

SBPE

Self Laminating Wire and Cable Markers

Technical Datasheet

TTDS-283 Revision 3 - Jan' 2023

ENTRELEC SBPE is a clear vinyl film label with a white or colored thermal transfer printable area. On application, the clear film over-laminates and protects the printed area. The label colours conform to TIA-606-D.

SBPE is supplied with a permanent acrylic based adhesive and on a white liner with reference holes for printer sensor detection. The “self laminating” feature protects the printed area from exposure to fluids, moisture and mechanical abrasion.

SBPE white labels are UL recognised to PGIS2 for indoor and outdoor use as wrap or flag (tag) in accordance with ANSI/UL 817, Cord Sets and Power-Supply Cords and UL 2238 Certification Requirement Decision (CRD) of the “Standard for Cable Assemblies and Fitting for Industrial Control and Distribution”. For conditions of use see UL file MH61871. (Colored labels in process of UL approval).

The SBPE label solution comprises of a complete identification system with printers, software, ribbons and wide range of standard sizes. The label can be used in “WRAP self-laminating” mode and “FLAG self-laminating” mode down to a diameter of 2.0mm (0.08 inch).

SBPE print performance and durability can only be guaranteed when printed using TE Connectivity printers and ribbons as defined in EWS document TTDS-282, also, when applied on wire & cable using Repeatable self-laminated labelling guide 411-121050.

Features

- Thermal Transfer Printable
- Over lamination protects the printed area and enables a higher level of print durability
- Conformable to irregular shapes.
- Range of sizes and colors available (see page 4)
- Variety of label layouts and roll core diameters,
- Useable down to 2.0mm diameter, even on Fluoropolymer wire jackets.

Specifications / Approvals

Industry

UL recognized PGIS2 - file MH61871 - White only, colors to follow.

Applications

- Ideal for wire and cable identification in general.
- Excellent conformability to round, irregular or flexible surfaces including flat ribbon cables.
- Small diameter cables and wire (2.0mm / 0.08 inch or greater) in wrap mode or flag mode.
- Electrical, Industrial, Automotive, Rail, Aerospace and Defense,

Temperature Rating

- Operating Temperature Range
-40 to 110°C (-40°F to 230°F)
- Minimum Application Temperature 10°C (50°F)

Design for Environment

- Does not contain any declarable or prohibited substances from the UNIFE Railway Industry Substances List
- Further information and a downloadable declaration covering RoHS and REACH compliance can be found at the TE Product Compliance Support Centre:

<https://www.te.com/usa-en/utilities/product-compliance.html>

Shelf Life

2 years when following good commercial storage practice detailed below.

Storage

Product should be stored in the original packaging, with any plastic covers which were included during shipping. Store out of direct sunlight in a clean, dry, dust free, environment.

Product should be stored at approximately 22°C and 50% relative humidity.



Typical Label Thickness

- Label (including adhesive): 0.0105 mm / 0.0041 inch
- Liner: 0.080 mm / 0.0031 inch

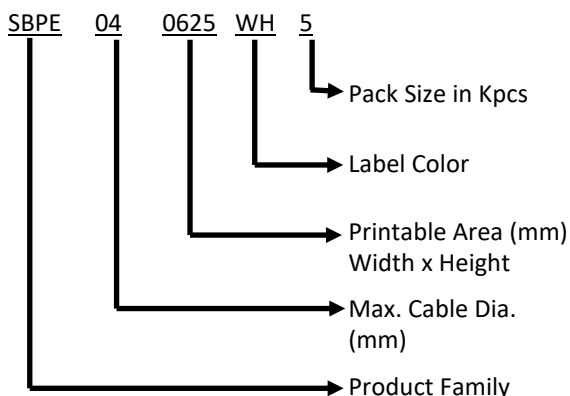
Technical Performance

	Requirement	Results	
Print Permanence			
Marking of Electrical Insulating Materials, SAE AS 5942	Legible after 50 rubs 1kg weight with an eraser	Pass	
Resistance to Solvents, MIL STD 202 Method 215	Legible after 30 wipes	Pass	
Fluid Exposure		Adhesive	Printed legend
• Isopropyl alcohol	Labels to remain on wire and legible / SAE AS 5942 (TE doc 109-121012)	Pass*	Pass
• IRM 902		Pass	Pass
• MIL PRF 23699	Wrap and flagged installed samples, 24 hours immersion 23°C followed by 20 rubs	Pass	Pass
• MIL-H-83282		Pass	Pass
• Diesel Fuel		Pass	Pass
• Kilfrost DF plus		Pass	Pass
• Tap water		Pass	Pass
• 5% Salt solution		Pass	Pass
• Detergent (1% solution)		Pass	Pass
• Brake fluid		Pass	Pass
• Jet A fuel		Pass	Pass
*Some loosening of flag possible			
Adhesion to FTM1 (180°)		Typical Peel force (N/25mm (oz/in.))	
Test surface:	FTM1 (180°)	20min Dwell	72hr Dwell
• Stainless steel		20 (73)	22 (82)
• Glass		17 (62)	21 (75)
• Aluminium		9 (32)	18 (64)
• Polypropylene		9 (32)	9 (32)
• Tufnol		15 (53)	20 (73)
• To SBPE Label Surface (wrap)		17 (64)	23 (83)
• Adhesive to Adhesive (flag)		20 (73)	20 (73)
Flammability			
Average burn time, ASTM D1000	Burn time less than 10 seconds.	Pass, typical burn time 7second	
Burn rate FMVSS 302	Maximum burn rate 102mm/min.	Pass, typical burn rate 35mm/min	
Weatherability			
Artificial weathering to ASTM G154	Labels to remain on wire and legible after 3000hr, UV-A and UV-B	Pass, samples remain legible and do not unwrap or unravel*	
* Note orange and red may fade under UV, print remains legible.			
Thermal performance			
Heat Aging	Labels to remain on wire and legible after 168hr at 90±2°C	Pass, samples remain legible and do not unwrap or unravel	
Thermal Cycling	Labels to remain in on wire and legible after 10 cycles of 1hr @ -50°C then 1hr @ 90°C	Pass, samples remain legible and do not unwrap or unravel	

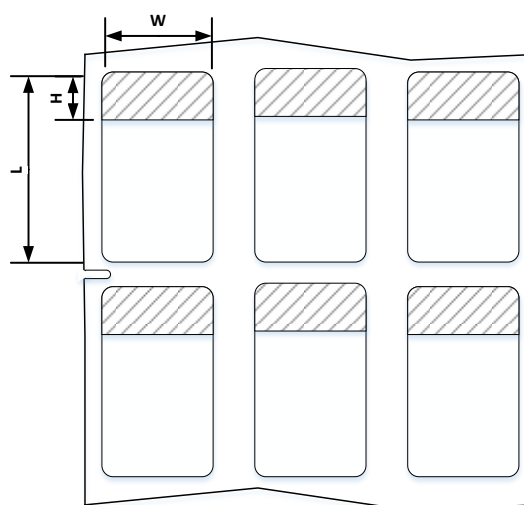
Where possible, TE have tested product as a finished item, including the print. Operational tests are followed by an assessment of mark adherence to validate fit form and function.

Ordering Information

Part Description



Label Layout with left edge sensor slot



Standard Color Code options for all formats

BL	Blue	WH	White
GN	Green	YL	Yellow
RD	Red		

Supplied on 76mm diameter core.

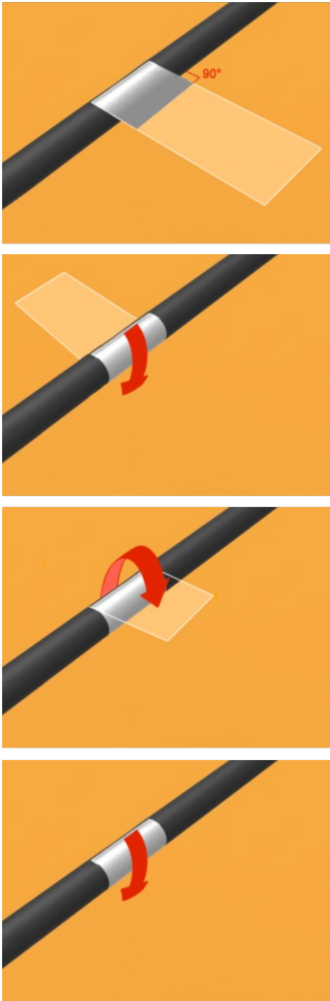
Available Parts

Part Number	Description	Color	Cable Out-side Dia. (mm) Wrap ¹	Cable Out-side Dia. (mm) Flag ¹	Printable Area "H" x "W" (mm)	Label Width "W" (mm)	Label Length "L" (mm)	Roll Quantity
1SET530100R000	SBPE04-0625-WH-5	White	2.0 to 4.1	Not Suitable	6.3 x 25.4	25.4	19.1	5000
1SET530101R000	SBPE04-0625-YL-5	Yellow						
1SET530102R000	SBPE07-1225-WH-5	White	4.0 to 7.6	Not Suitable	12.7 x 25.4	25.4	36.5	5000
1SET530103R000	SBPE07-1225-YL-5	Yellow						
1SET530104R000	SBPE07-1225-BL-5	Blue						
1SET530105R000	SBPE07-1225-RD-5	Red						
1SET530106R000	SBPE07-1225-GN-5	Green						
1SET530107R000	SBPE12-1925-WH-3	White	6.1 to 12.1	Not Suitable	19 x 25.4	25.4	57.2	3000
1SET530108R000	SBPE12-1925-YL-3	Yellow						
1SET530109R000	SBPE12-1925-BL-3	Blue						
1SET530110R000	SBPE12-1925-RD-3	Red						
1SET530111R000	SBPE12-1925-GN-3	Green						
1SET530112R000	SBPE22-2525-WH-2	White	8.1 to 22.0	3.0 to 6.1	25.4 x 25.4	25.4	95.3	2000
1SET530113R000	SBPE22-2525-YL-2	Yellow						
1SET530114R000	SBPE22-2525-BL-2	Blue						
1SET530115R000	SBPE22-2525-RD-2	Red						
1SET530116R000	SBPE22-2525-GN-2	Green						
1SET530117R000	SBPE35-3825-WH-2	White	12.1 to 35.9	5.8 to 11.6	38.1 x 25.4	25.4	150.9	1000
1SET530118R000	SBPE35-3825-YL-2	Yellow						
1SET530119R000	SBPE48-3850-WH-07	White	12.1 to 48	11.9 to 23.7	38.1 x 50.8	50.8	188.9	700
1SET530120R000	SBPE48-3850-YL-07	Yellow						

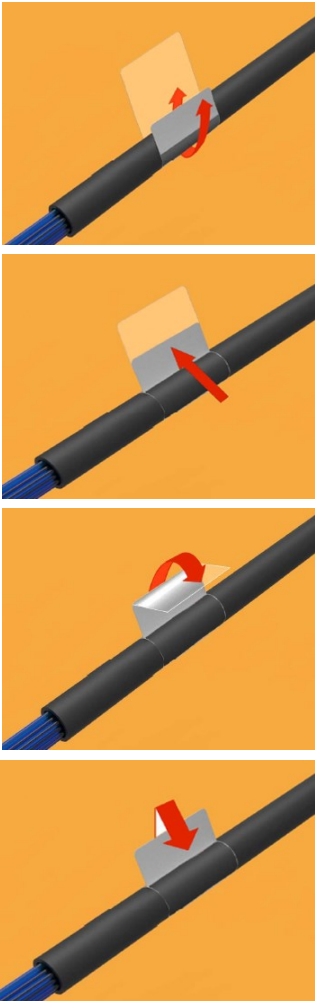
¹ See page 5 for explanation of Flag and Wrapped installation.

Self-laminating in WRAP & FLAG modes For full details see Installation Instruction 411-121050

WRAP self lamination mode



FLAG self lamination mode



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Printer Information

Print quality and print performance can only be guaranteed when specific TE printer and ribbons are used.

The current list of printers and ribbons can be found in EWS Printer Ribbon Product Matrix: ribbon matrix EWS :

https://www.te.com/commerce/DocumentDelivery/DDEController?Action=showdoc&DocId=Data+Sheet%7FTTDS-282%7F1%7Fpdf%7FEnglish%7FENG_DS_TTDS-282_1.pdf



Software

WINTOTAL software, available to download for a 14 day evaluation period from the Identification Printer Software page:

<https://www.te.com/usa-en/products/identification-labeling/printers-software-and-accessories/printing-software/wintotal.html?tab=pgp-story>

Contact a TE representative for further information



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