



ENGLISH

Datasheet

Stock No: 397-679

RS Pro Mixed Heat-shrink Kit



Product Specification:

Mixed heat-shrink kit containing 170 pieces of cut to length, flame retardant heat-shrink tubing. The tubing is available in a range of colours, lengths and diameters with 2:1 and 3:1 shrink ratio. The heat-shrink sleeves are supplied in a useful compartmented storage box which can be re-used. The kit can be used in many applications such as identification, insulation and protection.



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Material	Single Wall Polyolefin
Shrink Ratio	2:1
Operating Temp	-55 up to 135°C
Flammability	Flame Retardant
Min. Shrink Temp	90°C

Material	Dual Wall Polyolefin
Shrink Ratio	3:1
Operating Temp	-55 up to 125°C
Flammability	Flame Retardant
Min. Shrink Temp	110°C

Kit Contents:

Size (mm)	Length (mm)	Quantity	Adhesive Lined	Shrink Ratio	Colours
2.4	100	8	No	2:1	Black
2.4	100	8	No	2:1	Red
2.4	100	8	No	2:1	Yellow
2.4	100	8	No	2:1	Blue
2.4	100	4	No	2:1	White



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Size (mm)	Length (mm)	Quantity	Adhesive Lined	Shrink Ratio	Colours
3.2	180	8	No	2:1	Black
3.2	180	8	No	2:1	Red
3.2	180	8	No	2:1	Yellow
3.2	180	8	No	2:1	Blue
3.2	180	8	No	2:1	Brown
3.2	180	4	No	2:1	White
3.2	180	5	No	2:1	Yellow/Green
4.8	250	5	No	2:1	Black
4.8	250	5	No	2:1	Red
4.8	250	5	No	2:1	Yellow
4.8	250	5	No	2:1	Blue
4.8	250	5	No	2:1	White
6.4	250	4	No	2:1	Black
6.4	250	4	No	2:1	Red
6.4	250	4	No	2:1	Yellow
6.4	250	4	No	2:1	Blue
6.4	250	2	No	2:1	White
6.4	250	2	No	2:1	Brown
6.4	180	5	No	2:1	Yellow/Green
9.5	200	2	No	2:1	Black
9.5	200	2	No	2:1	Red
9.5	200	2	No	2:1	Yellow
9.5	200	2	No	2:1	Blue
9.5	200	2	No	2:1	White
9.5	200	2	No	2:1	Brown
9.5	180	3	No	2:1	Yellow/Green
12.7	140	4	No	2:1	Black
12.7	140	2	No	2:1	Red
12.7	140	2	No	2:1	Blue
3.0	150	6	Yes	3:1	Black
9.5	150	6	Yes	3:1	Black

Technical Properties: Single Wall Polyolefin, 2:1

PHYSICAL PROPERTIES			
Property	Test method	Requirement	Typical value
Longitudinal Change	SAE-AMS-DTL-23053	Max. \pm 5%	0% - -2%
Specific Gravity	ASTM D 792	1,35 Max.	1,34
Tensile Strength	ASTM D 638	Min. 10,4 MPa	\geq 14 MPa
Elongation at Break	ASTM D 638	Min. 200%	\geq 400%
Secant Modulus	ASTM D 882	Max. 173 MPa	65 MPa

THERMAL PROPERTIES			
Property	Test method	Requirement	Typical value
Operating Temperature	SAE-AMS-DTL-23053	-55 up to 135°C	-55 up to 135°C
Min. Shrink Temperature	Shrink curve	full recovery	90°C
Shrinking starts at	Shrink curve	60°C	
Heat Shock (250°C x 4h)	SAE-AMS-DTL-23053	no crack, flowing or dripping	Pass
Elongation after heat ageing (175°C x 168h)	SAE-AMS-DTL-23053	Min. 100% elongation	420%
Low temperature flexibility (-55°C x 4h)	SAE-AMS-DTL-23053	no cracking	Pass
Copper Corrosion (175°C x 16h)	SAE-AMS-DTL-23053	no corrosion	Pass
Colour stability (175°C x 24h)	SAE-AMS-DTL-23053	no change	Pass

CHEMICAL PROPERTIES			
Property	Test method	Requirement	Typical value
Flammability	UL 224	VW-1	Pass
Water Absorption	ASTM D 570	Max. 0,5%	0,25%
Fluid Resistance (after immersion 23°C x 24h)	SAE-AMS-DTL-23053	Min. 6,9 MPa (Tensile Strength)	7,25 - 14 MPa
Fungus Resistance	SAE-AMS-DTL-23053	ASTM G 21	Pass
Ozone resistance	NF F 00-608	No cracking or sweating	Pass



Continued: Single Wall Polyolefin, 2:1

ELECTRICAL PROPERTIES			
Property	Test method	Requirement	Typical value
Voltage Rating	UL 224		600V
Dielectric Voltage Withstand (2.5kV x 60s)	UL 224	no breakdown	Pass
Volume Resistivity	ASTM D 876	Min. 1014 Ω·cm	3,1 x 1014 Ω·cm
Dielectric Strength	ASTM D 876	Min. 19,7 kV/mm	≥ 37 kV/mm
Voltage Rating	UL 224		600V

Technical Properties

Dual Wall Polyolefin, 3:1

PHYSICAL PROPERTIES			
Property	Test method	Requirement	Typical value
Longitudinal Change	SAE-AMS-DTL-23053	+1% to -15%	≥ -7%
Tensile Strength	ASTM D 638	Min. 10,4 MPa	≥ 15 MPa
Elongation at Break	ASTM D 638	Min. 200%	≥ 350%
Secant Modulus	ASTM D 882	Max. 173 MPa	≤ 80 MPa

THERMAL PROPERTIES			
Property	Test method	Requirement	Typical value
Operating Temperature	UL 224	-55 up to 125°C	-55 up to 125°C
Min. Shrink Temperature	Shrink curve	full recovery	110°C
Heat Shock (250°C x 4h)	SAE-AMS-DTL-23053	no crack, flowing or dripping	Pass
Cold Impact (-55°C x 4h)	SAE-AMS-DTL-23053	no cracking	Pass
Corrosion of bare copper (158°C x 168h)	SAE-AMS-DTL-23053	no corrosion	Pass
Colour stability (175°C x 24h)	SAE-AMS-DTL-23053	no change	Pass



Continued: Dual Wall Polyolefin, 3:1

CHEMICAL PROPERTIES			
Property	Test method	Requirement	Typical value
Flammability	ASTM D 2671 (B)	Max. 60 seconds	Pass
Water Absorption	ASTM D 570	Max. 1,0%	≤ 0,5%
Fluid Resistance (after immersion 23°C x 24h)	SAE-AMS-DTL- 23053	Min. 6,2 MPa (Tensile Strength)	Pass
Fluid Resistance (after immersion 23°C x 24h)	SAE-AMS-DTL- 23053	Min. 7,9 kV/mm (Dielectric Strength)	Pass

ELECTRICAL PROPERTIES			
Property	Test method	Requirement	Typical value
Voltage Rating		600V	
Dielectric Voltage Withstand (2.5kV x 60s)	UL 224	no breakdown	Pass
Volume Resistivity	ASTM D 876	Min. 10 ¹² Ω·cm	≥ 10 ¹⁴ Ω·cm
Dielectric Strength	ASTM D 876	Min. 11,8 kV/mm	≥ 25 kV/mm

OTHER PROPERTIES			
Property	Test method	Requirement	Typical value
Sealing Efficiency	SAE-AMS-DTL- 23053	no openings on reheat	Pass