

# PLE Panel Labels

## Technical Datasheet

TTDS-285 Revision 2 - June 2022

**ENTRELEC PLE is a thermal transfer printable polyester label available as gloss white or satin metalized finish. It has been designed for general purpose applications that require a high durability.**

**Typical applications include: industrial control panels, data racks, switchgear and general equipment labelling.**

PLE utilizes a compressible polyethylene foam adhesive which enables good bonding onto rough, textured and powder coated surfaces.

PLE is UL recognised to PGJI2 and PGJI8 for indoor and outdoor applications.

The PLE Panel Label solution comprises a complete Identification system with compatible printers, software and ribbons.

PLE 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.

# PLE Panel Labels

## Features

- Thermal Transfer Printable
- Range of sizes in gloss white or grey finish
- Excellent fluid resistance
- Designed to withstand abrasion from frequent handling
- Excellent bonding properties on textured and painted surfaces
- Good shock absorbance & impact resistance

## Specifications / Approvals

**Industry** UL recognized PGJ12 and PGJ18 - file MH17292

## Applications

- Ideal for vertical application with exceptional shear strength
- Electrical - cabinets, data racks, control panels, switchgear and general equipment labelling.
- Industrial
- Rail

## Temperature Rating

- Operating Temperature Range:  
-40 to 80°C (-40°F to 176°F)
- Withstand 100°C (212°F) for 1 000 hours
- 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.



## Technical Performance

	Requirement	Results	
<b>Print Permanence</b>			
Marking of Electrical Insulating Materials, SAE AS 5942	Legible after 50 rubs with an eraser of 1kg weight	Pass	
Resistance to Solvents, MIL STD 202 Method 215	Legible after 30 brush strokes	Pass	
Abrasion, TE method 109-121020	Legible after 175 cycles - 0.5 kg weight with Taber wheel CS10	Pass	
<b>Fluid Exposure</b>			
Immersion, TE method 109-121012		<b>Adhesive</b>	<b>Printed legend</b>
<ul style="list-style-type: none"> <li>Isopropyl alcohol</li> <li>IRM 902</li> <li>MIL PRF 23699</li> <li>MIL-H-83282</li> <li>Diesel Fuel</li> <li>Kilfrost DF Plus</li> <li>Tap water</li> <li>5% Salt solution</li> <li>Detergent (1% solution)</li> <li>Skydrol LD4</li> </ul>	24 hours immersion At 23°C followed by 20 wipes 1kg weight  Labels to remain on aluminum and legible	Pass Pass Pass Pass Pass Pass Pass Pass Pass	Pass Pass Pass Pass Pass Pass Pass Pass Pass
<b>Adhesion</b>			
<b>Peel, Finat FTM1:</b>		<b>Typical Peel force in N/25mm (oz/in.)</b>	
<ul style="list-style-type: none"> <li>Stainless steel</li> <li>Glass</li> <li>Aluminium</li> <li>Polypropylene</li> <li>Tufnol</li> <li>Epoxy painted surface</li> </ul>	180° angle Dwell time 23°C 50% RH	<b>20min Dwell</b> 50 (285) 60 (342) 45 (256) 15 (85) 50 (285) 60 (342)	<b>72hr Dwell</b> 50 (285) 70 (400) 70 (400) 15 (85) 55 (313) 60 (342)
<b>Probe Tack, ASTM D2979</b>	1 sec dwell - 1cm per sec separation	<b>Typical in N (oz) on 5mm diameter contact</b>	
<ul style="list-style-type: none"> <li>Stainless steel</li> </ul>	10 times at 23°C / 50% RH	10 (36)	
<b>Static Shear, PSTC-107</b>	20mn dwell time - 23°C / 50% RH	<b>Typical in Hours on 25mm square contact</b>	
<ul style="list-style-type: none"> <li>Mirror finished steel</li> </ul>	1 Kg load	174hr adh. failure / clean peel	
<b>Artificial weathering UV-A and UV-B</b>			
Fluorescent UV testing, ASTM G154	Remain on Aluminium and legible after 1000hr exposure, with no crazing / cracking or powder residue	<b>Adhesive</b>	<b>Printed legend</b>
Xenon Arc Exposure, ASTM G155		Pass	Pass, little fading
		Pass	Pass, slight color change
<b>Thermal performances</b>			
	Remain on Aluminium and legible	<b>Adhesive</b>	<b>Printed legend</b>
Heat Aging	1440hr at 90°C	Pass	Pass, little fading
Heat Shock	4hr at 140°C	Pass	Pass
Low Temperature storage	168hr at -50°C	Pass	Pass
Thermal Cycling	10 cycles of 1hr at -50°C then 1hr at 90°C	Pass	Pass

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.

# PLE Panel Labels

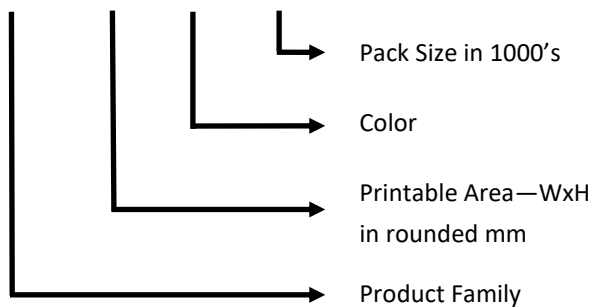
## Typical Label Thickness

- Label (including adhesive): 0.760mm
- Liner: 0.100mm

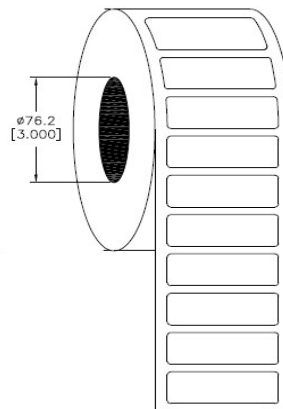
## Ordering Information

### Part Description

PLE - 045015 WH - 0.75 -



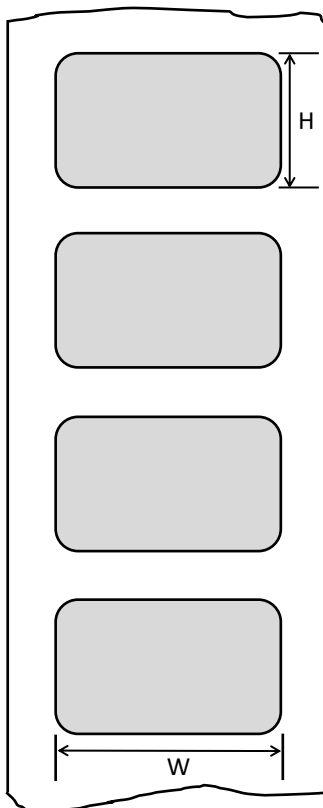
### Roll presentation



### Color Code

WH White      GY Metalized

### Layout



Part Number	Description	Color	Printable area (mm)		Roll Qty
			Width	Height	
1SET530201R0000	PLE-027015-WH-0.75	White	27	15	750
1SET530202R0000	PLE-027018-GY-0.625	Metalized	27	18	625
1SET530203R0000	PLE-027018-WH-0.625	White	27	18	625
1SET530204R0000	PLE-030008-WH-1	White	30	8.8	1000
1SET530205R0000	PLE-035009-WH-1	White	35	9	1000
1SET530206R0000	PLE-035018-GY-0.625	Metalized	35	18	625
1SET530207R0000	PLE-035018-WH-0.625	White	35	18	625
1SET530208R0000	PLE-045015-GY-0.75	Metalized	45	15	750
1SET530209R0000	PLE-045015-WH-0.75	White	45	15	750
1SET530210R0000	PLE-060030-GY-0.4	Metalized	60	30	400
1SET530211R0000	PLE-060030-WH-0.4	White	60	30	400
1SET530212R0000	PLE-100050-GY-0.25	Metalized	100	50	250
1SET530213R0000	PLE-100050-WH-0.25	White	100	50	250

# PLE Panel Labels



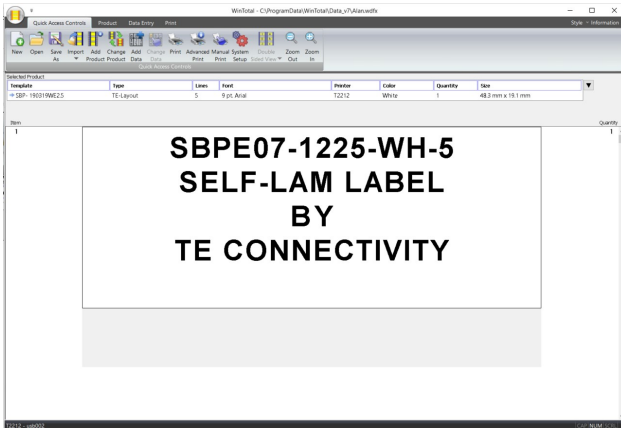
## Printer Information

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:

[https://www.te.com/commerce/DocumentDelivery/DDEController?Action=showdoc&DocId=Data+Sheet%7FTTDS-282%7F1%7Fpdf%7FEnglish%7FENG\\_DS\\_TTDS-282\\_1.pdf](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.



## www.te.com

TE Connectivity, TE Connectivity (logo) and Every Connection Counts are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2022 TE Connectivity Ltd. family of companies All Rights Reserved.

