tubing Boxes: a. Kwikon by IPEX
- B. All ENT tubing, ENT fittings, ENT boxes and accessories shall be manufactured by the same company so as to form a complete ENT system.
- C. ENT systems shall be approved for use in fire resistance rated concrete floor-ceiling assemblies with fire resistance ratings up to 4 hours.

2.2 RACEWAYS

- A. ENT raceway shall be color coded to indicate the wiring system. Blue stripe for power, red stripe for fire alarm/emergency systems and yellow stripe for data/communications.
- B. ENT raceway shall be listed to UL1653 and manufactured in accordance with NEMA TC-13.

2.3 FITTINGS

- A. ENT Fittings shall be manufactured of high-impact PVC
- B. ENT Fittings shall meet the following requirements:
 - 1. Six locking tabs located every 60° providing 360° contact.
 - Locking tabs shall provide a conduit pull-out of a minimum 175 ft-lb force.
 - 3. Concrete-tight without the need for taping.
 - When transitioning to EMT conduit, the transition fitting shall have six locking tabs for ENT connection and set-screw connection for EMT.

2.4 BOXES

- A. ENT boxes shall be manufactured of high-impact PVC
- B. ENT Slab Box and Wall Box requirements:
 - 1. Slab Boxes shall be approved for the purpose and concrete-tight.
 - 2. Round Slab Boxes shall be approved for use with luminaires up to 50 lbs and ceiling fans up to 35 lbs.
 - 3. Round Slab Boxes shall have threaded brass inserts for the attachment of luminaires or ceiling fans.
 - Slab Boxes shall have eight (8) integrally molded ENT hub connectors with six locking tabs for ENT raceway connection.

PART 3: INSTALLATION

3.1 INSTALLATION

- A. ENT raceways, fittings, boxes and accessories shall be installed in accordance with Article 362 of the 2002 National Electrical Code.
- B. Where ENT penetrates a fire-rated wall, floor or ceiling assembly, an approved firestop system as listed in Underwriters Laboratories Building Materials Directory or other nationally recognized testing laboratory shall be used.





CUSTOMER SERVICE CENTER

U.S. Customers call IPEX USA LLC

Toll free: (800) 463-9572 www.ipexamerica.com

About the IPEX Group of Companies

As leading suppliers of thermoplastic piping systems, the IPEX Group of Companies provides our customers with some of the world's largest and most comprehensive product lines. All IPEX products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have established a reputation for product innovation, quality, end-user focus and performance.

Markets served by IPEX group products are:

- · Electrical systems
- Telecommunications and utility piping systems
- PVC, CPVC, PP, ABS, PEX, FR-PVDF and PE pipe and fittings (1/4" to 48")
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- · PE Electrofusion systems for gas and water
- · Industrial, plumbing and electrical cements
- Irrigation systems

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