

DERAY®-ZHF 125

Halogen free, flame retardant heat shrink identification sleeve

Zero halogen & low smoke heat shrink identification sleeve. The product complies with the stringent requirements of the European rail norm EN45545-2 and the HL3 R22/R23 classification and even exceeds those.



The material is suitable for use in all classes required for the construction of locomotives and rolling stock. It is also suitable for use in underground environments as well as marine, military and aerospace applications.

Features and Benefits

- Low smoke generation
 - excellent fire safety characteristics
- Emissions of toxic fumes are well below the levels required to meet the relevant standards
- Flexible
- Flame retardant
- Good fluid resistance
- Soft surface finish supports good printability
- Shrink ratio: 2:1
- Continuous operating temperature: -40°C to 125°C
- Shrink temperature: 120°C min.

Standards

- EN45545-2 HL3 R22/R23
- LUL E 1042 A6
- BS 6853 vehicle category 1a
- DIN 5510
- EN 50343*
- SAE AS81531 4.6.2*
- MIL-STD-202G Method 215*
- NFPA 130

Typical Applications

- Cable identification

2:1

Shrink ratio

-40°C - 125°C
(-40°F to 257°F)

Continuous operating temperature

Markets:

Mass Transit, Defense, Aerospace, Offshore, Marine, Industrial

Standards:



EN 45545-2

NFPA 130

*Hardware used "XD4" printer from CAB and "RBZ11DR" ribbon from DSG-Canusa.

DERAY®-ZHF 125

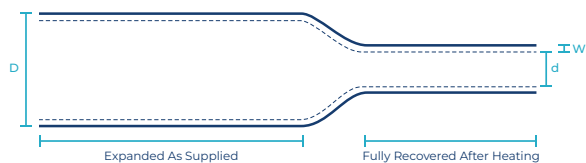
ORDER NUMBER	EXPANDED	RECOVERED		DELIVERY UNITS
	INTERNAL DIAMETER (MIN) D	INTERNAL DIAMETER (MAX) D	TOTAL WALL THICKNESS (NOM) W	SPOOL
	<i>mm (in)</i>	<i>mm (in)</i>	<i>mm (in)</i>	<i>m (ft)</i>
2.4	2.4 (3/32)	1.2 (3/64)	0.51 (0.020)	100 (328)
3.2	3.2 (1/8)	1.6 (1/16)	0.51 (0.020)	100 (328)
4.8	4.8 (3/16)	2.4 (3/32)	0.51 (0.020)	75 (246)
6.4	6.4 (1/4)	3.2 (1/8)	0.64 (0.025)	75 (246)
9.5	9.5 (3/8)	4.8 (3/16)	0.64 (0.025)	75 (246)
12.7	12.7 (1/2)	6.4 (1/4)	0.64 (0.025)	50 (164)
19.0	19.0 (3/4)	9.5 (3/8)	0.76 (0.030)	30 (98)
25.4	25.4 (1)	12.7 (1/2)	0.89 (0.035)	30 (98)
38.1	38.1 (1 1/2)	19.0 (3/4)	1.02 (0.040)	30 (98)

Ordering

Select a dimension which will shrink snugly over the application to be covered. If recovery is restricted the resultant wall thickness will be less than specified.

- Select options:
 - Color: Yellow (YL), white (WT)
 - Printing: Printed or unprinted
 - Length: Continuous reels
- Please specify the product name, order number and options you require
- Example: DERAY®-ZHF125, 2.4, white, printed, 100 m spool

Please contact your Customer Service Representative for information on custom colors, sizes, lengths and material data sheet.



We advise that customers should separately evaluate the suitability of our products for their particular application. Our responsibilities are only those listed in our Standard Terms and Conditions of Sale for these products. Please ask for the latest version of this data sheet. Subject to modification without prior notice.

For further information, please contact:

Americas: 800 422 6872
Canada: 800 845 6808

Asia Pacific: +86 512 82280099
Europe: +49 2226 9047 355

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Technical data

PROPERTY	CURRENT VALUES	TEST METHODS
MATERIAL		
Material	Polyofelin, modified; free of lead, cadmium and halogen	n/a
Shrink ratio	2:1	n/a
Longitudinal shrinkage	+/- 10% max.	ASTM D 2671
MECHANICAL		
Tensile strength	7 MPa min.	ASTM D 2671
Elongation	200% min.	ASTM D 2671
THERMAL		
Tensile strength after thermal ageing (168 h at 136°C)	100%	ASTM D 2671
Thermal shock (4 h at 180°C)	no cracking, no dripping	ASTM D 2671
Cold bend test	does not break at -40°C	ASTM D 2671 C
Shrink temperature	120°C min.	n/a
Continuous operating temperature	-40°C to 125°C	VG 95343-2
Water absorption	1%	ASTM D 2671
FLAME PROPERTIES*		
Combustion behaviour	flame-retardant	ASTM D 2671
Limiting oxygen index	pass R22 requirement	EN 45545-2 HL3 / EN ISO 4589-2 min. 32%
Smoke density	pass R22 requirement	EN 45545-2 HL3 / EN ISO 5659-2 max. 150
Toxicity index	pass R22 requirement	EN 45545-2 HL3 / NF X 70-100-1&-2 max. 75
Radiant panel index (Is)	passed	ASTM E 162:2016
Smoke optical density (Ds)	passed	ASTM E 662:2017
Toxic gas generation	passed	BSS 7239:1988
Smoke toxicity	passed	BSS 7242:1989
ELECTRICAL		
Dielectric strength	20 kV/mm	ASTM D 2671
Volume resistivity	10 ¹³ Ω x cm	ASTM D 2671

*Meets LUL E 1042 A6, BS 6853 vehicle category 1a and DIN 5510.

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