

Thermal Transfer Printable Heat Shrink Tube

PRODUCT SPECIFICATIONS:

Description:

Print Technology	Thermal Transfer
Material	Single Wall Polyolefin (3:1 shrink ratio)
Standard Colors	White, Yellow
Print operating temperature*1	5°C to 35°C
Service temperature	-55°C to 135°C
Storage Condition	From -10°C to 40°C and from 30% to 80% Relative Humidity

*1: Print on tube under this condition.

Details

Model No.	For Wire Diameter	Supplied Diameter [before shrinkage]	Recovered Diameter (Max.) [after shrinkage]	Recovered Wall Thickness (Min.) [after shrinkage]
BL203STBWX25PX BL203STBYX25PX	0.056" - 0.122" (1.4mm - 3.1mm)	0.157" +/- 0.016" (4.0mm +/- 0.4mm)	0.056" (1.4mm)	0.016" (0.4mm)
BL208STBWX35PX BL208STBYX35PX	0.095" - 0.236" (2.4mm - 6.0mm)	0.276" +/- 0.02" (7.0mm +/- 0.5mm)	0.095" (2.4mm)	0.018" (0.45mm)

APPLICATIONS

Wire and cable identification

Insulation, protection and reinforcement for termination and joints of electric wire.

Color identification for wire and cable

REGULATORY/ AGENCY APPROVALS

UL/cUL:

Epson Heat Shrink Tube is compliant to UL224. Rating temp.: 125°C / Rating voltage: 600V / VW-1

You can see the details of the original certified product on UL file E255532 (C5 Heat shrink markers, TAIWAN YUNLIN ELECTRONIC CO LTD) and our certified product on UL file E510889. It is available on UL.com.

RoHS:

Epson Heat Shrink Tube is compliant to RoHS Standards to Directive (2011/65/ EU) and (Annex II (EU) 2015/863) established on June 8, 2011.

Flammability:

Epson Heat Shrink Tube pass "VW-1".

SAE:

Epson Heat Shrink Tube meet the material and physical property requirements of SAE AS 81531 for Marking of Electrical Insulating Materials.

MIL:

MIL-STD-202

PROPERTIES

Properties	Test method	Average result
UV resistance	1.24kW/m ² irradiance, B.P.T 63 °C and 50% RH	Slight discoloration, Printed text can be identified
Short High service temperature	Putting on stainless rod	
	260 °C (5 minutes)	Slight discoloration, Printed text can be identified
	180 °C (24 hours)	Slight discoloration, Printed text can be identified
High service temperature	Putting on stainless rod at 40°C/ 80% RH, 90°C for 700 hours	No visible effect
Low Service Temperature	Putting on stainless rod at -40°C for 700 hours	No visible effect
Abrasion Resistance	1. 40 cycles on 500gf pressure by Japanese 10 Yen coin	No visible effect
	2. 50 cycles on 2kgf pressure by plastic eraser.	No visible effect
	3. 100 cycles on 500gf pressure by cotton swab containing ethanol	Printed text disappears

Properties	Items	Requirements	Typical values *1
Physical	Tensile strength (after shrink)		≥ 12 MPa
	Elongation at break (before aging)	ASTM D638	≥ 400%
	Elongation at break (after aging)	ASTM D638 (175°C/168 hrs)	≥ 400%
Thermal	Min. Shrink Temperature	Full recovery	110 °C
	Heat shock	ASTM D2671 (225°C x 4h)	No cracking
	Low temperature bending	ASTM D2671 (-55°C x 4h)	No cracking
Electrical	Dielectric voltage withstand (after shrink)	ASTM D2671	No breakdown
	Volume Resistivity	ASTM D876	≥ 10 ¹⁴ Ω·cm
	Copper corrosivity	ASTM D2671	No corrosion

*1: For reference use only

CHEMICAL/ SOLVENT RESISTANCE

Chemical reagents	Test method	Results
Trichloroethane	Put the HST labels on glass rods of Φ3mm × 100mm, then sink in each chemical / solvent for 10 minutes. After that leave for 30 minutes. Repeat 5 sets.	Failed
Sodium Hypochlorite		No Effect
Ammonia (10%)		No Effect
Sulfuric Acid (10%)		No Effect
Hydrogen Chloride (30%)		No Effect
Salt Water (5%)		No Effect
Acetic Acid		No Effect
Sodium Hydroxide (50%)		No Effect
Terpene Cleaner		Failed
Fomula409 (Cleaner)		No Effect
MIL-H-5606 Oil		No Effect
Mil 7808 Oil		No Effect
Brake Cleaner		No Effect
Fluid type rust preventive		No Effect
Brake Fluid DOT4		No Effect
Engine Oil		No Effect
Cleaning Solvent		No Effect
Acetone		No Effect
Isopropyl Alcohol		No Effect
Ethanol		No Effect
Gasoline		Failed
Jet fuel (JP-8)		No Effect
Toluene		Failed

Hexane		Failed
Heptane		No Effect
Water		No Effect
Mineral Spirit		Failed
Methanol		No Effect
Ethyl Methyl Ketone		No Effect
Ethyl Acetate		No Effect

Note:

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Product availability may vary by country. Please refer to your local Epson office for full details.

Note that the information about the characteristics, such as numeric values, described in this document are the evaluation results for information only, not for guarantees.