Flex-Plus® Blue ENT

is a nonmetallic flexible raceway for use in walls, floors, and non-plenum ceilings. It's lightweight, hand bendable, and free from sharp edges, which reduces installation time and saves money.

See pages 14–15 for technical information.

UL LISTED E73317

CSA LR83580 FT-4 Rated where noted by 🍁

Options:

- Sizes 1/2" through 2"
- Colors can designate different voltages. Examples:
  - Yellow color for communication circuits and signaling cable
  - Red color for fire alarm circuits
  - Blue color for power circuits
- Packaging: Coils or Reels

Standard Stock – Reels

	Color	Part No.	Nom. I.D.	Nom. O.D.	Pull Tape	Min. Bend Radius	Reel Size (F x W)	Reel Type (W=Wood)	Reel Length	Reel Wt. (lbs.)	Wt. per 100 ft. (lbs.)
1/2"	Blue	12005AK-001	.56	.84	Empty	6"	36" x 24"	W	1500	40	10
	Yellow	1205AKY-001	.56	.84	Empty	6"	36" x 24"	W	1500	40	10
	Red	1205AKR-001	.56	.84	Empty	6"	36" x 24"	W	1500	40	10
	Blue	🍁12005AKC-001	.56	.84	Empty	6"	36" x 24"	W	1500	40	10
3/4"	Blue	12007AA-001	.76	1.05	Empty	6"	36" x 24"	W	1000	40	14
	Yellow	1207AAY-001	.76	1.05	Empty.	6"	36" x 24"	W	1000	40	14
	Red	1207AAR-001	.76	1.05	Empty	6"	36" x 24"	W	1000	40	14
	Blue	🍁1207AAC-001	.76	1.05	Empty	6"	36" x 24"	W	1000	40	14
1"	Blue	12008-750	1.00	1.315	Empty	6"	36" x 24"	W	750	40	20
	Yellow	12008Y-750	1.00	1.315	Empty	6"	36" x 24"	W	750	40	20
	Red	12008R-750	1.00	1.315	Empty	6"	36" x 24"	W	750	40	20
	Blue	🍁12008C-750	1.00	1.315	Empty	6"	36" x 24"	W	750	40	20
1 1/4"	Blue	12009-750	1.402	1.66	Empty	7"	48" x 32"	W	750	90	19
1 1/2"	Blue	12010-750	1.554	1.90	Empty	8 1/4"	48" x 32"	W	750	90	39
	Yellow	12010Y-750	1.554	1.90	Empty	8 1/4"	48" x 32"	W	750	90	39
2"	Blue	12011-500	2.030	2.375	Empty	9 1/2"	48" x 32"	W	500	90	32
	Red	12011R-500	2.030	2.375	Empty	9 1/2"	48" x 32"	W	500	90	32
	Yellow	12011Y-500	2.030	2.375	Empty	9 1/2"	48" x 32"	W	500	90	32

*1-1/4" - 2" available in yellow & red, made to order; consult factory.

🍁 Canada Only

Standard Stock – Coils

	Color	Part No.	Nom. I.D.	Nom. O.D.	Pull Tape	Min. Bend Radius	Coil Length (ft.)	Wt. per 100 ft. (lbs.)
1/2"	Blue	12005-200	.56	.84	Empty	6"	200	10
	Yellow	12005Y-200	.56	.84	Empty	6"	200	10
	Red	12005R-200	.56	.84	Empty	6"	200	10
	Blue	🍁12005C-370	.56	.84	Empty	6"	200	10
3/4"	Blue	12007-100	.76	1.05	Empty	6"	100	14
	Yellow	12007Y-100	.76	1.05	Empty	6"	100	14
	Red	12007R-100	.76	1.05	Empty	6"	100	14
	Blue	🍁12007C-240	.76	1.05	Empty	6"	100	14
1"	Blue	12008-100	1.00	1.315	Empty	6"	100	22
	Yellow	12008Y-100	1.00	1.315	Empty	6"	100	22
	Red	12008R-100	1.00	1.315	Empty	6"	100	22
	Blue	🍁12008C-160	1.00	1.315	Empty	6"	100	22

🍁 Canada Only

10 ft. Lengths

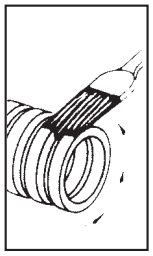
	Color	Part No.	Nom. I.D.	Nom. O.D.	Std. Ctn. Qty.	Std. Ctn. Wt. (lbs.)
1/2"	Blue	12005-UPC	.56	.84	10 ft.	1.02
3/4"	Blue	12007-UPC	.76	1.05	10 ft.	1.46
1"	Blue	12008-010	1.00	1.315	10 ft.	2.93

NOTE: The solid blue color of ENT conduit is a registered trademark of Carlon.

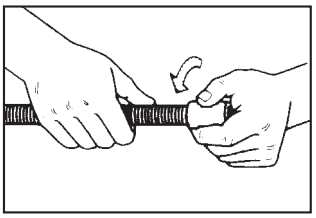
ENT may show color deterioration in direct sunlight when stored outdoors over an extended period of time. It is suggested that all ENT products not be stored outside. 362.12(9) of the NEC prohibits ENT to be used in areas exposed to direct sunlight.

Concrete Encasement Guidelines

1. Cut ENT square and cleanly.
2. Insert end into fitting, making sure two (2) full corrugations are snapped into fitting beyond flexible tabs (2 clicks).
3. ENT should be tied to rebar at 2-3 foot intervals to prevent flotation. Keep ENT straight. Small deflections over a long run may accumulate significant degrees of bend which will affect conductor installation. Suitable materials include wire, tie wraps, and tape.
4. When using rigid nonmetallic conduit fittings for concrete tight performance:



A. Do not use chemical primer or cleaner.
B. Apply a light, uniform coat of cement labeled for use with ENT on the coupling and ENT.
C. Do not use a dauber.
D. Brush excess cement out of ENT grooves.
E. Promptly insert ENT into fitting while cement is wet, until the stop is reached, and give a quarter turn.
F. Do not disturb until joint is set.



Specifications

1.1 Electrical Nonmetallic Tubing (ENT), is designed to replace EMT, flexible metal conduit or other raceway or cable systems, for installation in accordance with Article 362 of the National Electrical Code, Section 12-1500 of the CEC, other applicable sections of the Code, and local codes.

1.2 Any ENT used shall be listed to the requirements of UL Standard UL 1653 in accordance with Article 362 of the NEC and Section 12-1500 of the CEC.

1.3 Any ENT used shall meet the requirements of BI National Standard CAN/CSA-C22.2 No. 227.1-UL1653 and shall be Listed/Certified in accordance to the Electrical Codes.

1.4 Carlon's ENT shall be installed per the technical assessment prepared by fire cause analysis for use in 1-hour and 2-hour rated construction.

1.5 Penetration of fire rated walls, floors or ceilings shall use Classified Through-Penetration Firestop Systems described in the current Underwriters Laboratories Fire Resistance Directory.

1.6 Fittings and outlet boxes shall be designed for use with ENT shall be listed. All fittings, boxes and accessories shall be from one manufacturer.

1.7 Only Carlon ENT Blue cement recommended specifically for use with ENT and rigid nonmetallic fittings shall be used.

1.8 Unless indicated differently on drawings, ENT systems shall be color coded: BLUE for branch and feeder circuit wiring, YELLOW for communications, and RED for fire alarm and emergency systems, or colors can designate different voltages.

1.9 ENT, fittings, and accessories shall be manufactured by Carlon.

Features

- Recognized for use with PVC rigid nonmetallic conduit fittings with all sizes of ENT
- ENT rated for 90°C conductors US, and 75°C Canada
- One piece ENT Coupling, Threaded Terminator and RNC Transition Fitting are rated concrete tight without tape
- Recognized for use in 2-hour fire resistive nonload bearing and load bearing wall assemblies
- Recognized for use in 1-hour fire resistive nonload bearing wall assemblies
- Recognized for use in a fire resistive ceiling assembly (up to 3 hours)
- Recognized for Through-Penetration Firestop systems as classified by UL to meet ICC building codes.
- Conductors easily push through the raceway (up to approximately 50 feet)*
- For use in buildings in accordance with NEC Article 362 / CEC Section 12-1500
- Outside Diameters meet IPS Dimensions
- Storage -4°F to 158°F
- Handling -4°F to 104°F

Approved Uses:

- Concrete slab – NEC Article 362 / CEC Section 12-1500
- Walls - wood stud, masonry and metal stud – NEC Article 362 / CEC Section 12-1500
- Ceilings - permanent or dropped (free air only) – NEC Article 362 / CEC Section 12-1500
- Exposed – NEC Article 362 / CEC Section 12-1500
- Public Assembly – NEC Section 518.4, in nonfire rated and certain five rated structures
- Prewired – NEC Article 362 / CEC Section 12-1500
- Classified by UL 1479 for Through Penetration Firestop Systems in UL Guide Category XHEZ and current UL Fire Resistance Directory
- Three hour rated floor/ceiling assemble
- Raised Floors – NEC Section 645.5(D)(2)
- Exposed or concealed in building above three floors when a fire sprinkler system is installed in accordance with NFPA 13 – NEC Section 362.10(2)
- For use in residential attics up to 3 feet above the bottom of the ceiling joist.
- Maximum ambient temperature 140°F (60°C)

Typical Applications:

- Residential: Low or high rise – multi or single family
- Commercial: Low or high rise – office, retail, hotel/motel, restaurant, etc.
- Nursing Homes/Hospitals in nonpatient care areas only
- Schools, classrooms, dormitories, offices
- Fire Alarm Systems
- Recreational vehicles and parks
- Solar Photovoltaic systems
- Marinas and boatyards
- Other uses per the current NEC and CEC