

PVC DUCT GENERIC SPECIFICATION EN CLASSES (POWER CABLE DUCTING)



1.0 General

- 1.1 Emtelle uPVC duct is a solid wall pipe manufactured in accordance with relevant, internationally recognised quality standards under an ISO 9000/2000 quality system.
- 1.2 The application area covered within this document is power cable ducting.
- 1.3 Size ranges from 42mm to 200mm OD and includes plain ended and interference fit socket joints or ring seal joints available in 110mm, 160mm and 200mm sizes.
- 1.4 PVC ducts are supplied on non-returnable wooden U-frames. The pipe pallets are designed to be stored on even, stable ground, they must not be stored more than 3 pallets high.
- 1.5 The finished product shall be free from surface defects which are material to the pipes physical performance and colour is light stable in UK and Ireland for 6 months external storage unless otherwise agreed by customer specification.
- 1.6 The finished product shall be printed or labelled according to customer requirements and traceable to Emtelle's ISO 9000: 2000 quality system.

2.0 Raw Material

- 2.1 Raw Materials are uPVC resin and a other additives suitable for the required properties of the finished product.



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3.0 Dimensions

OD SIZE nominal mm	I.D. Nominal / mm	WALL THICKNESS nominal/ mm	EN 50086 2-4 Compression Strength Classification in Newtons	EN 50086 2-4 Impact Strength Classification in Joules
42	39	1.5	250	
42	38	1.8	450	15
42	38	2.1	750	
50	47	1.65	250	
50	46	2	450	15
50	45	2.4	750	
54	51	1.75	250	
54	50	2.1	450	15
54	49	2.5	750	
88.9	84	2.4	250	
88.9	83	2.95	450	20
88.9	82	3.5	750	
96.5	91	2.55	250	
96.5	90	3.1	450	28
96.5	89	3.7	750	
105	100	2.7	250	
105	98	3.3	450	28
105	97	3.9	750	
110	104	2.8	250	
110	103	3.37	450	28
110	102	4	750	
125	119	3	250	
125	118	3.7	450	28
125	116	4.35	750	
140	133	3.3	250	
140	132	4	450	40
140	131	4.7	750	
160	153	3.6	250	
160	151	4.35	450	40
160	150	5.13	750	
200	192	4.15	250	
200	190	5.05	450	40
200	188	6.05	750	

3.1 The duct shall have dimensions (mm) as per table above, all testing is conducted at +20 degrees C.

3.2 Compression strength and impact strength test procedures are as specified in BS EN 50086-2-4.

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4.0 Product Performance

Unless otherwise specified

4.1 Power ducting systems comply with BS EN 50086/2/4, 250N, 450N or 750N Classifications.

4.2 The key physical measurements have equal importance across application area.

Application	Power, HV	Power, LV	Specification	Pass criteria
Compression	M	M	BS EN 50086-2-4	<5% deflection
Impact	M	M	BS EN 50086-2-4	>9 from 12 pass
Gellation (Acetone)	O	O	BS 509 Pt1 1987	No effect other than swelling
Tensile	O	O	BS 2782 Pt3 method 320A 1976	>44.1N/mm ² and >80%
R/seal retention in socket	O	O	BS1401 method 4 of EN 1277 conditions B & C	No leaks at defined pressures
Pressure performance of seal	O	O	BS 1401 EN 1989	No leak after 90 days at 1.3bar
Static friction coefficient	M	M	EATS 12-24 1989	<0.27
Colour fastness, 6 months	O	O	500kJ/cm ² /Year uv climate zone	Maintains colour 6 months above ground
Colour range	M	M	BS4800, BS 5252 or RAL charts	Within customer range
UV Stability, 6 months	O	O	As specified performance	Maintains performance above ground
Heat Reversion	O	O	BS 1401 to method B of EN 743 air	<5% Reversion no blistering

Colour fastness and UV stability are based on application being in the UK and Ireland only.

Colour Fastness Ref:- apx Trainee – Basic and Problem Solutions for PVC-Extrusion (Germany)

5.0 Marking

Duct systems will be marked with the relevant specification to give durable detail and traceability after installation.



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