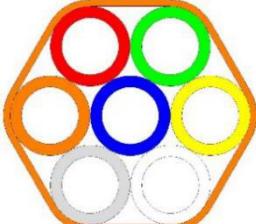


HDPE Tube Bundle 7-Ways 14/10mm

Test	Characteristic	Test Method	Acceptance Criteria
Raw Materials			
1	Bundles is manufactured with 100% virgin HDPE		
		2	Melt flow index ASTM 1238 190°C @ 2.16KG Load
		3	Density ASTM D792
		4	Environmental stress crack resist (F50) ISO 4599
Physical and Mechanical Properties – Inner Micro duct 14/10mm			
1	Visual appearance	Visual inspection	Ribbed inside & smooth outside surface, free from blisters, shrink hole, flaking, scratches & roughness.
2	Outer diameter	FCST	14.0mm ± 0.1mm
3	Wall thickness	FCST	2.00mm ± 0.10mm
4	Inner diameter clearance	Blowing steel ball	A 8.5mm steel ball can be blown freely through the duct.
5	Ovality	FCST	≤ 5%
6	Pressurization	5 minutes @25bar each duct	No damage and leakage
7	Kink	IEC 60794-1-2 Method E10	≤ 140mm
8	Tensile strength	Rate of extension: 100mm/min	≥ 1350N
9	Crush	Sample length: 250mm Load: 1400N Duration of Max. load: 1 min Recovery time: 1 hour	No residual deformation > 15% of inner and outer diameter, shall pass inner diameter clearance test.
10	Impact	IEC 60794-1-2 Method E4 1.5J Impact, recovery time 1 hour	No residual deformation > 15% of inner and outer diameter, shall pass inner diameter clearance test.
11	Heat reversion	110°C ~ 23°C, 1 hour	≤ 3%
12	Min. bend radius	168mm	No residual deformation > 15% of inner and outer diameter, shall pass inner diameter clearance test.
13	Co-efficient of Friction	750mm Diameter, 450°loop, 5kg mass	≤ 0.1
14	Color and printing	Visual inspection	As per customer specification

Test	Characteristic	Test Method	Acceptance Criteria
Physical and Mechanical Properties – tube bundles			
1	Visual appearance	Visual inspection, Outer sheath: Black	Ribbed inside & smooth outside surface, free from blisters, shrink hole, flaking, scratches & roughness.
2	Outer diameter	FCST	44.4mm*40.6mm ($\pm 1.1\text{mm}$)
3	Sheath Wall thickness	FCST	1.20mm $\pm 0.20\text{mm}$
4	Pressurization	5 minutes @25bar each duct	No damage and leakage
5	Tensile strength	Rate of extension: 100mm/min	$\geq 6600\text{N}$
6	Crush	Sample length: 250mm Load: 2000N Duration of Max. load: 1 min Recovery time: 1 hour	No residual deformation $> 15\%$ of inner and outer diameter, shall pass inner diameter clearance test.
7	Impact	IEC 60794-1-2 Method E4 15.0J Impact, recovery time 1 hour	No residual deformation $> 15\%$ of inner and outer diameter, shall pass inner diameter clearance test.
8	Min. bend radius	820mm	No residual deformation $> 15\%$ of inner and outer diameter, shall pass inner diameter clearance test.
9	Color and printing	Visual inspection	Orange or as per customer specification

Completed packages of the HDPE micro duct on drum can be stored outdoor max. 6 months upon the date of production.

Storage temperature: $-40^\circ\text{C} \sim +70^\circ\text{C}$

Installation temperature: $-30^\circ\text{C} \sim +50^\circ\text{C}$

Operating temperature: $-40^\circ\text{C} \sim +70^\circ\text{C}$