



MDT-A-F-471

Polyolefin with hot melt adhesive



1. Product Description

3M™ MDT-A-F471 is a medium wall halogen free, flexible heat shrink tubing range, designed to provide reliable performance for electrical splices, connections, and terminations up to 1,0 kV as well as navel and offshore applications. MDT-A-F471 heat shrink tubes have a ROHS compliant flame-retardant polyolefin crosslinked outer wall with a factory-applied adhesive inner layer.

2. Typical Properties

Physical Properties	Value	Requirement	Test Method
Colour	Black		
Shrink Ratio	up to 4,5:1		
Tensile Strength	10-13 N/mm ²	>10	IEC 60684-2-19.1
Elongation at Break	300-500%	>250	IEC 60684-2-19.2
Longitudinal Change	-10<>+0%	-15<>+5	IEC 60684-2-9
Concentricity Supplied (total wall)	75%	>50	IEC 60684-2-3
Concentricity Fully Recovered (outer wall)	85%	>85	IEC 60684-2-3
Secant Modulus	90 N/mm ²	80<>160	IEC 60684-2-19.4
Relative Density ⁽¹⁾	1.24-1.34g/cm ³	-	IEC 60684-2-4
Thermal Tests	Value	Requirement	Test Method
Continuous Operating Temperature ⁽¹⁾	-40<>110°C		
Shrink Temperature	135<>280°C		
Heat Shock		4 hrs. @ 200°C	IEC 60684-2-6
Tensile Strength Elongation at Break	10-13 N/mm ² 300-500 %	>10 >200	IEC 60684-2-19 IEC 60684-2-19
Low Temperature Flexibility	Pass	4 hrs. @ -40°C No cracking after bending	IEC 60684-2-14
Copper Corrosion	Pass	No Corrosion	IEC 60684-2-33
Flammability ⁽¹⁾	Pass	C (30s, 75mm)	IEC 60684-2-26
Electrical Tests	Value	Requirement	Test Method
Volume Resistivity	10 ¹⁴ Ωm	>10 ¹²	IEC 60684-2-23
Breakdown Voltage	11 kV/mm	Exp. ID kV 10-25 >12 26-50 >10 51-120 >8 >121 >6	IEC 60684-2-21
Chemical Tests	Value	Requirement	Test Method
Chemical Resistance		-	
Insulating oil (mineral based) @ 23°C Cleaning fluid (isopropyl alcohol) @ 23°C Water (de-ionized) @ 85°C	Pass N/mm ² / %	Tensile/Elongation >10 / >200	IEC 60684-2-36

¹⁾ Outer wall only

3. User Information

3.1 Product Guide

ID (mm)		Outer Wall Thickness (mm)	Adhesive Wall Thickness (mm)
Supplied min.	Recovered max.	Recovered Avg.	Recovered Avg.
12,0	3,0	2,0	0,50
19,0	6,0	2,5	0,85
27,0	7,5	2,5	1,00
32,0	7,5	2,5	1,00
38,0	12,0	2,5	1,00
50,0	18,0	2,5	0,85
70,0	26,0	2,5	0,85
90,0	36,0	2,5	0,85
120,0	36,0	2,5	0,85

3.2 Agency Approvals & Self Certifications

- Halogen Free, RoHS compliant

3.3 Shelf Life & Storage

This product has a 5-year shelf life from date of manufacture when stored in a humidity-controlled storage (-5°C to +25°C and <75% relative humidity).

4. Additional Information

For additional product information, please refer to below contact details.

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