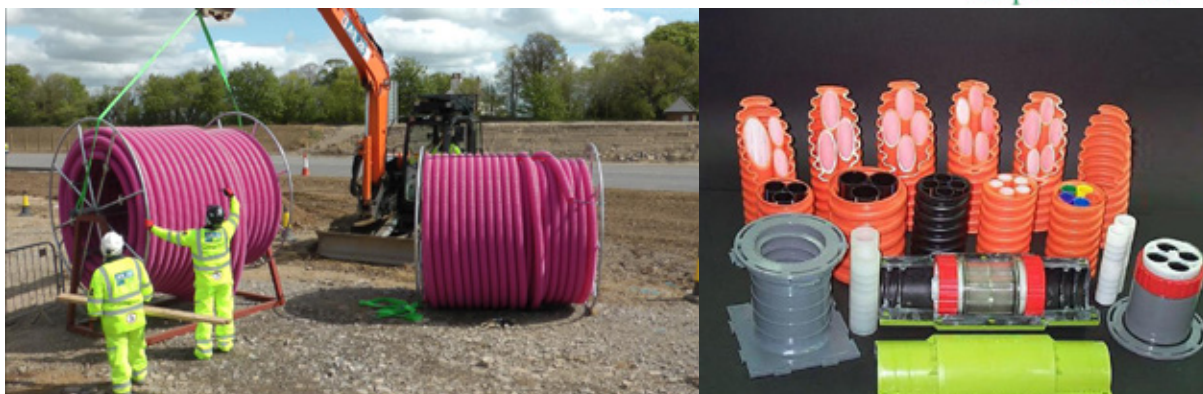


GSI Coiled Duct GENERAL SPECIFICATION



General

The GSI Coiled Duct system is designed for optical fibre, cable and power networks to deliver a highly robust duct structure that is fast and simple to install and which will maintain long term air and water tightness.

The duct complies with IEC 61386 Industry Standard (1250N class).

Duct systems are printed with standard markings, including any additional information required by the customer, to give durability and traceability after installation.

Standard duct lengths depend upon duct size, but are typically delivered on reels from 200m to 600m.

GSI Coiled Duct is supplied on returnable metal reels which are designed to be easily managed and stored on even stable ground. Reels should not be stacked. Any packaging should be recycled locally.

Colour fastness and UV stability for UK and Ireland only, for 6 months external storage unless otherwise agreed by customer specification.

Physical Characteristics

Raw materials are High Density Polyethylene (HDPE) and other additives suitable for the required properties of the finished duct.

Standard colours are Black, Green, Grey, Dark Grey, White and Purple. Other colours are available upon request.

Inner ducts are pressure rated to >130 psi

Examples of Standard GSI Coiled Duct Sizes & available jointing kit types

| Model Code | | 110190000 | 090328000 | 100428000 | 100332000 | 110336000 | 110432000 | 110528000 | 120436000 | 160350000 |
|--|---------------------|-----------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------|
| Cross Section of GSI Coiled Duct | | | | | | | | | | |
| Inner Duct | Inner Ø | 89mm | 28mm | 28mm | 32mm | 36mm | 32mm | 28mm | 36mm | 50mm |
| | Wall Thickness | 1.0mm | 2.5mm | 2.5mm | 2.5mm | 3.0mm | 3.0mm | 2.5mm | 3.0mm | 4.0mm |
| | Inner Duct No. | 1 | 3 | 4 | 3 | 3 | 4 | 5 | 4 | 3 |
| Outer Duct | Outer Ø | 110mm | 90mm | 100mm | 100mm | 110mm | 110mm | 110mm | 120mm | 160mm |
| | Wall Thickness | 2.5mm | 2.5mm | 2.5mm | 2.5mm | 2.5mm | 2.5mm | 2.5mm | 2.5mm | 2.5mm |
| Industry Class | | 1250N | 1250N | 1250N | 1250N | 1250N | 1250N | 1250N | 1250N | 1250N |
| Compression Strength | | 2500N | 2863N | 2863N | 2863N | 2863N | 2863N | 2863N | 2863N | 2863N |
| Joining Kits | | | Plastic Clamshell | Plastic Clamshell | Plastic Clamshell | Plastic Clamshell | Plastic Clamshell | Plastic Clamshell | Plastic Clamshell | Metal & Rubber |
| Loading Capacity on 40' High Cubic container | Inner Barrel Width | ±2.2m | ±2.2m | ±2.2m | ±2.2m | ±2.2m | ±2.2m | ±2.2m | ±2.2m | ±2.2m |
| | Reel Height | ±2.3m | ±2.3m | ±2.3m | ±2.3m | ±2.3m | ±2.3m | ±2.3m | ±2.3m | ±2.3m |
| | Reel Length | 600m | 600m | 600m | 600m | 500m | 500m | 500m | 400m | 200m |
| | Reels per container | 5 Reels | 5 Reels | 5 Reels | 5 Reels | 5 Reels | 5 Reels | 5 Reels | 5 Reels | 5 Reels |
| | Loading Length | 3,000m | 3,000m | 3,000m | 3,000m | 2,500m | 2,500m | 2,500m | 2,000m | 1,000m |

Reference: Maximum no. of inserting cables through GSI Coiled Duct = 80% of Ø of inner duct

This product specification is intended as a guide only. Whilst the information it contains is believed to be correct, GSI can take no responsibility for actions taken based on the information contained in this document. GSI reserves the right to make changes to this document without notice. All sales of product are subject to GSI's terms and conditions of sale only, a copy of which may be requested directly from GSI. This document is protected by copyright (c) GSI Corporation Ltd. The products depicted are protected by intellectual property rights. Any unauthorised copying of this document or of our products is prohibited and GSI Corporation Ltd will take action to prevent any infringement of its rights and to claim damages for the loss that it suffers.

SAFE | AGILE | TOGETHER | WITH INTEGRITY

GSI Coiled Duct GENERAL SPECIFICATION



Material Specifications

Resin Type: High Density Polyethylene, Pipe extrusion grade

Applications: Highly robust spiral corrugated duct for Fibre Optic cable, telecommunications and power cable ducted networks.

Specifications:

| Properties | Test Method | Test Condition | Unit | Value | |
|------------|---------------------------|----------------|----------------|--------------------|-------------|
| Physical | Melt Flow Rate | ASTM D1238 | 190°C/2.16Kg | g/10min | 0.12~0.18 |
| | Density | ASTM D1505 | 23°C | g/cm ³ | 0.955~0.958 |
| Thermal | Melting Temperature | ASTM D3418 | 23°C | °C | 132 |
| | Vicat Softening Point | ASTM D1525 | - | °C | 123 |
| Mechanical | Tensile Strength at Yield | ASTM D638 | 50mm/min | Kg/cm ² | 270 |
| | Tensile Strength at Break | | | Kg/cm ² | 350 |
| | Elongation at Break | | | % | >800 |
| | Flexural Modulus | ASTM D790 | - | Kg/cm ² | 13,000 |
| | Izod Impact Strength | ASTM D256 | 23°C (notched) | Kg.cm/cm | >20 |
| | Hardness (Rockwell) | ASTM D785 | R-Scale | - | 55 |
| | ESCR | ASTM D1693 | F50 | Hr | >200 |

Typical resin property values measured on standard compression molded specimens, conditioned at 23°C

Mechanical and Insulating Testing

| Test Item | Requirement | Test Method |
|-----------------------|--------------------------|---|
| Tensile Strength | >200 Kgf/cm ² | ASTM D 638 |
| Deformative Rate | <3.5% | KS C 8455 (MOD KS C IEC 61386-21 : 2003) |
| Impact Strength | No Defect | KS C 8455 (MOD KS C IEC 61386-21 : 2003) |
| Withstand Voltage | AC 2,000V – 15 mins | KS C 8454 |
| Insulation Resistance | Over 100MΩ | KS C 8454 |



Resistance to chemicals:

- No defects at 40% HNO₃
- No defects at 40% NaOH
- No defects at 30% H₂SO₄
- No defects at 10% NaCl
- No defects at 95% C₂H₆O

GSI Coiled Duct Bending Performance:
Bendable to -20°C temperature.

