

# TwistTube® 2473



### **Product Highlights**

- Operating temperature up to +150°C (+302°F)
- Provides electromagnetic shielding
- Self-wrapping design
- Stable woven construction
- Multiple grounding options available

### **Typical Applications**

- Instrument panel harnesses
- Engine compartment harnesses
- Battery cables
- Interior harnesses



Our manufacturing sites are certified ISO 9001, IATF 16949, or AS/EN 9100, ISO 14001 and ISO 45001 (Selected Sites)



**TwistTube® 2473** is a family of self-wrapping sleeves designed to provide electromagnetic (EM) screening attenuation. Tinned copper wire is combined with polyester yarn to create a wrappable product that offers flexibility and consistent shielding protection. The product features an acrylic/silicone coating to prevent end fray and enable cold cutting to specific application length.

Engineered to reduce installation time, the wrappable design can accommodate breakouts and be installed over completed assemblies. Unlike foils that may crack while in use, TwistTube 2473 is durable and tear resistant, enabling it to provide long term protection. Additionally the more stable woven construction eliminates performance variances commonly exhibited by traditional braids where installation over varying harness size or rough handling may cause inconsistent performance.

Special grounding versions available depending upon application.



#### TwistTube<sup>®</sup> 2473

Standard product designed for backshell style grounding.



#### TwistTube<sup>®</sup> 2473 C

TwistTube 2473 with additional metal in the fill/cross direction for specialty applications.



#### TwistTube<sup>®</sup> 2473D

TwistTube 2473C construction with the addition of two integrated tinned copper drain wires to be extended and used for grounding. Product can be delivered with drain wires extended and terminations preinstalled to customer specifications.

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#### TwistTube<sup>®</sup> 2473 C-S

TwistTube 2473C construction with mechanically attached custom drain wires.

## Performance Data – TwistTube® 2473

| Property                         | Test Method                      | Result  |  |  |
|----------------------------------|----------------------------------|---|--|--|
| Operating Temperature            |                                  | +150°C (+302°F)   |  |  |
| Heat Aging 240hrs @+175°C        | ISO 6722                         | Neither visible degration nor loss of flexibility   |  |  |
|                                  |                                  | Shrinkage < 10%   |  |  |
| Low Temperature Flexability      | SAE J2192                        | Pass -40°C (-40°F)  |  |  |
| Flammability                     | FMVSS 302                        | Pass  |  |  |
| Fluid Resistance                 | D47 1924                         | No visible degradation or alteration after being immersed during 24<br>hrs in the typical automotive fluids |  |  |
| Shielding Effectiveness          | IEC 62153-4-3                    | See graph below   |  |  |
| Ohmic Resistance After Salt Mist | 96 hour exposure per EN 3475-301 | <10% increase in resistance   |  |  |

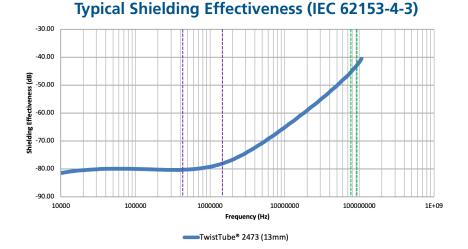
All numeric performance data shows average or typical values. Please consult your sales representative for product drawings, test reports and OEM approvals.

### **Standard Sizes**

| Commercial<br>Part Number | Nominal diameter<br>(mm) | Recommended Application Range<br>(mm) |       |
|---------------------------|--------------------------|---------------------------------------|-------|
|                           |                          | Min Ø                                 | Max Ø |
| TwistTube 2473 5-0/       | 5                        | 1                                     | 5     |
| TwistTube 2473 8-0/       | 8                        | 6                                     | 8     |
| TwistTube 2473 10-0/      | 10                       | 9                                     | 10    |
| TwistTube 2473 13-0/      | 13                       | 11                                    | 13    |
| TwistTube 2473 16-0/      | 16                       | 14                                    | 16    |
| TwistTube 2473 19-0/      | 19                       | 17                                    | 19    |
| TwistTube 2473 25-0/      | 25                       | 20                                    | 25    |
| TwistTube 2473 38-0/      | 38                       | 26                                    | 38    |

Max diameter is defined as a nominal 90° sleeve overwrap. A variety of application-based variables will dictate the appropriate sleeve size for use on each harness. Proper sleeve sizing is at the discretion of the end user.

A reduced overlap could be acceptable in certain applications allowing for a larger max diameter harness. Please consult your local sales representative for recommendations and guidance.





Standard sizes are listed here. Additional sizes could be available upon request.

nominal overlap.

Available in spools and custom cut lengths. Recommended cut lengths are in 5mm increments. Please see regional drawings for cut length tolerances.

End view of TwistTube 2473 illustrating self-curling wrappable construction with

Standard color is black. Additional colors are available.

Please consult your local sales representative for regional packaging details and standards.

TwistTool is available as an installation aid for sizes 5, 8 and 13 mm.



United States: (1) 800 926 2472 • México: (52) 442 101 8100 • Brazil: (55) 19 3116 1600 EMEA: (33) 3 44 39 06 06 • Japan: (81) 45 330 0300 • China: (86) 21 6182 7560 Southeast Asia: (66) 35 276 400 • Korea: (82) 44 861 6368 • India: (91) 124 4784565 www.systemsprotection.com



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