

# Entrelec Warning and Electrical Symbols Label Kits

## Technical Datasheet

TTDS-280 Revision 1 – December 2021

Entrelec labels kits are a selection of popular pre-printed symbols for the electrical panel installations and other similar uses. This group of labels are permanent self-adhesive indicator labels.

Warning and electrical symbols are available in multiple colours and designs that conform with IEC 160417 (Electrical Symbols) & ISO 7010-W012 (Warning Signs). The labels are all made from a high quality, flexible vinyl base material for tough performance with a strong permanent acrylic adhesive. The labels' construction allows use in many industrial applications such as electrical cabinets.

Labels are supplied in handy pocket size convenient booklet, which can be easily stored or hung above the workshop bench.

The sizes of the labels are detailed below with all part numbers listed.

## Features

- Permanent acrylic adhesive.
- Tough vinyl base material.
- Flexible vinyl for irregular surfaces.
- Electrical symbols comply with IEC 60417, Warning signs comply with ISO 7010-W012.
- Range of sizes and colors available (see page 4).
- Good adhesion to low energy surfaces (e.g. Polypropylene).

## Temperature Rating

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

## Applications

- Ideal for identification, installation and maintenance work.
- Electrical Cabinets.
- Voltage Warning.
- 3 Phases motor application.
- Excellent identification through color coding and symbols.

## 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:

<http://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 21°C (70°F) and 50% relative humidity.



## Typical Label Thickness

- Label (including adhesive): 0.104 mm / 0.0041 inch
- Liner: 0.130 mm / 0.007 inch

## Technical Performance

	Requirement	Results	
<b>Print Permanence</b>			
Marking of Electrical Insulating Materials, SAE AS 4952	Legible after 50 rubs 1kg weight with an eraser.	Pass	
Resistance to Solvents, MIL STD 202 Method 215	Legible after 30 wipes.	Pass	
<b>Fluid Exposure</b>			
		<b>Adhesive/color</b> <b>Printed legend</b>	
• Isopropyl alcohol	Labels to remain on test plate, legible / SAE AS 5942 (TE doc 109-121012) and no change in pre-printed color.	Pass	Pass
• IRM 902 reference oil		Pass	Pass
• MIL PRF 23699 Oil	Samples stuck to Aluminium plates. 24 hours immersion 23°C (73°F) followed by 20 rubs. TE Doc. 109-121039	Pass	Pass
• MIL H 83282 Oil		Pass	Pass
• Diesel Fuel		Pass	Pass
• Kilfrost DF Plus de-icer		Pass	Pass
• Tap water		Pass	Pass
• 5% Salt solution		Pass	Pass
• Detergent (1% solution)	Pass	Pass	
<b>Adhesion to FTM1 (180°)</b>			
<b>Test surface:</b>	FTM1 (180°)	<b>Typical Peel force (N/25mm (oz/in.))</b>	
		<b>20min Dwell</b>	<b>72hr Dwell</b>
• Stainless steel		11 (40)	12 (42)
• Glass		15 (54)	20 (73)
• Aluminium		12 (42)	15 (54)
• Polypropylene		8 (31)	10 (38)
• Epoxy painted surface		12 (42)	34 (124)
<b>Flammability</b>			
Average Burn time, ASTM D1000	Burn time less than 10 seconds	Pass, typical burn time 5 seconds	
Burn Rate to FMVSS 302	Maximum burn rate 102mm/min	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.

## Part Description—Kit #1 & #2 Voltage Warning Sign

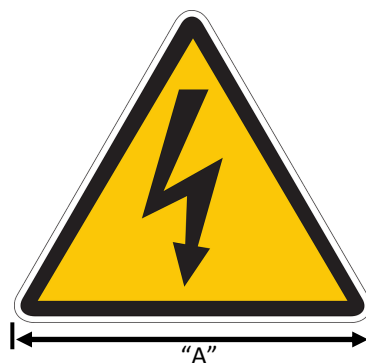
- Kit #1 and #2 have 150 warning labels in each kit.
- Kit #1 warning label dimension “A” 25mm (0.984in).
- Kit #2 warning label dimension “A” 50mm (1.969in) high.

### ORDERING INFORMATION:

KIT # 1 - Part Number - 1SET530001R0000

Description - LB-KIT-WARNING-25-150

KIT # 2 - Part Number 1SET530002R0000



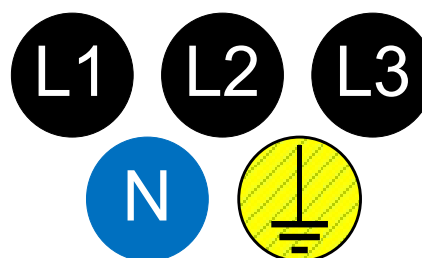
## Part Description—Kit #3 Three Phase Applications

- Label Diameter is 12.5mm (0.492in).
- There are 60 of each label in the pack.

### Kit #3 ORDERING INFORMATION

Part Number - 1SET530003R0000

Description - LB-KIT-ELEC-3PHASES-12-300



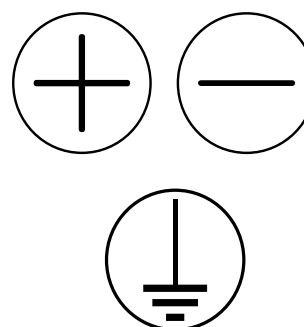
## Part Description - Kit #4 Phase Symbols

- Label Diameter is 12.5mm (0.492).
- There are 100 of each label in the pack.

### Kit #4 ORDERING INFORMATION

Part Number - 1SET530004R0000

Description - LB-KIT-ELEC-DC-12-300



**Note:** All label pictures are illustrative only and not an exact representation



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