

# **Durable Print Solutions**

ES100 Cable Sleeves (Shrink tubes)

Technical data	January, 2017	
Product Description	Cable Sleeves are 2:1 heat shrinkable wire markers made of halogen free, flame retardant and low smoke heat shrinkable polyolefin tubing with ideal printability properties for identification purposes.	
	The compound of the tubing is free of halogens and offers excellent low fire hazard characteristics combined with minimal smoke emission.	
Colours	2 - Yellow, White	
Material	Radial cross linked polyolefin, shrink ratio 2:1	
Main Benefits	Cable Sleeves are supplied on rolls for thermal transfer printing. Making delivery of low volume and high volume equally easy.	
Application Ideas	Common uses include marking, insulation, wire bundling and mechanical protection.	
Recommended printer(s)	SMS-F1 / SMS TAG-ID / SMS-430 / SMS TAG-ID2	

#### **DIMENSIONS**

Size (inches)	Size (mm)	Minimum ID as supplied (mm)	Maximum ID recovered (mm)	Recovered wall Thickness (mm)
3/32	2.4	2.4	1.2	$0.35 \pm 0.10$
1/8	3.2	3.2	1.6	$0.40 \pm 0.10$
3/16	4.8	4.8	2.4	$0.50 \pm 0.10$
1/4	6.4	6.4	3.2	$0.55 \pm 0.10$
3/8	9.5	9.5	4.8	$0.60 \pm 0.10$
1/2	12.7	12.7	6.4	$0.60 \pm 0.10$
3/4	19.1	19.1	9.5	$0.80 \pm 0.15$
1	25.4	25.4	12.7	$0.90 \pm 0.15$
1 1/2	38.1	38.1	19.1	$1.00 \pm 0.15$
2	50.8	50.8	25.4	$1.00 \pm 0.15$

## **MATERIAL SPECIFICATIONS**

Adherence Adherence: MIL-M 81531 AS

(SAE-AS81531-1998), point 4.6.2. UL224 recognized file E361238 CSA certified file 220127

**Carrier lining** White, non-coated, medium range thermal sensitive paper cardstock.

Thickness  $185 \pm 10 \, \mu m$ . Width  $109 mm \pm 0.5 mm$ .

#### **PHYSICAL PROPERTIES**

	Typical value	163t Methou
Tensile strength Elongation at break Longitudinal change	10.4 Mpa (min.) ≥200% +/- 5%	GB/T1040 GB/T1040 UL224

Typical value

Typical value

**Typical value** 

Test Method

**Test Method** 

**Test Method** 

FH	FCTR	ICAL	<b>PROPERTIES</b>
		UAL	FIXOF LIXTILS

Dielectric strength	15 kV/mm²	GB/T1408

#### **CHEMICAL PROPERTIES**

Chemical resistance	Good	AMS-DTL-23053/5
Copper corrosion	No corrosion	UL224
Copper stability	No corrosion	UL224

#### THERMAL PROPERTIES

	Typical value	Test Method
Heat shock 4 hours at 250°C	No dripping, cracking or flowing	ASTM D 2671
Heat aging 168 hours at 158°C	No corrosion	ASTM D 638
Flammability	Pass » flame retardant	UL224

Operating temperature:

Minimum shrink temperature:

**Storage** 

-40°C to +125°C

>70°C

Store in original packaging. Recommended temperature at  $\pm 10^{\circ}\text{C}$  to  $\pm 25^{\circ}\text{C}$  and

45-55% relative humidity. Use within 3 years from date of Manufacture.

### Adhesive backing

Clear, polyethylene film coated with an acrylic-based pressure sensitive adhesive.

Thickness 0.10mm. Width 72/85mm.

The products are supplied on a thermal sensitive cardstock liner converted into a

ladder construction offering superb organization of the markers.

The cardstock liner is die-cut with cavities where into the sleeves are applied,

supported by a backing adhesive.

#### **Special Considerations**

All values shown are averages and should not be used for specification purposes. Test data and test results contained in this document are for general information only and shall not be relied upon by customers for designs and specifications, or be relied on as meeting specified performance criteria.

Customers desiring to develop specifications or performance criteria for specific product applications should contact us for further information.

**IMPORTANT:** Ultimately customers are advised to test the materials, referred to above, in their own performance environments to be certain of their performance. Data supplied by Rebo is general in content and cannot cover all the possible environments required by customers.

#### **Product Performance and Suitability**

We reserve the right to modify characteristics with the aim of improving the product and adapting it to the requirements of the market. All of the descriptive information, the typical performance data, and recommendations for the use of REBO BV products shall be used only as a guide and do not reflect the specification or specification range for any particular property of the product. Furnishing such information is merely an attempt to assist you after you have indicated your contemplated use and shall in no event constitute a warranty of any kind by REBO BV. All purchasers of REBO BV products shall be responsible for independently determining the suitability of the material for the purpose for which it is purchased. No distributor, salesman, or representative of REBO BV is authorized to give any warranty, guaranty, or make any representation in addition or contrary to the above.





