

# Series 2100 Cast Film

# **High Performance Cast Film**

Series 2100 is a 2-mil (50 micron) cast film is extra formable, thereby providing exceptional conformability, even on deep recesses and channel constructions on vans. The advanced adhesive system is designed to perform well on a wide variety of substrates including rigid sign faces, banners, and painted metal. Series 2100 is available in 67 vibrant colors. With outdoor durability up to 12 years, it withstands adverse climate and environmental conditions.

## **APPLICATIONS & FEATURES**

- Maintains softness over time.
- Resists embrittlement, cracking and crazing.
- Outperforms most films in multi-layered graphics.
- Provides up to 12 years of outdoor durability (varies by color; see chart on page 3)
- Conforms exceptionally well to rivets, corrugations and channel structures.
- Film is designed for cut graphics not for digital printing applications.
- · Contrasting blue liner on Gloss & Matte White make for optimal cutting & weeding

#### PERFORMANCE & PHYSICAL DATA

| PROPERTY                         | TEST METHODS  | TYPICAL V                             | ALUE                 |
|----------------------------------|---|---------------------------------------|----------------------|
| SURFACE FINISH                   | Gloss Meter 60° Reflection  | 70 to 90 Gloss Units                  |                      |
| THICKNESS                        | Micrometer, Federal Bench Type  | 2-mil (50 micron)                     |                      |
| TENSILE STRENGTH                 | Tensile Tester 2-in (51 mm) jaw seperation; crosshead speed of 12 in/min. (5.1 mm/s)  | ≥ 4.5 lb/in                           | ≥ 0.8 kg/cm          |
| ELONGATION                       | Instron Tensile Tester as above   | Non-Metallics ≥ 1<br>Metallics ≥ 100% | 70%                  |
| SHELF LIFE (IN BOX)              | Ideal Storage Temperature 70°F (21°C) and 50% relative humidity   | 2 years from factory shipment         |                      |
| APPLICATION<br>TEMPERATURE RANGE | On clean, dry substrate   | 40°F to 120°F                         | 5°C to 50°C          |
|                                  |   | 60°F to 90°F<br>optimum               | 15°C to 30°C optimum |
| SERVICE<br>TEMPERATURE RANGE     | Film applied to etched aluminum panels 24 hours prior to testing  | -40°F to 200°F                        | -40°C to 93°C        |
| GASOLINE RESISTANCE              | Film applied to etched aluminum panels 24 hours prior to testing; immersed 15 minutes at 70°F (21°C); stabilized 24 hours before inspection | No appreciable effect                 |                      |
| DIMENSIONAL STABILITY            | 158°F (70°C), 48 hours  | 0.01 - 0.02 in                        | 0.25 - 0.50 mm       |
| PEEL ADHESION                    | PSTC-1, 15 min  | 3.0/in                                | 613 N/m 525          |
|                                  | PSTC-1 Ultimate Bond  | 4.5/in                                | 875 N/m 787          |
| LINER RELEASE                    | TLMI 300 in/min (762 cm/min) 2 in (51 mm) wide sample   | 150 g/2 in                            | 30 g/cm              |

Standard film adhesion (PSTC-1) 180°F, peel at room temperature at a rate of 12 inches per minute after 24 hours dwell.

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#### **DURABILITY**

Series 2100 is a premium cast film. Standard colors have been weather tested in a variety of rigorous direct exposure locales including Florida, Arizona and California. Custom color matches are derived only from best weathering pigments and stabilizer systems, incurring very high durability assurance at short development times. For specific color durability, see chart on page 3

### OPTIMUM PERFORMANCE AND WARRANTY EXCEPTIONS

Actual weathering durability depends on surface preparation, surface maintenance and exposure conditions. Successful weather resistance is characterized by the retention of legibility.

Series 2100 film will resist weathering best when applied to vertical or upper outboard angles. Horizontal angles such as hood, trunk and auto roof surfaces will weather significantly sooner than vertical and is not recommended. This is due to increased exposure to sun and moisture as well as continued high deposition of dirt and atmospheric contaminants. Arlon does not recommend its Series 2100 film for use on stainless steel trailers or latex painted surfaces.

#### **OPACITY**

Series 2100 opacity level may vary depending color and not compatible with backlighting applications. (Only Series 2500 is designed and warrantedd for backlighting.)

#### **TERMS AND CONDITIONS**

The following is made in lieu of all warranties expressed or implied:

All orders and purchases made in connection with this document are governed and limited by Arlon's Standard Terms and Conditions, which are incorporated in full by this reference and are available at http://www.arlon.com/terms-and-conditions or in hardcopy by request.

# **DURABILITY**

Note: Some color fade may occur in severe environmental areas.

| COLOR                | VERTICAL DURABILITY<br>ZONE 1 | COLOR                    | VERTICAL DURABILITY<br>ZONE 1 |  |
|----------------------|-------------------------------|--------------------------|-------------------------------|--|
| 003 BLACK            | 12 Years                      | 106 MEDIUM GREEN         | 9 Years                       |  |
| 002 WHITE            | 10 Years                      | 250 INTENSE BLUE         | 9 Years                       |  |
| 005 BLUE             | 10 Years                      | 280 TERRA COTTA          | 9 Years                       |  |
| 008 BROWN            | 10 Years                      | 000 CLEAR                | 8 Years                       |  |
| 011 DARK BLUE        | 10 Years                      | 006 YELLOW               | 8 Years                       |  |
| 012 BURGUNDY         | 10 Years                      | 014 TOMATO RED           | 8 Years                       |  |
| 017 SAPPHIRE BLUE    | 10 Years                      | 051 ARUBA BLUE           | 8 Years                       |  |
| 024 DARK GREEN       | 10 Years                      | 056 HOT PINK             | 8 Years                       |  |
| 026 OYSTER           | 10 Years                      | 059 IMITATION GOLD       | 8 Years                       |  |
| 027 FAWN             | 10 Years                      | 060 BRIGHT CARDINAL RED  | 8 Years                       |  |
| 040 MATTE BLACK      | 10 Years                      | 067 PRIMROSE YELLOW      | 8 Years                       |  |
| 050 MEDIUM GRAY      | 10 Years                      | 068 BEIGE                | 8 Years                       |  |
| 052 DARK GRAY        | 10 Years                      | 069 APPLE GREEN          | 8 Years                       |  |
| 065 DARK BAHAMA BLUE | 10 Years                      | 070 PALM OYSTER GRAY     | 8 Years                       |  |
| 065 MIDNIGHT BLUE    | 10 Years                      | 073 POPPY                | 8 Years                       |  |
| 066 MEDIUM BLUE      | 10 Years                      | 079 KIWI                 | 8 Years                       |  |
| 074 ROYAL PURPLE     | 10 Years                      | 081 TITANIUM             | 8 Years                       |  |
| 086 FOREST GREEN     | 10 Years                      | 083 BRIGHT ORANGE        | 8 Years                       |  |
| 093 LIGHT NAVY       | 10 Years                      | 084 EGGSHELL             | 8 Years                       |  |
| 230 BOTTLE GREEN     | 10 Years                      | 087 AQUA GREEN           | 8 Years                       |  |
| 001 RED              | 9 Years                       | 092 WEDGEWOOD BLUE       | 8 Years                       |  |
| 018 OLYMPIC BLUE     | 9 Years                       | 096 TANGERINE            | 8 Years                       |  |
| 028 DOVE GRAY        | 9 Years                       | 097 LIGHT ORANGE         | 8 Years                       |  |
| 031 OCEAN BLUE       | 9 Years                       | 165 CHROME YELLOW        | 8 Years                       |  |
| 032 AZURE BLUE       | 9 Years                       | 220 PERFECT MATCH RED    | 8 Years                       |  |
| 042 CARDINAL RED     | 9 Years                       | 221 GERANIUM             | 8 Years                       |  |
| 049 MATTE WHITE      | 9 Years                       | 223 PEACOCK RED          | 8 Years                       |  |
| 058 DARK MAGENTA     | 9 Years                       | 023 CHARCOAL METALLIC    | 6 Years                       |  |
| 061 KELLY GREEN      | 9 Years                       | 037 MEDIUM BLUE METALLIC | 6 Years                       |  |
| 071 TEAL             | 9 Years                       | 120 PEARL                | 6 Years                       |  |
| 080 GRAPHITE         | 9 Years                       | 004 GOLD                 | 5 Years                       |  |
| 085 COCOA            | 9 Years                       | 021 SMOKE METALLIC       | 5 Years                       |  |
| 089 AQUA BLUE        | 9 Years                       | 029 SILVER METALLIC      | 5 Years                       |  |
| 099 BRIGHT PURPLE    | 9 Years                       |                          | February                      |  |

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