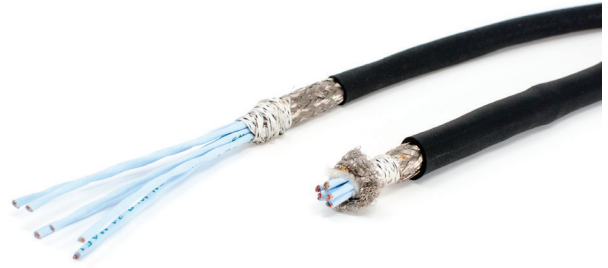


# DERAY®-VT 220

## Crosslinked Viton®

Fluoroelastomer heat shrink tubing suitable for use in electronic systems and components in military, aerospace, automotive, and industrial applications requiring outstanding heat and fluid resistance.



### Features and Benefits

- Flame retardant
- Flexible
- Highly abrasion resistant
- High withstand to corrosive fluids in extreme temperatures up to 220°C
- Shrink ratio: 2:1
- Continuous operating temperature: -55°C to 220°C
- Shrink temperature: 160°C min.

### Standards

- DEF STAN 59-97 Type 4a
- BS G198 Part 3 Type 12A
- VG95343 Part 5 Type E
- PAN6480L
- GS 95008-3-3
- CNES approved and listed in Matrex database
- ECSS-Q-ST-70-02

### Typical Applications

- Bundling and strain relief of wire harnesses in high temperature applications

and environments

- Excellently suitable for applications where severe chemical and thermal requirements are crucial
- Highly cut through resistant
- Commonly used for protection of cables against contamination by nearly all commercial hydraulic fluids, minerals and synthetic oils
- Widely used in hydraulic equipment, aerospace and marine ship building applications

## 2:1

Shrink ratio

**-55°C - 220°C**  
**(-67°F to 428°F)**

**Continuous operating temperature**

#### Markets:

Defense, Aerospace, Automotive, Industrial, Shipboard, Utility, Renewables / Wind, Mass Transit

#### Standards:



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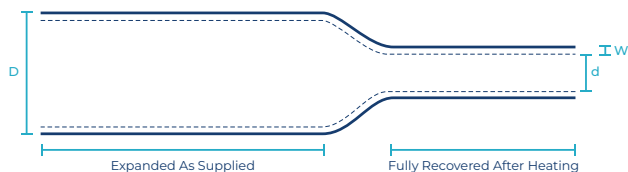
ORDER NUMBER	EXPANDED	RECOVERED		DELIVERY UNITS
	INTERNAL DIAMETER (MIN) D	INTERNAL DIAMETER (MAX) D	TOTAL WALL THICKNESS (NOM) W	SPOOL
	<i>mm (in)</i>	<i>mm (in)</i>	<i>mm (in)</i>	<i>m (ft)</i>
0125	3.2 (1/8)	1.6 (0.063)	0.80 (0.031)	50 (164)
0187	4.8 (3/16)	2.4 (0.094)	0.90 (0.035)	50 (164)
0250	6.4 (1/4)	3.2 (0.126)	0.90 (0.035)	50 (164)
0375	9.5 (3/8)	4.8 (0.189)	1.00 (0.039)	50 (164)
0500	12.7 (1/2)	6.4 (0.252)	1.20 (0.047)	30 (98)
0625	15.90 (5/8)	8.00 (0.315)	1.10 (0.043)	50 (164)
0750	19.0 (3/4)	9.5 (0.374)	1.40 (0.055)	30 (98)
1000	25.4 (1)	12.7 (0.500)	1.80 (0.071)	30 (98)
1500	38.0 (1 1/2)	19.0 (0.748)	2.40 (0.094)	15 (49)
2000	51.0 (2)	25.4 (1.000)	2.80 (0.110)	15 (49)
3000	76.0 (3)	38.0 (1.496)	1.80 (0.071)	15 (49)

## 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)
- Please specify the product name, order number and options you require:
  - Example: DERAY®-VT 220, 0375 or 3/8 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.

### For further information, please contact:

Americas: 800 422 6872  
Canada: 800 845 6808

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

# DERAY®-VT 220

## Technical data

PROPERTY	CURRENT VALUES	TEST METHODS
<b>MATERIAL</b>		
Material	Elastomer, modified; free of lead and cadmium	n/a
Surface	satin, matt	n/a
Specific gravity	1.9 g/cm <sup>3</sup> max.	ASTM-D 792, A-1
Shrink ratio	2:1	n/a
Longitudinal shrinkage	-10% max.	AMS-DTL 23053
<b>MECHANICAL</b>		
Tensile strength	18 MPa min.	IEC 60684-2
Elongation	520% min.	IEC 60684-2
Secant modulus	70 MPa max.	ASTM-D 882
<b>THERMAL</b>		
Tensile strength after thermal ageing (168 h at 250°C)	14 MPa min.	IEC 811-1-2
Elongation after thermal ageing (168 h at 250°C)	220%	IEC 811-1-2
Tensile strength after thermal shock (4 h at 300°C)	17 MPa	IEC 811-1-2
Elongation after thermal shock (4 h at 300°C)	250%	IEC 811-1-2
Cold bend test	does not break -55°C	ASTM-D 2671 Meth. C
Combustion behaviour	selfextinguishing	ASTM-D 876 Meth. A
Shrink temperature	160°C min.	n/a
Storage temperature	50°C max.	AMS-DTL 23053
Continuous operating temperature	-55°C to 220°C	AMS-DTL 23053
<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	0.20% max.	VDE 0473
<b>ELECTRICAL</b>		
Dielectric strength	16 kV/mm	VDE 0303 Part 2
Spec. volume resistivity	10 <sup>15</sup> Ω x cm	VDE 0303 Part 3

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