







### **Technical Datasheet**

TTDS-249 Revision 2 - March 2022

Q-Cee Labels are a selection of popular pre-printed labels used in Inspection, Calibration, Inventory and Maintenance tasks. These kits are a selection of labels aimed at the relevant operator or worker for their daily use.

These labels are a permanent label however they can be removed cleanly after use if required. The labels are all made from a vinyl base material for tough performance. Labels are supplied as individual sheets in the handy pocket sized kits as shown above.

Some of the labels are designed with a write-on surface. This allows the user to add additional information e.g. date of test, operator I.D. etc. TE recommends use of a high performance, permanent marker pen with these labels.

The kits come in a handy pocket size convenient booklet design with a cover to protect the labels inside. The booklet is designed to be easily stored or hung above the workshop bench.

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#### **Features**

- · Permanent adhesive but removable
- Tough vinyl base material
- Writable surface
- No adhesive residue on removal
- · Variety of label designs in the kit

### **Temperature Rating**

- Operating Temperature Range
   -40 to 80°C (-40°F to 176°F)
- Minimum Application Temperature 10°C (50°F)

### **Applications**

- Ideal for identification of maintenance, calibration, stock control and inspection work.
- Industrial, Automotive, Rail, Electrical, Laboratory and Warehouse.

### **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 and 50% relative humidity.





### **Typical Label Thickness**

• Label (including adhesive): 0.120 mm / 0.005 inch

• Liner: 0.188 mm / 0.007 inch

#### **Technical Performance**

5% Salt solution

Detergent (1% solution)

**Print Permanence** 

| Marking of Electrical Insulating Materials, SAE AS 4952                          | Legible after 100 rubs 1kg weight with an eraser  | Pass<br>Pass         |                      |  |
|--|---|----------------------|----------------------|--|
| Resistance to Solvents, MIL STD 202<br>Method 215                                | Legible after 30 wipes  |                      |                      |  |
| Fluid Exposure   |   | Adhesive/color       | Printed legend       |  |
| <ul><li>Isopropyl alcohol</li><li>IRM 902 reference oil</li><li>Grease</li></ul> | Labels to remain on test plate, legi-<br>ble (TE doc 109-121012) and no<br>change in pre-printed color      | Pass<br>Pass<br>Pass | Pass<br>Pass<br>Pass |  |
| <ul><li>Engine Oil</li><li>Diesel Fuel</li><li>Tap water</li></ul>               | Samples stuck to Aluminium plates.<br>24 hours immersion in fluid @ 23°C<br>followed by 20 rubs, SAE AS5942 | Pass<br>Pass<br>Pass | Pass<br>Pass<br>Pass |  |

Requirement

Results

Pass

**Pass** 

Pass

Pass

| Adhesion to FTM1 (180°) |                       |             | Typical Peel force (N/25mm (oz/in.)) |            |  |
|-------------------------|-----------------------|-------------|--------------------------------------|------------|--|
| Test                    | surface:              | FTM1 (180°) | 20min Dwell                          | 72hr Dwell |  |
| •                       | Stainless steel       |             | 20 (73)                              | 22 (80)    |  |
| •                       | Glass                 |             | 27 (97)                              | 28 (101)   |  |
| •                       | Aluminium             |             | 25 (90)                              | 29 (105)   |  |
| •                       | Polypropylene         |             | 2.0 (7.5)                            | 2.0 (7.5)  |  |
| •                       | Epoxy painted surface |             | 34 (126)                             | 32 (116)   |  |

|    |     |     | _  |       |
|----|-----|-----|----|-------|
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Artificial weathering to ASTM G154 Labels to remain on plate, no discol- Pass, samples remain legible and no discolaration and legible after 240hr, UV- coloration

### Thermal performance

Heat Aging

Labels to remain on plate, no discol- Pass, samples remain legible and adhered oration and legible after 168hr at to test plate

100±2°C

Thermal Cycling

Labels to remain on plate, no discoloration and legible after 10 cycles of 1hr @ -50°C then 1hr @ 90°C followed by 100rubs

Note: write-on print performance is dependent on pen used.

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.



### **Kit Label Details**

|                   | Part Description            | Packing                     |   |                                      | Label Quantity                        | Label dimensions<br>(w /h) |             |
|-------------------|-----------------------------|-----------------------------|---|--------------------------------------|---------------------------------------|----------------------------|-------------|
| Part No.          |                             | No. of<br>labels<br>per Kit | No. of labels<br>per pack<br>(10 Kits per<br>bag) | Label Image                          | description                           | mm                         | in          |
| 2404300-1         | INVENTORY-LABEL<br>-BK-225  | 225                         | 2250  | INVENTORY NO DATE COUNT BY           | 105x<br>"INVENTORY"                   | - 50.8 x 12.7              | 2.0 x 0.5   |
|                   |                             |                             |   | SHELF LIFE OF AT EXPIRES             | 60x<br>"SHELF LIFE"                   |                            |             |
|                   |                             |                             |   | SCRAP BYDATE                         | 30x<br>"SCRAP"                        |                            |             |
|                   |                             |                             |   | FOR REFERENCE ONLY                   | 30x<br>"FOR REFER-<br>ENCE ONLY"      |                            |             |
| 2404400-1         | INSPECTION-<br>LABEL-BK-222 | 222                         | 2220  | INSPECTED OK BYDATE                  | 108x<br>"INSPECTED<br>OK"             | 50.8 x 19.1                | 2.0 x 0.75  |
|                   |                             |                             |   | REJECTED BY DATE                     | 60x<br>"REJECTED"                     | 50.8 x 12.7                | 2.0 x 0.5   |
|                   |                             |                             |   | HOLD FOR INSPECTION  BY DATE         | 54x "HOLD FOR<br>INSPECTION"          | 50.8 x 19.1                | 2.0 x 0.75  |
| <b>2404500</b> -1 | CALIBATION-<br>LABEL-BK-247 | 247                         | 2470  | CALIBRATION  LD. No.  By.  Date  Due | 84x<br>"CALIBRATION"                  | 50.8 x 15.9                | 2.0 x 0.625 |
|                   |                             |                             |   | DATE DUE BY                          | 108x "CAL."                           | Ø 15.9                     | Ø 0.625     |
|                   |                             |                             |   | OUT OF<br>CALIB<br>DO NOT<br>USE     | 55x "OUT OF<br>CALLIB. DO<br>NOT USE" | Ø 12.7                     | Ø 0.5       |

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### **Kit Label Details**

| Part No.  | Part Description             | Packing                     |   |   |                                     | Label dimensions<br>(w /h) |             |
|-----------|------------------------------|-----------------------------|---|---|-------------------------------------|----------------------------|-------------|
|           |                              | No. of<br>labels<br>per Kit | No. of labels<br>per pack<br>(10 Kits per<br>bag) | Label Image   | Label Quantity & description        | mm                         | in          |
| 2388600-1 | MAINTENANCE-<br>LABEL-BK-282 | 282                         | 2820  | TESTED  DATE BY                                       | 150x<br>"TESTED"                    | 50.8 x 12.7                | 2.0 x 0.5   |
|           |                              |                             |   | PREVENTIVE MAINTENANCE  DONE BY DATE  NEXT MAINT, DUE | 72x<br>"PREVENTATIVE<br>MAINTENANCE | 50.8 x 15.9                | 2.0 x 0.625 |
|           |                              |                             |   | OUT OF SERVICE  | 30x "OUT OF<br>SERVICE"             | 50.8 x 12.7                | 2.0 x 0.5   |
|           |                              |                             |   | DEFECTIVE<br>DO NOT USE                               | 30x<br>"DEFECTIVE DO<br>NOT USE"    | 50.8 x 12.7                | 2.0 x 0.5   |



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