Carlon
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## Riser-Gard – Frequently Asked Questions

On you're website you state: "The Riser-Gard system is complemented by a full line of fittings and accessories to meet even the most demanding application." Where are the fittings that are available? You don't list them. How do I know if you have what I need?

All the fittings can be found towards the back of the catalog in pdf format at the above url. Riser-Gard will accept the ENT fittings and Rigid Nonmetallic Conduit fittings. Pricing, availability, and catalogs can be obtained from your local Carlon Sales Representative: http://www.carlon.com/LocalSalesContacts_US.html

I'm trying to connect 1" Riser-Gard to 1 1/4" Riser-Gard. I think there is some kind of connector that would just snap together. I have a reducer coupling but do not want to have to go through hassle of gluing, as the connection is 40 feet up. Do you have anything?

There is no mechanical fitting that can do this: only the glue on ones.

My company has used thousands of feet of your innerduct product, both riser and plenum, and we never had its use questioned as much as we have had with our local school system. After a recent fiber installation the inspector questioned everything from its support to its lack of markings. It was supported per code and it was, of course, marked with the appropriate UL markings. Regardless of that the inspector didn't like it.

In light of the above I need your help. Please point out to me the appropriate NEC references to the use of ENT. I believe innerduct comes under the guidelines for ENT. I need information pertaining to the NEC that differentiates the use of ENT with high voltage power versus non-conductive fiber optic cable. I believe the inspector is applying its use with power to fiber and is incorrect.

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One example is his judgment that the run has too many bends and exceeds 360 degrees. Is the "360 rule" a proper limitation to the use of innerduct with fiber?

The run was very convoluted. It does indeed have bends in excess of 360 degrees. My answer is "So What?" Is my answer wrong?

I don't expect to get into an argument with the inspector. That would be counter productive to my company and our customer. But I do want to offer my best case to our customer, so that I can keep them convinced that we did not improperly install it.

Can you help me with NEC information? I am a registered BICSI Installer, level II. I have checked with a BICSI staff member who answers questions about the NEC and he believes the inspector is incorrect.

It's not unusual for inspectors to dislike products they are not really familiar with.

ENT is distinctly different from Riser-Gard and Plenum-Gard in the fact they fall under different UL categories. ENT (Smurf Tube, usually blue, yellow, or red. ENT is to be used per Article 331 of the 99 NEC/Article 362 of the 2002 NEC. Riser-Gard and Plenum-Gard fall under the guidelines of 770 and 800 of the NEC.

Now the 2002 NEC says:

770.6 Raceways for Optical Fiber Cables.

The raceway shall be of a type permitted in Chapter 3 and installed in accordance with Chapter 3.

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Exception: Listed nonmetallic optical fiber raceway identified as general-purpose, riser, or plenum optical fiber raceway in accordance with 770.51 and installed in accordance with 362.24 through 362.56, where the requirements applicable to electrical nonmetallic tubing shall apply. Unlisted underground or outside plant construction plastic innerduct shall be terminated at the point of entrance.

FPN: For information on listing requirements for optical fiber raceways, see UL 2024, Standard for Optical Fiber Raceways.

Where optical fiber cables are installed within the raceway without current-carrying conductors, the raceway fill tables of Chapter 3 and Chapter 9 shall not apply.

Where nonconductive optical fiber cables are installed with electric conductors in a raceway, the raceway fill tables of Chapter 3 and Chapter 9 shall apply.

Riser-Gard and Plenum-Gard follow the exception, which leads you back to the ENT articles, but not the entire ENT article; only the sections mentioned above.

362.26 does address the bends and it says you can't have more than 360 deg total between pull points. Wouldn't there be a concern with possibly exceeding the bend radii of your fiber optical cables if the bends were too tight? For now, this code reference is valid, but if you feel there should be different wording to address fiber optic applications, you can always submit code proposal changes. As for the rest of the inspectors concerns, use the above exception as a guideline and if he tries to impose something in article 362 outside of section 362.24-362.56, then that is a no, no.

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Do you know if Carlon makes a corrugated white tube? (Like smurf tube) but it can be structured cable or anything.

We offer Riser-Gard in white as well as well as Plenum-Gard. People often equate these products to being similar to "smurf tube". However, these are limited to telecommunications applications, and cannot be used in electrical applications.

I'm working on evaluating my data communications specifications, and am having trouble locating a couple items on your web site, so I'm not sure if they've been discontinued, renamed, etc.

I'm looking for the Optic-Gard/PE series of raceway (AF4X...), as well as part # BF4X1A-500 (if it even exists). Are these still viable products, or what is their direct replacement? I'm looking specifically for an innerduct that will be placed in conduit or run exposed in a non-plenum space and not sure of the best option.

We do have a new part numbering system for the Optic-Gard PE Series, which is our HDPE, High Density Polyethylene conduit found on our website at:

http://www.carlon.com/p_Corrugated.html

The BF4X series is our PVC corrugated product, which is now our Riser-Gard product. The part number series for this product is now DF4X... for example.

HDPE cannot be used indoors exposed. Riser-Gard would be more appropriate in an exposed innerduct, indoor, non-plenum area situation.

What is the maximum temperature that the Riser Guard innerduct can withstand?

Riser-Gard is made of PVC and the maximum ambient temperature for PVC is 122 deg. F.

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I was looking at a part number BG4X1A and I was wondering if you could let me know what it is and if it can be trenched and buried.

This was the 1-1/4" PVC Orange Corrugated General Purpose Raceway that we offered with 1/4" rope. The current GP product cannot be trenched or buried. Riser-Gard 1-1/2 and 2" are suitable for direct burial or plowing. P&C Flex could be used is another option. Looks like 1-1/2" is what you need to offer.

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