

Standards

Metstrut Cable Tray Systems generally conform to BS EN 61537:2007 Cable management - cable tray systems and cable ladder systems.

Information relating to compliance is detailed/highlighted within the following sections of the standard:

6 Classification

6.1 According to material

6.1.1 Metstrut cable tray systems are metallic system components

6.2 According to resistance to flame propagation

6.2.2 Metstrut cable tray systems are non-flame propagating system components

6.3 According to electrical continuity characteristics

6.3.2 Metstrut cable tray systems have electrical continuity characteristics

6.4 According to electrical conductivity

6.4.1 Metstrut cable tray systems are electrically conductive system components

6.5 According to resistance against corrosion

6.5.2 Metstrut cable tray systems are made of steel with metallic finishes or stainless steel

(Resistance to corrosion is classified according to Table 1 and follow the relevant specification in Table 8, with compliance according to Table 7.)

Table 1 - classification for resistance against corrosion

Class	Reference - material and finish
0 (a)	None
1	Electroplated to a minimum thickness of 5 µm
2	Electroplated to a minimum thickness of 12 µm
3	Pre - galvanised to grade 275 to EN 10327 and EN 10326
4	Pre - galvanised to grade 350 to EN 10327 and EN 10326
5	Post - galvanised to a zinc mean coating thickness (minimum) of 45 µm according to ISO 1461 for zinc thickness only
6	Post - galvanised to a zinc mean coating thickness (minimum) of 55 µm according to ISO 1461 for zinc thickness only
7	Post - galvanised to a zinc mean coating thickness (minimum) of 70 µm according to ISO 1461 for zinc thickness only
8	Post - galvanised to a zinc mean coating thickness (minimum) of 85 µm according to ISO 1461 for zinc thickness only
9A	Stainless steel manufactured to ASTM: A 240/A 240M - 95a designation S30400 or EN 10088 grade 1 - 4301 without a post treatment (b)
9B	Stainless steel manufactured to ASTM: A 240/A 240M - 95a designation S31603 or EN 10088 grade 1 - 4404 without a post treatment (b)
9C	Stainless steel manufactured to ASTM: A 240/A 240M - 95a designation S30400 or EN 10088 grade 1 - 4301 with a post treatment (b)
9D	Stainless steel manufactured to ASTM: A 240/A 240M - 95a designation S31603 or EN 10088 grade 1 - 4404 with a post treatment (b)
(a)	For materials which have no declared corrosion resistance classification
(b)	The post-treatment process is used to improve the protection against crevice crack corrosion and the contamination by other steels

Table 7 - System component compliance and classification for resistance against corrosion

System component Material and finishes	Classification according to	Compliance	Subclause for compliance check
Non - metallic	6.5.1	Declaration	14.2.1
Reference - zinc coating as in Table 1.	6.5.2 Table 1 classes 1 to 8	Declaration or measurement	14.2.2
Non - referenced zinc coating	6.5.2 Table 1 classes 1 to 8	By neutral salt spray test NSS	14.2.3
Reference - stainless steel as in Table 1.	6.5.2 Table 1 Class 9A to 9D	Declaration	14.2.2
Non-referenced stainless steel	Not classified	Declaration	None
Other metallic coatings	6.5.2 Table 1 Column 1 classes 1 to 8	By neutral salt spray test NSS	14.2.3
Aluminium alloys or other metals	6.5.3 Under consideration	Under consideration	14.2.4
Organic coatings	6.5.4 Under consideration	Under consideration	14.2.5

Table 8 - Zinc coating thickness of reference materials

Class	Minimum Thickness µm	Minimum coating thickness as given in EN 10327 or EN 10326 µm	Mean coating thickness (minimum) to ISO 1461 µm
0 (a)	-	-	-
1	5	-	-
2	12	-	-
3	-	15	-
4	-	19	-
5	-	-	45
6	-	-	55
7	-	-	70
8	-	-	85
(a)	As declared by the manufacturer or responsible vendor		

6.6 According to temperature

6.6.1 Minimum temperature for the system components is given in Table 2.

6.6.2 Maximum temperature for the system components is given in Table 3.

Table 2 - Minimum temperature classification

Minimum transport, storage installation and application temperature °C
+5
- 5
- 15
- 20
- 40
- 50

Table 3 - Maximum temperature classification

Maximum transport, storage installation and application temperature °C
+40
+60
+90
+105
+120
+150

6.7 According to the free base area of the cable tray length as given in Table 4.

Table 4 - Perforation base classification

Classification	Perforation in the base area
A	Up to 2%
B	Over 2% and up to 15%
C	Over 15% and up to 30%
D	More than 30%

Note: Classification D relates to IEC 60364 - 5 - 52 Subclause A.52.6.2 second paragraph

6.9 According to impact resistance

6.9.4 System component offering impact resistance up to 20 J (as verified by testing in accordance with 10.9 Test for impact resistance.)

7 Marking and documentation

7.1 Each system component is marked by a label. Labels used fully comply with the rubbing test. Boxed items are labelled on the packaging

8 Dimensions

Key cross sectional dimensions for straight cable trays

Part No.	External depth mm	Internal depth mm	External width mm	Internal width mm (Internal)	X-sectional area mm ²	Gauge mm
CTSL12/0050#	12	11.1	50	48.2	535	0.9
CTSL12/0075#	12	11.1	75	73.2	813	0.9
CTSL12/0100#	12	11.1	100	98.2	1090	0.9
CTSL12/0150#	12	11.1	150	148.2	1645	0.9
CTSL12/0225#	12	11.1	225	223.2	2478	0.9
CTSL18/0300#	18	16.8	300	297.6	5000	1.2
CTSL25/0050#	25	24.3	50	48.6	1181	0.7
CTSL25/0075#	25	24.3	75	73.6	1788	0.7
CTSL25/0100#	25	24.3	100	98.6	2396	0.7
CTSL25/0150#	25	24.1	150	148.2	3572	0.9
CTSL25/0225#	25	24.1	225	223.2	5379	0.9
CTSL25/0300#	25	24.0	300	298.0	7152	1.0
CTSL25/0450#	25	23.8	450	447.6	10653	1.2
CTSL25/0600#	25	23.8	600	597.6	14223	1.2
CTSL50/0075#	50	49.2	75	73.4	3611	0.8
CTSL50/0100#	50	49.2	100	98.4	4841	0.8
CTSL50/0150#	50	49.1	150	148.2	7277	0.9
CTSL50/0225#	50	48.8	225	222.6	10863	1.2
CTSL50/0300#	50	48.8	300	297.6	14523	1.2
CTSL50/0450#	50	48.5	450	447.0	21680	1.5
CTSL50/0600#	50	48.5	600	597.0	28955	1.5
CTSL50/0750#	50	48.0	750	746.0	35808	2.0
CTSL50/0900#	50	48.0	900	896.0	43008	2.0

Minimum internal radius of fittings

Minimal internal radius of fittings available for the accommodation of cables is 125mm.

9 Construction

9.1 Surfaces of system components which are likely to come into contact with cables during installation are inspected to ensure they shall not cause damage to the cables when installed correctly.

9.2 As with all metallic system components, care should be exercised that handling is in accordance with the relative COSHH regulations and gloves should be worn.

9.3 Screwed connections have been designed to withstand the mechanical stresses occurring during installations and normal use and will not cause damage to cables when correctly inserted. Screwed connections are in general ISO metric threads fully compliant to tests in accordance with 9.3.1 and 9.3.2 of the standard. Metstrut cable tray systems are usually assembled using M6 roofing bolts particularly for couplers, fishplates and connection to supporting framework. These bolts should be tightened to a torque of 12N/m.

10 Mechanical properties

Cable tray lengths have been tested generally in accordance with the standard under 10.2 and 10.3 for verification of the loading graphs. It should be noted that independent testing has been carried out to verify the structural performance of the cable trays at the minimum and maximum temperature classifications for test conditions under 10.2.2.

All accessories eg bends, tees etc should be directly supported by a suitable support device or devices at appropriate positions.