

DERAY®-I 3000

Thin wall crosslinked polyolefin

High shrink ratio, multiple specifications
flexible heat shrink tubing with excellent
physical and mechanical properties.



Features and Benefits

- Self-extinguishing (colors only)
- Flexible
- High shrink ratio
- Resistant to common fluids and solvents
- Additionally available in RAL2003 orange color
- Shrink ratio: 3:1
- Continuous operating temperature: -55°C to 135°C
- Shrink temperature: 90°C min.

- ECSS-Q-ST-70-02
- Approved to major automotive OEM specifications
- Fiat 91992

Typical Applications

- Electrical insulation of in-line splices
- Strain relief of terminals
- Color coding of electronic components
- Insulation and protection of objects with large diameter variations

Standards

- UL 224 125C ATF - UL file # E107857 (colors only)
- CSA 22.2 No 198.1 125C - CSA file # 065789_0_000 (colors only)
- DEF STAN 59-97 Type 2b
- BS G198 Part 3 Type 11B
- VG95343 Part 5 Type A/B
- CNES approved and listed in Matrex database

3:1

Shrink ratio

-55°C - 135°C (-67°F to 275°F)

Continuous
operating
temperature

Markets:

Automotive, Aerospace, Defense, Industrial, Mass transit

Standards:



DSG-CANUSA

DERAY®-I 3000

ORDER NUMBER	EXPANDED	RECOVERED		DELIVERY UNITS		
	INTERNAL DIAMETER (MIN) D	INTERNAL DIAMETER (MAX) D	TOTAL WALL THICKNESS (NOM) W	SPOOL*	MINI-SPOOL	LENGTHS
	mm (in)	mm (in)	mm (in)	m (ft)	m (ft)	1.22 m (48 in)
0063	1.6 (1/16)	0.5 (0.020)	0.45 (0.018)	300 (984)	150 (492)	25
0125	3.2 (1/8)	1.0 (0.039)	0.55 (0.022)	300 (984)	150 (492)	25
0187	4.8 (3/16)	1.5 (0.059)	0.60 (0.024)	300 (984)	75 (246)	25
0250	6.4 (1/4)	2.0 (0.079)	0.65 (0.026)	300 (984)	75 (246)	25
0375	9.5 (3/8)	3.0 (0.118)	0.75 (0.030)	150 (492)	75 (246)	25
0500	12.7 (1/2)	4.0 (0.157)	0.75 (0.030)	100 (328)	50 (164)	25
0750	19.0 (3/4)	6.0 (0.236)	0.85 (0.033)	50 (164)	30 (98)	10
1000	25.4 (1)	8.0 (0.315)	1.00 (0.039)	50 (164)	30 (98)	10
1500	38.0 (1 1/2)	13.0 (0.512)	1.15 (0.045)	50 (164)	30 (98)	-

Clear items not UL listed.

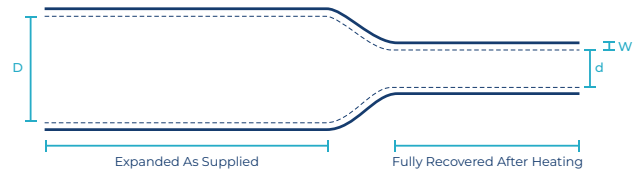
*Delivery unit spool only available for black items

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: Black (BK), red (RD), white (WT), clear (CL), blue (BL), yellow (YL), orange (OE)
- Please specify the product name, order number and options you require:
 - Example: DERAY®-I 3000, 0375 or 9/3 in, black

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.

DERAY®-I 3000 colored

Technical data

PROPERTY	CURRENT VALUES	TEST METHODS
MATERIAL		
Material	PE, modified; free of lead, silicone and cadmium	n/a
Surface	matt	n/a
Specific gravity	1.3 g/cm ³ max.	ASTM-D 792, A-I
Shrink ratio	3:1	n/a
Longitudinal shrinkage	-10% max.	ASTM-D 882
MECHANICAL		
Tensile strength	17 MPa	IEC 60684-2
Elongation	500%	IEC 60684-2
Secant modulus	175 MPa max.	ASTM-D 882
THERMAL		
Tensile strength after thermal ageing (168 h at 158°C)	13 MPa	UL 224
Elongation after thermal ageing (168 h at 158°C)	300%	UL 224
Tensile strength after thermal shock (4 h at 200°C)	15 MPa	IEC 811-1-2
Elongation after thermal shock (4 h at 200°C)	480%	IEC 811-1-2
Cold bend test	does not break at -55°C	ASTM-D 2671 Meth. C
Combustion behaviour	selfextinguishing	UL 224
Shrink temperature	90°C min.	n/a
Storage temperature	50°C max.	n/a
Continuous operating temperature	-55°C to 135°C	IEC 216
CHEMICAL		
Corrosive action	non-corrosive	ASTM-D 2671 Meth. A
Compatibility with copper	non-corrosive	ASTM-D 2671 Meth. B
Resistance against chemicals	good	n/a
Water absorption	0.20%	VDE 0473
ELECTRICAL		
Dielectric strength	24 kV/mm	VDE 0303 Part 2
Spec. volume resistivity	10 ¹⁶ Ω x cm	VDE 0303 Part 3

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DERAY®-I 3000 transparent

Technical data

PROPERTY	CURRENT VALUES	TEST METHODS
MATERIAL		
Material	PE, modified, free of lead, silicon, cadmium and halogen free	n/a
Surface	matt	n/a
Specific gravity	1.0 g/cm ³ max.	ASTM-D 792, A-I
Shrink ratio	3:1	n/a
Longitudinal shrinkage	-10% max.	ASTM-D 2671
MECHANICAL		
Tensile strength	20 MPa	IEC 60684-2
Elongation	550%	IEC 60684-2
Secant modulus	175 MPa max.	ASTM-D 882
THERMAL		
Tensile strength after thermal ageing (168 h at 158°C)	18 MPa	UL 224
Elongation after thermal ageing (168 h at 158°C)	500%	UL 224
Tensile strength after thermal shock (4 h at 200°C)	19 MPa	IEC 811-1-2
Elongation after thermal shock (4 h at 200°C)	no cracking or dripping	IEC 811-1-2
Cold bend test	does not break at -55°C	ASTM-D 2671 Meth. C
Combustion behaviour	passed	FMVSS 302
Shrink temperature	90°C min.	n/a
Storage temperature	40°C max.	n/a
Continuous operating temperature	-55°C to 135°C	IEC 216
CHEMICAL		
Corrosive action	non-corrosive	ASTM-D 2671 Meth. A
Compatibility with copper	non-corrosive	ASTM-D 2671 Meth. B
Resistance against chemicals	good	n/a
Water absorption	0.2% max.	VDE 0473
ELECTRICAL		
Dielectric strength	24 kV/mm	VDE 0303 Part 2
Spec. volume resistivity	10 ¹⁶ Ω x cm	VDE 0303 Part 3

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