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1. Does ANAMET Electrical Make A Plenum Rated Conduit? < BACK

Yes. There are several types of conduit made by ANAMET Electrical, Inc. approved for use in Plenum Environments. Refer to local building codes before installing any electrical conduit. Article 300.22 of the 2020 National Electrical Code (NEC) lists four (4) separate categories which apply to Ducts and Environmental Air.

1. Section (A) Ducts for Dust, Loose Stock, or Vapor RemovalPer this section "no wiring systems of any type shall be installed in a duct used to transports dust, loose stock, flammable vapors," or "used for ventilation or vapor removal for commercial type cooking equipment."
   No ANAMET Electrical, Inc. or other conduit is allowed in this area.

2. Section (B) Ducts Specifically Fabricated for Environmental Air Section (B) directly applies to sheet metal ducts and other ducts with the specific purpose of transporting environmental air. Flexible metal conduit shall be permitted in lengths not to exceed 1.2 meters (4 feet). This method of installation is only acceptable when connecting "physically adjustable equipment" which is "necessary for the direct action upon or sensing of the contained air."
   ANAMET Electrical, Inc. Type RWA and RWS are permitted for use in lengths not to exceed 1.2 meters (4 feet). No conduit with an overall nonmetallic covering shall be installed.

3. Section (C) Other Spaces Used for Environmental Air (Plenums)This section applies directly to spaces that are not specifically constructed for "environmental air-handling purposes as a plenum. This section shall not apply to habitable rooms or areas of buildings, the prime purpose of which is not air handling." The NEC defines "Other Spaces" as the space or cavity between a structural floor or roof and a suspended ceiling. The reason section C is segregated from section B is because these areas are not specifically designed to handle environmental air. Instead, many times these areas are used as air returns or plenums.
   Installation of ANAMET Electrical, Inc. Type RWA and RWS are permitted for areas which apply to Article 300.22 section (C).

4. Section (D) Information Technology Equipment Electrical wiring in air-handling areas beneath raised floors for information technology is permitted in accordance with Article 645.5 (E) (2).
   Installation of ANACONDA SEALTITE® Type UA, HTUA, CW, ZHUA, FGUA, CNP, NMUA, RWA or RWS is permitted for areas where the raised floor is constructed to code and the area under the floor is accessible.

A sheet with this information is available at Engineering-Plenums 2022
For more information about flexible conduit in plenums see NEMA Bulletin No. 118

2. Does ANAMET Electrical Make A UV (Sunlight) Resistant Conduit? < BACK

Yes, all ANACONDA SEALTITE® conduit is UV (sunlight) resistant.

- All UL listed Liquid Tight Metal Conduit (LFMC) is tested in accordance with UL Standard 360 "Liquid Tight Flexible Metal Conduit"
- All UL listed Liquid Tight Non-Metallic Conduit (LFNC) is tested in accordance with UL Standard 1660 "Liquid Tight Flexible Non-Metallic Conduit"
- All ANAMET Electrical non-UL listed conduit has a UV resistant cover.

More information about Sunlight Resistance.

3. Does ANAMET Electrical Make A Halogen Free Conduit? < BACK

Yes, ANACONDA SEALTITE® Type ZHUA, HCX, HFSS, XTHF and Shieldtite® Z1 are Halogen Free Conduit.

- ZHUA is UL listed, Halogen Free conduit.
- HCX is extreme temperature Halogen Free conduit.
- HFSS is Halogen Free stainless steel core conduit.
- XTHF is Halogen Free, silicone jacket conduit for extreme temperature applications.
- Shieldtite® Z1 is Halogen Free, bronze core, shielding conduit.

More Information about Halogen Free

4. What Tests Are Performed On Your Conduit? < BACK

Our flexible metal conduit is consistently tested to UL Standard 360 for Liquid Tight Flexible Metal Conduit: Resistance Test, Fault Current Test, Impact Test, Tension Test, Crushing Test, Pipe Stiffness for Direct Burial, Flexibility Test, Zinc Coating Test, Vertical Flame Test, Physical Properties of Thermoplastic Jacket, Deformation Test, Mechanical Water Absorption Test, Moisture Penetration Test, Sunlight Resistance Test, Secureness of Fittings Test and Test for Durability of Ink Printing.

Our flexible non-metallic conduit is consistently tested to UL Standard 1660 for Liquid Tight Flexible Non-Metallic Conduit.

ANAMET Electrical, Inc. tests our UL Listed, CSA Certified conduit to:

- CSA Standard C22.2
- UL Standard 360 for Liquid Tight Flexible Metal Conduit (Type UA, CW, HTUA and ZHUA conduit)
- UL Standard 1660 for Liquid Tight Flexible Non-Metallic Conduit (Type CNP and NMUA conduit)
- National Electrical Code (NEC) specifications
- Type UA, CW, HTUA, ZHUA, CNP and NMUA conduit conform to UL and CSA requirements.

Type FGUA conduit conforms to UL and NSF requirements.

5. Does ANAMET Electrical Make An Explosion Proof Rated Conduit? < BACK

No Flexible Conduit is Explosion Proof for NEC Class I Division 1 Hazardous Locations.

Refer to local safety code authorities for approval before installation of flexible conduit in Hazardous Locations.

- Flexible conduit is not allowed in National Electrical Code (NEC) Article 501 Class I Division 1 Hazardous Locations.
- Some flexible conduit is allowed in less volatile Class I, II and III Hazardous Locations. ANACONDA SEALTITE® UL listed flexible conduit is suitable for use in Class I Division II, Class II Division 1 & 2, and Class III Division 1 & 2 locations.
- ANACONDA SEALTITE® is manufactured to meet requirements of CSA Standard C22.2, UL Standard 360 Liquid Tight Flexible Metal Conduit Type LFMC or UL Standard 356 Liquid Tight Nonmetal Conduit (LFNC-A and LFNC-B) .
- UL Listed, and CSA Certified conduit is suitable for use in accordance with CSA Canadian Electrical Code part I, Article 350 of the National Electrical Code (NEC) and other articles of the NEC.
- See ANAMET Europe ATEX products for conduit and fittings approved for European Explosion Risk Zones.

6. What Fittings Do You Recommend With LFMC SEALTITE®? < BACK

Fittings for LFMC (flexible metal) conduit are available in stainless steel, nickel-plated brass and steel.

SEALTITE® stainless steel 316 and nickel-plated brass fittings have proven to be most resistant to corrosion in a salt spray atmosphere. Corrosion resistance test results are available for metal fittings at Corrosion Resistance.

Fittings for LFNC (flexible non-metallic) conduit are also available.

7. What Fittings Do You Recommend With Type CNP Conduit? < BACK

We recommend SEALTITE® Type CNP Type A metal fittings.
For more information, see: Type A Fittings for CNP Conduit

8. Does ANAMET Electrical Have Fittings For NMUA Type "B" Conduit? < BACK

Yes, Fittings for Type NMUA Non-Metallic, 3/8" thru 2" straight and 90° Type B nylon fittings are available.

For more information, see Fittings for Type "B" non-metallic conduit

9. What Is The Voltage Rating Of SEALTITE® Conduit? < BACK

1000 Volts nominal.
In 2013 UL and the NEC removed the 600 volt max rating for flexible conduits.
The 2014 NEC has a 1,000 volt maximum rating listed in Articles that have special applications for the installation 1000 volts nominal in specified sections that had the 600 volt Nominal
All ANAMET Electrical, Inc. SEALTITE® conduit is rated for 1,000 volts.
The NEC allows Liquid Tight Flexible Metal Conduit in specific applications for voltages over 1000 volts nominal.
Article 430 section XI, Over 1000 volts, Nominal
430.223 Motors, Motor Circuits Article 600.32 (A) (1) Electric Sign Circuits over 1000V
UL has removed the 600 volt Nominal rating from the test standards and
online certification directory.
2014 NEC changed from 600 volt nominal to 1000 volts nominal in specified sections that had the 600 volt Nominal for photo voltaic (PV) Systems, and removed the 600 volt Nominal for flexible conduit.

10. Does SEALTITE® Conduit Require A Bonding Wire? < BACK

UL listed SEALTITE® metal conduit Type UA, CW, HTUA, ZHUA and FGUA (Trade sizes 3/8 to 1-1/4 inches) includes an integral bonding wire, so a separate bonding wire is not required when installation is less than six feet in length. According to the National Electrical Code (NEC), bonding in six foot lengths or less where flexibility is not required after installation, approved LFMC shall be permitted to be used as an equipment grounding conductor when installed in accordance with Article 250.118 (6).

An internal or external bonding/ground conductor is required for lengths greater than six feet. UL listed conduit in sizes 1-1/2 inches and larger does not include an integral bonding wire, so an internal or external bonding/grounding conductor is required. All Trade sizes of Liquid Tight Flexible Metal Conduit may be installed in unlimited lengths.

Refer to the most recently published National Electrical Code (NEC), NFPA 70, for bonding and grounding requirements.

11. What Are Differences Between Type UA And EF Conduit? < BACK

The difference between conduit Type EF / EFST and the UL Listed Type UA is the construction of the metal core and the cover compound.

The core material in ANACONDA SEALTITE® UL Listed conduit (Type UA, CW, HTUA, ZHUA and FGUA) is made with a thicker metal with thicker galvanizing than the type EF / EFST. The UL listed conduit in sizes 3/8" through 1-1/4" is constructed with an integral bonding wire wound into the convolution of the strip. The UL Listed conduit has a flame resistant cover compound.

Type EF / EFST is made with a lighter metal core and is not tested to UL requirements. Type EF has a cover compound that is not classified as flame resistant. Cover compounds for Type EF have sunlight resistant material added.

UL Listed conduits are tested to UL Standard 360 Liquid Tight Flexible Metal Conduit. UL Listed conduit as "LISTED" is suitable for use in accordance with NEC Article 350, for Liquid Tight Flexible Metal Conduit (LFMC) and other Articles of the NEC.

CSA Certified conduits are suitable for use in accordance with CSA Canadian Electrical Code C22.2.

The UL Listed conduit that ANAMET Electrical, Inc. sells passed all UL Testing.

More Information about UL "Listed"

- Nationally recognized testing laboratories: NRTLs
- NEMA Bulletin about Nationally recognized testing laboratories Bulletin No. 102
- NEMA Bulletin about Listed conduit Bulletin No. 104

12. How Much Tension Can Be Exerted On SEALTITE® Conduit? < BACK

Conduit Tension Test UL 360 paragraph 11 Finished conduit shall be capable of withstanding an axial tension of 300 lbf. For 60 seconds.

13. How Much Tension Can Be Exerted On SEALTITE® Fittings? < BACK

Test for Secureness of Fittings UL 360 paragraph 22 Finished conduit with fittings shall be capable of withstanding a load of 150 lbf. between each fitting and the conduit for 5 minutes.

14. Can SEALTITE® Conduit Be Buried In Concrete? < BACK

Yes, SEALTITE® has been tested for the Direct Burial rating in Earth or Concrete.

According to the NEC Article 350 Liquidtight Flexible Metal Conduit.

Article 350.1 Scope
Liquidtight flexible metal conduit (LFMC) is intended for use in wet locations or where exposed to oil or coolants, at a maximum temperature of 176°F – 80°C. LFMC is not intended for use where exposed to gasoline or similar light petroleum solvents unless so marked on the product. If properly marked for the application, LFMC is permitted for direct burial in earth and concrete.

Article 350.12 Uses Not Permitted

LFMC shall not be used as follows:

(1) Where subject to physical damage
Backfill for Direct Burial Rated Conduit.
Article 300.5 Underground Installations: Article 300.5(D) Enclosure or raceway Damage
300.5(D) Protection from Damage. Direct-buried conductors and cables shall be protected from damage in accordance with 300.5(D)(1) through (D)(4).
300.5(D)(4) Enclosure or Raceway Damage. Where the enclosure or raceway is subject to physical damage, the conductors shall be installed in rigid metal conduit, intermediate metal conduit, RTRC-XW, Schedule 80 PVC conduit, or equivalent.

Article 300.5(F) Backfill
(F) Backfilll that contains large rocks, paving materials, cinders, large or sharply angular substances, or corrosive material shall not be placed in an excavation where materials may damage raceways, cables, or other substructures or prevent adequate compaction of fill or contribute to corrosion of raceways, cables, or other substructures. Where necessary to prevent physical damage to the raceway or cable, protection shall be provided in the form of granular or selected material, suitable running boards, suitable sleeves, or other approved means.

15. What Is The IP / NEMA Enclosure Rating Of SEALTITE® With Fittings? < BACK

IEC 60529 Clause 6 rating for the conduit should be listed as IP 66/67 when installed with IP 66/67 rated Fittings.
Most Flexible Conduit manufacturers only use the single designation IP 67 when it should be the dual designation IP 66/67 for Liquid Tight Flexible Metal Conduit.

The conduit has an extruded cover that will withstand water spray or immersion. The fitting rating is necessary for the completed assembly.

NOTE: Type MTC is IP 65 Rated when using IP 66/67 fittings.
NEMA enclosure types may be converted to IP ratings but because of the additional testing IP ratings may not be converted to NEMA enclosure types. See NEMA Bulletin No. 123 NEMA and IP Ratings for Liquid-tight Flexible Metal Conduit and Fittings.

16. Does Anamet Electrical Have A FOOD GRADE Rated Conduit? < BACK

YES: ANAMET Electrical Food Grade conduit is approved by NSF for food zone Non-Contact or Splash zone.

Anamet Electrical Inc. Food Grade Cover Colors approved by NSF
LFMC Food Grade colors available Orange, Black, Blue, Green, Purple, Red, White and Yellow.

SEALTITE® Food Grade Fittings: Stainless Steel AISI-316 Premium LFMC NPT fittings are NSF approved for
NSF FOOD ZONE NON-CONTACT
NSF FOOD ZONE SPLASH ZONE

Type FG conduit, Food Grade LFMC conduit is NSF approved for
NSF FOOD ZONE NON-CONTACT
NSF FOOD ZONE SPLASH ZONE

Type FGSS, 316 Stainless Steel Food Grade LFMC conduit is NSF approved for
NSF FOOD ZONE NON-CONTACT
NSF FOOD ZONE SPLASH ZONE

Type FGUA, Food Grad LFMC conduit, UL approved, is NSF approved for
NSF FOOD ZONE SPLASH ZONE

Food Grade Zones and Applications

17. Can SEALTITE® Be Stored In An Outside Conex Container? < BACK

Long term storage of conduit in a CONEX container is not recommended.

CONEX containers are not air tight, allowing exposure to moisture and outdoor temperatures. Long term exposure to moisture may start corrosion in an electrical conduit core, decreasing flexibility and durability. Container contents can warm beyond the rated temperature for conduit (like an oven), which is only acceptable for a few weeks on a construction site.

UL listed ANACONDA SEALTITE® Type UA and CW is moisture and corrosion resistant with an 80°C or 176°F temperature rating. When installed, conduit is sealed with liquid tight fittings so moisture exposure is prevented. In free air circulation after installation, the conduit temperature rating is not exceeded for long periods, even in direct sunlight.

18. Do You Have Material Safety Data Sheets For Your Products? < BACK

No, MSDS are not required for Articles.

Anamet Electrical products are classified as articles and articles are not required to have MSDS's.

(Definitions. Article means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees).

MSDS Declaration

19. Are Anamet Electrical Inc. Products RoHS And REACH Compliant? < BACK

Yes, Anamet Electrical Inc. products are RoHS and REACH Compliant.

RoHS3 Compliance Letter

REACH / SVHC 223 Declaration

20. Does Anamet Electrical Have LEED Green Building Rated Conduit? < BACK

No, Anamet Electrical SEALTITE® conduit is not LEED Rated.

See LEED rating system: NEMA Bulletin No. 98

21. How Do I Determine The Length Of Conduit For Expansion Joint? < BACK

More Information for SEALTITE® used in Structural Joints.

See Application of Flexible Conduit for Structural Joints: NEMA Bulletin No. 108

22. What is the tightening torque for SEALTITE® LFMC fittings? < BACK

RECOMMENDED LFMC FITTING TIGHTENING TORQUE VALUES

TRADE SIZE	TIGHTENING TORQUE (LBF-FT)	TRADE SIZE	TIGHTENING TORQUE (LBF-FT)
3/8″	19.6	2″	133.3
1/2″	25.0	2-1/2″	133.3
3/4″	41.7	3″	133.3
1″	58.3	3-1/3″	133.3
1-1/4″	83.3	4″	133.3
1-1/2″	100.0	See UL-514B/CSA C22.2 18.3 Table 15 Tightening Torque for metric values	

Tightening Torque and IP Rating for ANACONDA SEALTITE® Fittings

23. What Size Knockouts Are Required For Your Fittings? < BACK

The required knockout sizes for ANAMET Electrical conduit fittings can be found at NEMA Bulletin No. 71 Knockout Diameters