

Rippedsheets.com

C02 Laser Black Label Permanent

102300-3

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Technical Data

June 30, 2005

Description Rippedsheets.com 102300-3 is a specialty film label material that can be imaged and “kiss cut” by a laser beam. The top layer of Rippedsheets.com 102300-3 is engineered to be ablated by a laser beam, to create an image. A laser beam can both ablate and cut the label material thus leading to maximum flexibility for producing variable label formats.

Construction	Facestock	Adhesive	Liner
Top Layer:		1.2 mil (30 microns)	3.2 mil (80 microns)
0.4 mil (10 microns)		#350 high-holding	Densified kraft
Matte black acrylate		acrylic	
Base Layer:			
2.0 mil (50 microns)			
Matte white acrylate			

- Features**
- Cast modified acrylate facestock offers long-term durability and excellent temperature, chemical and environmental resistance
 - Excellent convertability (“kiss cutting”) of acrylate facestock on densified kraft liner.
 - Matte surface provides good printability resulting in excellent bar code readability.
 - Two-layer construction with engraved inscription provides long-term readability, abrasion resistance and excellent contrast of images.
 - #350 modified acrylic adhesive provides reliable, permanent adhesion to LSE plastics, oily metals, powder coatings and textured surfaces.
 - Destructible facestock material provides tamper evidence to meet security labeling requirements.
 - No corrosive emissions during the laser marking process.
 - Rippedsheets.com 102300-3 is a Recognized Component under file TEOU2.E243761 by Underwriters Laboratories Inc.
 - Cast modified acrylate facestock can achieve high resolution with standard Nd-Yag lasers for smaller barcodes, 2-D symbologies and fine point text.

- Application Ideas**
- Durable goods marking
 - Under hood labels
 - Barcode labels
 - Process labeling in-plant
 - Asset labels
 - Security labels
 - Information labels with 2-D symbologies

Typical Physical Properties and Performance Characteristics **Note: The following technical information and data should be considered representative or typical only, and should not be used for specification purposes.**

Minimum application temperature: 39°F (4°C)

Weight per yd² (film and adhesive): 75-84g/yd² (90-100 g/m²)

Elongation at break: ca. 13%

Tensile strength: Min. 3,630 psi (25N/mm²) [elongation at break and tensile strength have been tested according to DIN 53455/ISO 527, 300mm/min.]

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Environmental Performance

Note: The following tests are intended as a guide to product performance. Application testing is recommended using actual substrates, expected dwell times, and actual conditioning for best determination of product suitability.

Temperature resistance: Resistant up to 392 °F (200 °C)
 (when applied to 530°F (275 °C) for 1 min.
 aluminum surfaces) 482°F (250 °C) for 5 min.
 440°F (225 °C) for 60 min.

Dimensional stability: No changes
 Low temperature resistance
 without stress: -76°F (-60 °C): No change
 with stress*: -22°F (-30 °C): No change

* Tested according to Gardner Impact Test.

Adhesive performance/bond strength:

Substrate	Oz/inch	N/inch.
Stainless Steel	108	30
Aluminum	108	30
Polypropylene	72	20
Polyethylene	64	18
Polycarbonate	90	25
ABS	101	28
PVC	108	30

Measured according to DIN 30646, part 1 (300 mm/min., at 180 ° angle, film width: 25.4 mm). Adhesive performance for each case can depend on the texture of the surface. The above adhesive values are average values. They are not appropriate for specifications.

Weather resistance : Acceleration test in the Xenon device > 2000 hours according to
 (thermal cycling) DIN 53387 (equivalent to 4-5 years outdoor exposure to weather):
 No change

Resistance to environmental conditions:

(according to automotive specification DCC 654A-(Europe), applied to aluminum): No change

72 hours	176 °F (80 °C)
24 hours	100 °F (38 °C) 98% r h
7 hours	-22 °F (-30 °C) 98% r h
17 hours	100 °F (38 °C) 98% r h
7 hours	176 °F (80 °C)
24 hours	100 °F (38 °C) 98% r h
17 hours	-22 °F (-30 °C)

Resistance to chemical immersion:

Substance	Exposure Time	Results
Distilled water , 149 °F (65 °C)	390 hours	No change
SAE 20 motor oil, 77 °F (25 °C)	250 hours	No change
Sodium hydr oxide solution	200 hours	No change
Sulphuric acid	300 hours	No change
Gasoline (unleaded)	1 hour	No change
95% r h, 100 °F (38 °C)	250 hours	No change
Xylene	0.5 hour	No change
Isopropanol	0.5 hour	No change

Spraying with salt water: 168 hours/5% concentration/95 °F (35 °C): No change

Resistance to abrasion: Abrasion test Taber/Abraser (applied to aluminum panels)
 CS 10 wheels, 500 grams per wheel up to 300 cycles: No change

Storage/shelf life: 2 years storage stability if stored at room temperature conditions
 in cool, dry and sun-protected rooms.

Processing

Laser Marking:

- Rippedsheets.com 102300-3 label material is compatible with many kinds of dispenser systems and is suitable for a continuous process with minimal supervision.
- Rippedsheets.com recommends operating an exhaust system combined with a charcoal filter to reduce emissions during the laser operation.
- All Nd-Yag laser marking equipment on the market can ablate and “kiss cut” Rippedsheets.com 102300-3.
- For optimized optical results, Rippedsheets.com recommends individually adjusting marking parameter, such as power, pulse rate, and speed, to your individual requirements depending on the type of labels to be produced (bar codes or characters).

Printing:

- When using press printing methods, Rippedsheets.com recommends pre-printing tests to check for sufficient ink adhesion.

Note: All of the descriptive information, the typical performance data, and recommendations for the use of Rippedsheets.com products shall be used only as a guide and do not reflect the specification or specification range for any particular property of the product. Furnishing such information is merely an attempt to assist you after you have indicated your contemplated use and shall in no event constitute a warranty of any kind by Rippedsheets.com. All purchasers of Rippedsheets.com products shall be responsible for independently determining the suitability of the material for the purpose for which it is purchased. No distributor, salesman, or representative of Rippedsheets.com is authorized to give any warranty, guaranty, or make any representation in addition or contrary to the above.

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