

HDPE PLB Duct Technical Specifications

No	Parameters	Ref. Test Method	Unit	Typical Value / Requirement
Dimensions & Tolerances:				
a.	Nominal Outside Diameter	GR. No.G/CDS-08/02.Nov 04	mm	32 + 0.3, 40 + 0.4, 50 + 0.5
b.	Wall Thickness	GR. No.G/CDS-08/02.Nov 04	mm	3.0 ± 0.2, 3.5 ± 0.2, 4.0 ± 0.3
c.	Thickness of inside lubrication	GR. No.G/CDS-08/02.Nov 04	mm	10% of Pipe Thickness
d.	Lubrication	GR. No.G/CDS-08/02.Nov 04	mm	Permanently lubricated for blowing of Optical Fiber Cable
e.	Ovality	GR. No.G/CDS-08/02.Nov 04	mm	0.8, 1.0, 1.4
f.	Length	GR. No.G/CDS-08/02.Nov 04	mm	1000 ± 100 or as per requirement
HDPE Raw Material Testing :				
a.	Density	IS : 2530 : 1963	G/CC	0.940 to 0.958 at 27° C
b.	Melt Flow Rate	IS : 7328 : 1992	Gm/10 min.	0.2 to 1.10 at 190° C under 5 Kg Load
Visual appearance:				
a.	Surface Finish	GR. No.G/CDS-08/02.Nov 04		Duct is smooth, clean, round and free from blister, shrink, holes, flaking & other defects
Performance Requirement :				
a.	Heat Reversion	IS : 4984 : 1995	%	Max 3%
b.	Hydrostatic Pressure Resistance Test	IS : 4984 : 1995		<u>Acceptance Test:</u> Duration: 48 hrs at 80° Induced Stress 3.8 Mpa <u>Type Test :</u> Duration: 165 hrs at 80° Induced Stress: 3.5
c.	Tensile Strength & Elongation	IS : 14151 (part-1)	N/mm ² %	Min. 20 N/mm ² 600%
d.	ESCR	ASTMD 1693		No Failure
e.	Impact	IS:12235 (part-9)		Striker Weight 10 kg, Duct Shall not crack or split
f.	Crush Resistance	GR. No.G/CDS-08/02.Nov 04	%	Approx. 50 kg Load with load deflection <10 after> recovery <2
g.	Oxidation Induction Test	GR. No.G/CDS-08/02.Nov 04	Min	Time > 30
h.	Internal Co-efficient of Friction	GR. No.G/CDS-08/02.Nov 04		COF < 0.06
i.	Minimum bending radius during storage	GR. No.G/CDS-08/02.Nov 04	Mtrs.	1.25
j.	Maximum pulling force	GR. No.G/CDS-08/02.Nov 04	Kg	300

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k.	Ash Content of Finished Duct	GR. No.G/CDS-08/02.Nov 04		0.3 (Max)
l.	Fading of colors of Duct	GR. No.G/CDS-08/02.Nov 04		No Discoloration
m.	UV Stabilizer Content of Resin	FT-IR Method	%	0.15 (Min)
n.	UV stabilizer Content of Duct	GR. No.G/CDS-08/02.Nov 04		Variation in tensile strength after aging is not more than 20%
o.	Marking Identification	GR. No.G/CDS-08/02.Nov 04		All pipes are marked in white color by hot embossed as per detail specified by the client, with length mark at every meter. 4 white strips applied on duct in the longitudinal direction. Color: Orange.