CSL and LSR
Self-Laminating Laser Printable Polyester Labels on Sheet

Technical Datasheet

TTDS-208 Revision 2 - February 2019

CSL and LSR are clear polyester labels with a white or yellow laser printable area. On application, the clear film over-laminates and protects the printed area.

CSL and LSR are supplied with a permanent acrylic adhesive on a white Kraft liner. The self-laminating feature protects the printed area from frequent handling and exposure to oil, solvents, salt, water and mechanical abrasion, with good conformability to round surfaces. They are ideal for cable marking including flat ribbon cables and can be flagged or wrapped around a wire as shown in TE Connectivity repeatable self-laminated labelling guide 411-121050.

CSL is manufactured with a white or yellow printable area in European A4 format (210 x 297 mm)

LSR is supplied in a US letter format (8.5 x 11.0 inches) with a white printable area.

CSL AND LSR SELF-LAMINATING POLYESTER LABELS

Features

- Laser printable
- Over-lamination protects the printed area and enables a higher level of print durability
- Designed to withstand exposure to oil, solvents, salts, alkalis and water

Temperature Rating

- Service Temperature

  -40°C to +120°C (-40°F to +248°F)

- Min. Application Temperature: 10°C (50°F)

Applications

- Ideal for wire and cable marking including flat ribbon cable
- Good conformability to round, irregular or flexible surfaces including flat ribbon cables
- Industrial and Electrical applications

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 not be stored outside of the designed storage temperature, which is 20 to 25 °C (68°F to 77°F), 40 to 50 % RH.

TE connectivity

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 202G Method 215K	Legible after 30 wipes	Pass

Fluid Exposure		Adhesive	Printed legend
• IPA 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 at 23°C followed by 20 rubs with cloth, minimum print contrast 3*, legible	Pass	Pass
• MIL-H-83282		Pass	Pass
• Diesel Fuel		Pass	Pass
• Kilfrost DF plus	*Print contrast as defined in TE doc. 411-121002	Pass	Pass
• Tap water		Pass	Pass
• 5% Na Cl solution		Pass	Pass
• Detergent (1% solution)		Pass	Pass
		Pass	Pass

*8 h immersion

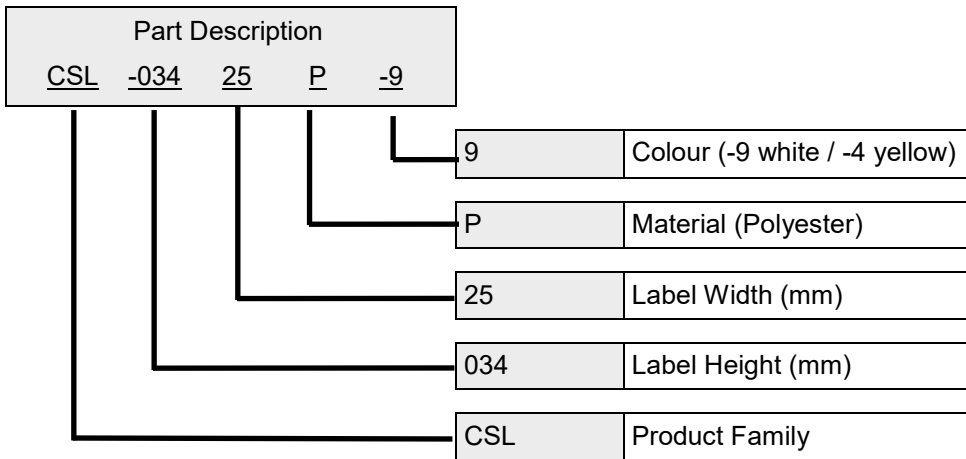| **Adhesion** to FTM1 (180°)		**Typical Peel force (N/25mm (oz/in.))**	
Test surface:	FTM1 (180°)	**20min Dwell**	**72hr Dwell**
• Stainless steel		9 (32)	14 (53)
• Glass		10 (35)	14 (53)
• Aluminium		11 (39)	16 (57)
• Polypropylene		6 (23)	7 (26)
• Tufnol		10 (38)	14 (53)
• Adhesive to Adhesive (flag)		5 (18)	10 (38)
• Adhesion to own surface (wrap)		5 (18)	8 (30)

Typical Label Thickness

- Label (including adhesive): 0.045 mm / 0.0018 inch
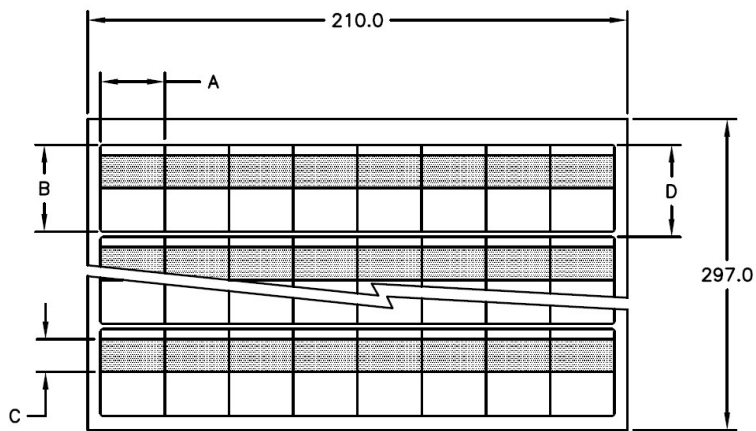- Liner: 0.155 mm / 0.0061 inch

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

CSL -034 25 P -9

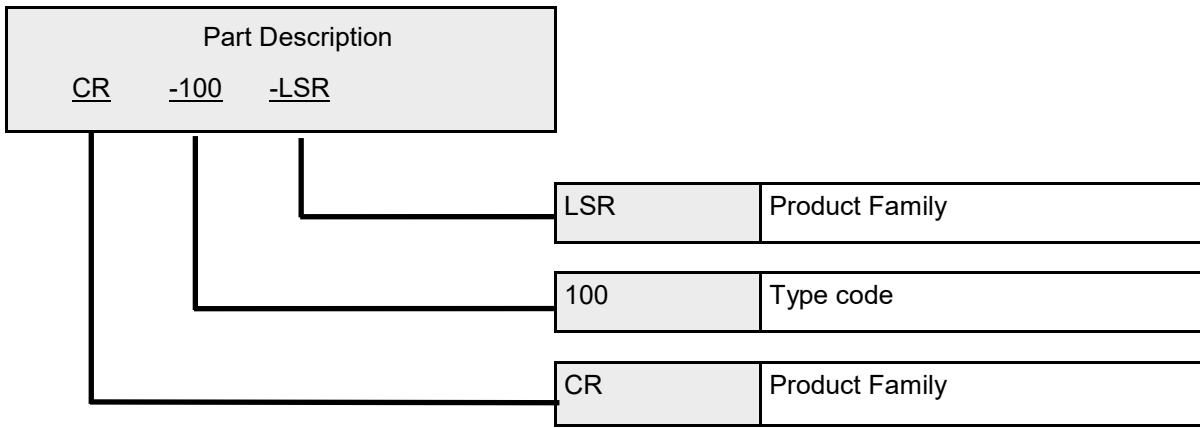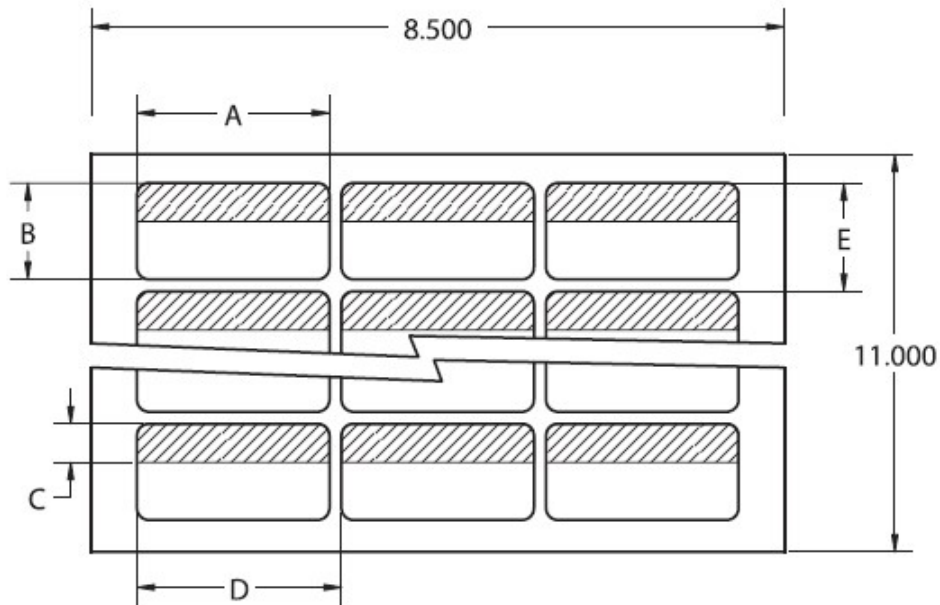|	
9	Colour (-9 white / -4 yellow)
P	Material (Polyester)
25	Label Width (mm)
034	Label Height (mm)
CSL	Product Family

Ordering Information CSL - European A4 format: 210 x 297 mm

Product Description	Labels per sheet/ Labels per pack	Max. Cable Diameter (mm) (inches)		Label Width A (mm) (inches)		Label Height B (mm) (inches)		Printable Height C (mm) (inches)		Vertical Repeat D (mm) (inches)	
CSL-02713P-9	160	6.6	0.260	12.5	0.490	26.7	1.050	6.0	0.240	28.7	1.130
CSL-03418P-4	88	8.1	0.318	18.2	0.720	33.9	1.330	8.5	0.330	35.9	1.413
CSL-03418P-9	88	8.1	0.318	18.2	0.720	33.9	1.330	8.5	0.330	35.9	1.413
CSL-03425P-4	64	6.8	0.266	25.0	0.980	33.9	1.330	12.7	0.500	35.9	1.413
CSL-03425P-9	64	6.8	0.266	25.0	0.980	33.9	1.330	12.7	0.500	35.9	1.413
CSL-05525P-4	40	13.5	0.530	25.0	0.980	55.0	2.170	12.7	0.500	57.5	2.264
CSL-05525P-9	40	13.5	0.530	25.0	0.980	55.0	2.170	12.7	0.500	57.5	2.264
CSL-06925P-4	32	16.6	0.652	25.0	0.980	69.0	2.720	17.0	0.670	72.0	2.835
CSL-06925P-9	32	16.6	0.652	25.0	0.980	69.0	2.720	17.0	0.670	72.0	2.835
CSL-06933P-4	24	15.0	0.589	33.3	1.310	69.0	2.720	22.0	0.870	72.0	2.835
CSL-06933P-9	24	15.0	0.589	33.3	1.310	69.0	2.720	22.0	0.870	72.0	2.835
CSL-09333P-4	18	21.5	0.848	33.3	1.310	93.0	3.660	25.4	1.000	96.00	3.780
CSL-09333P-9	18	21.5	0.848	33.3	1.310	93.0	3.660	25.4	1.000	96.00	3.780
CSL-14033P-4	12	36.5	1.437	33.3	1.310	140.0	5.510	25.4	1.000	145.00	5.709
CSL-14033P-9	12	36.5	1.437	33.3	1.310	140.0	5.510	25.4	1.000	145.00	5.709

Part Description

CR   -100   -LSR

LSR	Product Family

100	Type code

CR	Product Family

Ordering Information LSR - US sheet format: 8.5 x 11.0 inches
Colour of the printable area: white

Ordering Description	Package Quantity	Labels per	Max. Cable Outside Diameter		Label Width A (mm) (inches)		Label Height B (mm) (inches)		Printable Height C (mm) (inches)		Horizontal Repeat D		Vertical Repeat E	
CR-100-LSR	4,992	156	3.09	0.122	12.70	0.500	19.10	0.750	9.40	0.370	15.20	0.600	20.60	0.810
CR-101-LSR	4,992	78	8.08	0.318	12.70	0.500	38.10	1.500	12.70	0.500	15.20	0.600	40.60	1.600
CR-105-LSR	5,040	84	3.34	0.132	25.40	1.000	19.10	0.750	8.60	0.340	27.90	1.100	20.60	0.810
CR-106-LSR	2,520	63	5.35	0.211	25.40	1.000	25.40	1.000	8.60	0.340	27.90	1.100	27.90	1.100
CR-107-LSR	2,499	49	6.72	0.265	25.40	1.000	33.80	1.330	12.70	0.500	27.90	1.000	36.60	1.440
CR-108-LSR	1,008	21	17.79	0.700	25.40	1.000	80.50	3.170	24.60	0.970	27.90	1.100	84.10	3.310
CSL-110-LSR	1,008	12	17.79	0.700	47.80	1.880	80.50	3.170	24.60	0.970	50.80	2.000	83.30	3.280

Printer Information

Printers: Monochrome and colour Laser Jet printers were used for technical performance testing.

Monochrome: Samsung SL-M2026W A4 Mono Wireless Laser Printer.

Colour Laser jet printer: HP M452nw LaserJet Pro Colour Printer.

INDUSTRIAL /// TTDS-208 TECHNICAL DATA SHEET