BUNDLED MICRO DUCT

2, 4 and 7 x 8/5mm BUNDLED MICRO DUCT

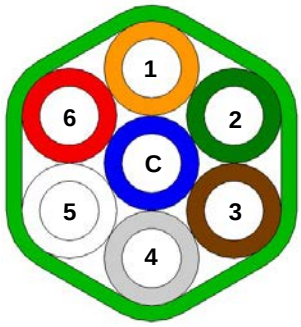
Bundled-micro duct, smooth Silicon lined, High Density PE Outer Sheath

for Direct Buried Applications

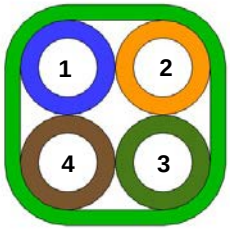
Application:

For blown applications of micro optical fibre cables

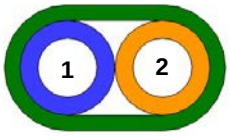
Construction		
Micro Duct		8/5mm bundled low friction silicon lined micro ducts. The tubes are identified by color
	2 Way	1. Blue 2. Orange
	4 Way	1. Blue 2. Orange 3. Green 4. Brown
	7 Way	C. Blue 1. Orange 2. Green 3. Brown 4. Gray 5. White 6. Red
Outer sheath	High density polyethylene UV stabilized sheath, 1.3mm radial thickness **Other colours available on request	



7 Way



4 Way



2 Way

Typical properties:			
Micro Duct **Type**	**2 Way**	**4 Way**	**7 Way**
Application	Direct Buried	Direct Buried	Direct Buried
Nominal O.D (mm)	17.2 x 31.2	31.2 x 31.2	41.4 x 45.2
Min. Bend Radius (mm) 20 x O.D.	345	625	905
Nominal Weight (kg/km)	270	455	715
Maximum Installation Tension (N)	600	900	1200
Drum Length (m)	1000	1000	1000

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MECHANICAL PERFORMANCE CRITERIA				
5.1 Impact Resistance: Test Method IEC 60794-1-2 Method E4		Test requirements:	Duct Length	200 mm
			Conditioning	-10°C for 3hrs
			Anvil	25 mm ROC
Test Load	2 Way = 6.5 Joules 4 Way = 6.5 Joules 7 Way = 6.5 Joules		Weight	3 kg
			Free Fall Distance	221mm
			No. of Impacts	4 spaced equally
		Acceptance Criteria	No cracking or fracturing shall occur.	
5.2 Crush Resistance: Test Method IEC 60794-1-2 Method E3		Test requirements:	Duct Length	150 mm
			Compressive Load	1000 N
			Duration of Load	1 min.
Test Load	2 Way = 1000N 4 Way = 1000N 7 Way = 1000N	Acceptance Criteria	a Ball with a 8mm OD should pass freely through all the tubes upon a recovery period of 1.0 min.	
5.3 Tensile Performance: Test Method IEC 60794-1-2 Method E1		Test requirements:	Duct Length	<10 m
			Rate of Extension	115 mm/min
			Tensile Load	9.81 x Test Weight
Test Load	2 Way = 1.75kN 4 Way = 3.75kN 7 Way = 5kN		Duration of Load	1 min.
		Acceptance Criteria	During load the elongation shall be less than 3%.	
			Three minutes after load is removed the elongation	
5.4 Flexibility (Bend): Test Method IEC 60794-1-2 Method E6		Test requirements:	Duct Length	<1000 mm
			Mandrel Diameter	20D
		Acceptance Criteria	a Ball with a 8mm OD should pass freely through all the tubes after a period of 10 min.	
5.5 Kink Resistance:		Test requirements:	Micro-Duct Length	1000 mm
			Bending Diameter	144mm
			Duration	10 min
		Acceptance Criteria	After 10 minutes no kinking shall occur.	

MECHANICAL PERFORMANCE CRITERIA			
5.6 Friction Co-efficient	**Test Requirement**	Duct Length	5 m
		Loop Internal Diameter	750mm of 450°
		Optical Fibre Cable OD	6.2mm
		Weight	5kg
		Pulling Speed	500mm/min
	Acceptance Criteria	The calculated friction co-efficient shall be less than 0.1	
5.7 Pressure Test:	**Test requirements:**	Duct Length	5000 mm
		Water Pressure	12 Bar
		Duration of Test	10 min.
	Acceptance Criteria	Micro duct shall not burst	
5.8.Chemical Resistance:	**Test requirements:**	Duct Length	100mm
		Acid/Base Chemicals	pH 2-12
		Solvents	Petrol, Acetone and Diesel
	Acceptance Criteria	The duct shall withstand chemical treatment	
5.9 Environmental Stress Cracking	**Test Requirements:**	Strip Length	8mm wide x38mm long
		No of Strips	5
		Chemical	Teepol Blue 825
		Temperature	50°C
		Duration of Test	2 hours
		Acceptance Criteria	No Cracks or ruptures shall be visible