

TOPWELD H01N2-D

1. Object

This document defines the design and manufacturing characteristics of the cables type H01N2-D manufactured by Top Cable.

2. Design

This type of cable is designed, manufactured and tested according to EN 50525-2-81.

Approvals available:
AENOR <HAR>
SASO (Saudi Arabia)

3. Applications

Flexible cable for mobile service. Suitable for use in hand-held electrodes for arc welding at 100 V.

4. Characteristics



Nominal voltage: 100/100 V.

Minimum service temperature: -20°C.

Maximum conductor temperature: 85°C.

Maximum short-circuit temperature: 250°C (maximum 5 s.)

Minimum bending radius: 5 x cable Ø.

No flame propagation: according EN 60332-1/IEC 60332-1.

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5. General make-up of cable

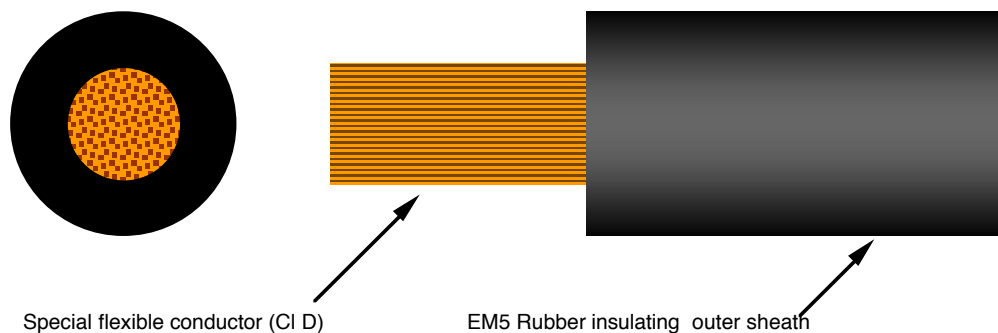
5.1 Conductor

Electrolytic annealed copper conductor, class D according to EN 50525-2-81.

5.2 Outer sheath

Rubber insulating outer sheath, type EM5 according to EN 50363-2-2; black color.

5.3 Diagram representation



6. Current-carrying capacities

6.1 Nominal current-carrying capacities

Table 1 shows the current-carrying capacities and voltage drop detailed for every cable.

Current-carrying capacities, in amperes, are calculated according to HD 516 and for the following conditions:

- It is supposed an ambient temperature of 25 °C and single on-load period not exceeding 5 minutes. The on-load time period is expressed as a percentage of five minutes.

For conditions other than this apply the adequate correction factors (point 6.2).

Voltage drop are for 10 metres of cable carrying 100 A. It is calculated for the maximum conductor temperature and for direct current.

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n° x Cross section (mm ²)	Current rating (A) for single cycle for 5 min.				Voltage drop (V) (100A, 10 m)
	100%	85%	60%	35%	
1 x 10	100	103	108	122	2,450
1 x 16	135	145	175	230	1,560
1 x 25	180	195	230	300	0,998
1 x 35	245	245	290	375	0,709
1 x 50	285	305	365	480	0,493
1 x 70	355	380	460	600	0,348
1 x 95	430	470	560	730	0,264
1 x 120	500	540	650	850	0,206
1 x 150	580	630	750	980	0,166
1 x 185	665	720	860	1120	0,136

Table 1

6.2 Correction factors

The current-carrying capacities must be multiplied with the adequate correction factor when the installation conditions differs from point 6.1

Correction factors for air temperature other than 25 °C.

Air T. (°C)	20	25	30	35	40	45	50
Factor	1,04	1	0,96	0,91	0,87	0,82	0,76

Table 2

7. Dimensions

Table 3 shows diameter and weight detailed for every cable.

n° x section (mm ²)	Diameter (mm)	Weigth (Kg)
1 x 10	8,0	140
1 x 16	9,1	195
1 x 25	10,3	280
1 x 35	11,4	375
1 x 50	13,4	520
1 x 70	15,5	725
1 x 95	17,4	945
1 x 120	19,3	1.195
1 x 150	21,4	1.475
1 x 185	23,3	1.780

Table 3