

## **BRADY B-946**

TDS No. B-946

Effective Date: 11/15/2010

### **Description:**

Brady B-946 indoor/outdoor marking film is a high gloss, durable, flexible, pressure sensitive adhesive product.

### **Details:**

#### **Use:**

B-946 is used for Pipemarkers, Arrow Tape, Arrow Tape, Numbers and Letters, Vehicle Placards, Pedestal Markers, Warning Panels and Safety Signs.

#### **Special Properties:**

Brady B-946 is printed with weather resistant inks and is particularly suited for use in outdoor applications where weatherability is a key consideration.

#### **Substrate Type:**

Vinyl film

#### **Standard Material Colors:**

White, red, yellow, green, blue and orange

#### **Standard Legend Colors:**

Black, blue, red, green, white, yellow, orange and magenta

#### **Thickness (PSTC-133):**

Total: 0.004 in. (0.102mm)

#### **Adhesive Properties:**

Adhesion to Steel (PSTC-101)

15 Minute Dwell to stainless steel (Avg.) -- 80 oz/in. (87.5 N/100mm)

Ultimate Dwell to stainless steel (72 Hrs.) (Avg.) -- 85 oz/in. (93 N/100mm)

15 Minute Dwell to polypropylene (Avg.) -- 60 oz/in. (65 N/100mm)

Ultimate Dwell to polypropylene (72 Hrs.) (Avg.) -- 69 oz/in. (75 N/100mm)

15 Minute Dwell to Powder Coated Metal (Avg.) -- 60 oz/in. (65 N/100mm)

Ultimate Dwell to Powder Coated Metal (72 Hrs.) (Avg.) -- 75 oz/in. (82 N/100mm)

Note: Not recommended for adhesion to Bare Concrete or Unpainted Wood

Tack (ASTM D 2979) (Avg.) -- 1100 g (10.5 N)

#### **Abrasion Resistance (Method 5306 of U.S. Federal Test Method Std. No. 191A):**

CS-10 wheels, 250 g wts.

The printed legend withstands up to 350 cycles

#### **Gloss:**

60° 50 Gardner Units

#### **Minimum Application Temperature**

0°F (-18°C)

#### **Service Temperature**

-40°F to 180°F (-40°C to 82°C)

**Average Outdoor Durability:**

8-10 years (Average expected outdoor life of product will depend on user definition of failure, climatic conditions, mounting techniques, and material color.)

**Chemical Resistance:**

| REAGENT               | 7 DAY IMMERSION | DIP TEST | Sutherland RUB TEST |
|-----------------------|-----------------|----------|---------------------|
| 30% Sulfuric Acid     | NE              | NE       | NE                  |
| 10% Sulfuric Acid     | NE              | NE       | NE                  |
| 30% Hydrochloric Acid | NE              | NE       | NE                  |
| 10% Hydrochloric Acid | NE              | NE       | NE                  |
| 50% NaOH              | NE              | NE       | NE                  |
| 10% NaOH              | F               | NE       | NE                  |
| Methyl Ethyl Ketone   | F               | F        | F                   |
| Acetone               | F               | F        | F                   |
| Methanol              | F               | NE       | F                   |
| IPA (Isopropanol)     | F               | NE       | F                   |
| ASTM #3 Oil           | NE              | NE       | NE                  |
| SAE 20 Oil            | NE              | NE       | NE                  |
| Alconox®              | NE              | NE       | NE                  |
| Toluene               | F               | F        | F                   |
| Mineral Spirits       | F               | F        | F                   |
| Glacial Acetic Acid   | F               | F        | F                   |
| 5% Acetic Acid        | NE              | NE       | NE                  |
| Diesel Fuel           | F               | F        | F                   |
| Heptane               | F               | NE       | F                   |
| 10% Ammonia           | NE              | NE       | NE                  |
| Turpentine            | F               | F        | F                   |
| Kerosene              | NE              | F        | F                   |
| Turpentine            | F               | F        | F                   |
| Kerosene              | NE              | F        | F                   |
| 10% Sodium Chloride   | NE              | NE       | NE                  |
| Water                 | NE              | NE       | NE                  |
| Gasoline              | F               | F        | F                   |

NE = No Effect  
NT = Not Tested  
F = Failed (affected sample)

7 Day Immersion: Immersed in reagent for 7 days.  
Dip Test: Five 10 minute dips in reagent with 30 minute recovery.  
Rub Test: Rubbed sample for up to 100 rubs on Sutherland Ink rub tester.

Shelf Life and Fitness for Use: Product testing, customer feedback, and history of similar products, support a customer performance expectation of one year from the date of receipt for this product as long as this product is stored in its original packaging in an environment below 80°F (27°C) and 60% RH. However, it remains the responsibility of the user to assess the risk of using such product. We encourage customers to develop functional testing protocols that will qualify a product's fitness for use, in their actual applications.

**Trademarks:**

Alconox® is a registered trademark of Alconox Co.  
Signmark® is a registered trademark of Brady Worldwide, Inc.  
ASTM: American Society for Testing and Materials (U.S.A)  
PSTC: Pressure Sensitive Tape Council (U.S.A.)  
SAE: Society of Automotive Engineers (U.S.A.)  
All S.I. Units (metric) are mathematically derived from the U.S. Conventional Units

**Note:** All values shown are averages and should not be used for specification purposes.  
Test data and test results contained in this document are for general information only and shall not be relied upon by Brady customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact Brady for further information.

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