

# DERAY®-IAKT

Thin wall adhesive lined polyolefin  
Adhesive lined heat shrink tubing ideal for  
effective moisture-resistant insulation.



## Features and Benefits

- Flexible
- Adhesive bonds to plastics, rubber, steel polyethylene and other materials
- Shrink ratio: 3:1 & 4:1
- Continuous operating temperature of outer jacket: -55°C to 110°C
- Shrink temperature: 95°C min.

## Standards

- Industrial and automotive OEM specifications

## Typical Applications

- Environmental sealing and strain relief of connectors and terminals
- Moisture sealing and electrical insulation of simple in-line splices
- Abrasion resistance for tubes and pipes
- Repair of damaged wire harnesses

## 3:1 & 4:1

Shrink ratio

## -55°C - 110°C (-67°F to 230°F)

Continuous  
operating  
temperature

### Markets:

Automotive, Industrial

### Standards:



## Dimensions for shrink ratio 3:1

ORDER NUMBER	EXPANDED	RECOVERED		DELIVERY UNITS	
	INTERNAL DIAMETER (MIN) D	INTERNAL DIAMETER (MAX) D	TOTAL WALL THICKNESS (NOM) W	SPOOL	LENGTHS
	<i>mm (in)</i>	<i>mm (in)</i>	<i>mm (in)</i>	<i>m (ft)</i>	<i>1.22 m (48 in)</i>
3.0/1.0	3.0 (0.118)	1.0 (0.039)	1.00 (0.039)	300 (984)	25
4.5/1.5	4.5 (0.177)	1.5 (0.059)	1.10 (0.043)	300 (984)	25
6.0/2.0	6.0 (0.236)	2.0 (0.079)	1.20 (0.047)	300 (984)	10
9.0/3.0	9.0 (0.354)	3.0 (0.118)	1.40 (0.055)	150 (492)	10
12.0/4.0	12.0 (0.472)	4.0 (0.157)	1.70 (0.067)	100 (328)	10
19.0/6.0	19.0 (0.748)	6.0 (0.236)	2.10 (0.083)	50 (164)	10
24.0/8.0	24.0 (0.945)	8.0 (0.315)	2.40 (0.094)	50 (164)	10
40.0/13.0	40.0 (1.575)	13.0 (0.512)	2.40 (0.094)	30 (98)	10

## Dimensions for shrink ratio 4:1

ORDER NUMBER	EXPANDED	RECOVERED		DELIVERY UNITS	
	INTERNAL DIAMETER (MIN) D	INTERNAL DIAMETER (MAX) D	TOTAL WALL THICKNESS (NOM) W	SPOOL	LENGTHS
	<i>mm (in)</i>	<i>mm (in)</i>	<i>mm (in)</i>	<i>m (ft)</i>	<i>1.22 m (48 in)</i>
4.0/1.0	4.0 (0.157)	1.0 (0.039)	1.00 (0.039)	300 (984)	25
8.0/2.0	8.0 (0.315)	2.0 (0.079)	1.20 (0.047)	150 (492)	10
12.0/3.0	12.0 (0.472)	3.0 (0.118)	1.40 (0.055)	100 (328)	10
16.0/4.0*	16.0 (0.630)	4.0 (0.157)	1.70 (0.067)	50 (164)	10
24.0/6.0	24.0 (0.945)	6.0 (0.236)	2.10 (0.083)	50 (164)	10
32.0/8.0	32.0 (0.1260)	8.0 (0.315)	2.40 (0.094)	50 (164)	10
52.0/13.0*	52.0 (2.047)	13.0 (0.512)	2.40 (0.094)	30 (98)	10

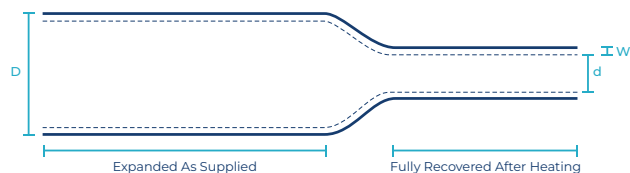
\*IAKT 4:1 sizes 16.0/4.0 & 52.0/13.0 clear have different delivery units

## 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), clear (CL)
- Please specify the product name, order number and options you require:
  - Example: DERAY®-IAKT 3:1, 40.0/13.0, 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.

## For further information, please contact:

Americas: 800 422 6872  
Canada: 800 845 6808

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

# DERAY®-IAKT colored

## Technical data

PROPERTY	CURRENT VALUES	TEST METHODS
<b>MATERIAL</b>		
Material	Polyolefin, modified; free of lead	n/a
Specific gravity	1.25 g/cm <sup>3</sup> max.	ASTM-D 792, A-1
Shrink ratio	3:1 / 4:1	n/a
Longitudinal shrinkage	3:1: - 15 % max.; 4:1: - 18 % max.	ASTM-D 2671
<b>MECHANICAL</b>		
Tensile strength	15 MPa	IEC 60684-2
Elongation	410%	IEC 60684-2
Secant modulus	175 MPa max.	ASTM-D 882
<b>THERMAL</b>		
Tensile strength after thermal ageing (168 h at 150°C)	14 MPa	IEC 811-1-2
Elongation after thermal ageing (168 h at 150°C)	310%	IEC 811-1-2
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)	370%	IEC 811-1-2
Cold bend test	does not break at -55°C	ASTM-D 2671 Meth. C
Combustion behaviour	jacket selfextinguishing	FMVSS 302
Shrink temperature	95°C min.	n/a
Storage temperature	40°C max.	n/a
Continuous operating temperature	-55°C to 110°C	IEC 216
<b>CHEMICAL</b>		
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	0.15%	VDE 0472
<b>ELECTRICAL</b>		
Dielectric strength	22 kV/mm	VDE 0303 Part 2
Spec. volume resistivity	10 <sup>14</sup> Ω x cm	VDE 0303 Part 3

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# DERAY®-IAKT transparent

## Technical data

PROPERTY	CURRENT VALUES	TEST METHODS
<b>MATERIAL</b>		
Material	Polyolefin, modified; free of lead and cadmium	n/a
Specific gravity	1.00 g/cm <sup>3</sup> max.	ASTM-D 792, A-1
Shrink ratio	3:1 / 4:1	n/a
Longitudinal shrinkage	3:1: - 15 % max.; 4:1: - 18 % max.	ASTM-D 2671
<b>MECHANICAL</b>		
Tensile strength	17 MPa	IEC 60684-2
Elongation	450%	IEC 60684-2
Secant modulus	175 MPa max.	ASTM-D 882
<b>THERMAL</b>		
Tensile strength after thermal ageing (168 h at 150°C)	15 MPa	IEC 811-1-2
Elongation after thermal ageing (168 h at 150°C)	360%	IEC 811-1-2
Tensile strength after thermal shock (4 h at 200°C)	16 MPa	IEC 811-1-2
Elongation after thermal shock (4 h at 200°C)	380%	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	95°C min.	n/a
Storage temperature	50°C max.	n/a
Continuous operating temperature	-55°C to 110°C	IEC 216
<b>CHEMICAL</b>		
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
Resistance against mould	does not promote mould growth	ISO 846
Water absorption	0.17%	VDE 0472
<b>ELECTRICAL</b>		
Dielectric strength	23 kV/mm	VDE 0303 Part 2
Spec. volume resistivity	10 <sup>14</sup> Ω x cm	VDE 0303 Part 3

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