DATA SHEET

Valid from: 09.11.2018

Shrink tubes PROTECT-C



General Description:

- Flame retardant, dual wall, flexible heat shrinks tubing.
- The hot melt adhesive will melt and flow to seal and encapsulate the inner components, offering excellent insulation and protection against moisture.

Technical data:

- Adhesive lined for environmental protection,
- High shrink ratio 3:1
- Very flexible,
- Good adherence to steel, plastics & many other materials,
- Excellent chemical, physical & electrical properties,
- Shrink temperature > 100°C,
- Operating temperature -55°C to +110°C*

* Outer wall operating temperature is -55°C to +135°C but in combination with the adhesive a safety margin has been applied.

Dimensions:

	Dimensions.			
Size mm	Min. ID supplied mm	Max. ID recovered mm	Recovered wall thickness (NOM) mm	
3/1	3.0	1.0	1.0	
4.8/1.5	4.8	1.5	1.0	
6/2	6.0	2.0	1.1	
9/3	9.0	3.0	1.3	
12/4	12.0	4.0	1.7	
18/6	18.0	6.0	2.0	
24/8	24.0	8.0	2.5	
39/13	39.0	13.0	2.5	

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Normative:

SAE-AMS-DTL-23053/4 Class 3**

Colour: Black

Physical properties:

Description	Test method	Typical value
Tensile strength	ASTM D 638	11 N/mm ²
Elongation at break	ASTM D 638	300%
Longitudinal change	ASTM D 2671	-15% to +1%
Water absorption	ASTM D 570	≤ 0.5%
Specific gravity	ASTM D 792	1.45

Electrical properties:

Description	Test method	Typical value
Dielectric strength	ASTM D 2671	15 kV/mm
Volume resistivity	ASTM D 257	10 ¹⁴ ohm cm
Adhesive properties		
	PVC	85 N/25 mm ²
Peel strength	Steel	44 N/25 mm ²
	Copper	35 N/25 mm ²

Chemical properties:

Description	Test method	Typical value
Fungus resistance	ASTM G21	no growth
Chemical resistance	AMS-DTL-23053/4C	good
Copper corrosion	ASTM D 2671 B	no corrosion

Thermal properties:

Description	Test method	Typical value
Heat shock 4 hours at 250°C	ASTM D 2671	no dripping, cracking or flowing
Heat aging 168 hours at 175°C	ASTM D 638	elongation 250%
Low temp. flexibility at -55°C	ASTM 2671 C	no cracking
Flammability	ASTM D 2671 B	pass

Foot note:

Photographs are not to scale and do not represent detailed images of the respective products.

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