## Permanent Kraft

Revision: 3 Dated: 08/24/17

#### Uses:

Avery Dennison® Glow-in-the-Dark Film is a specialty photoluminescent non-coated rigid polyester film that can be used for exit and directional signs, identification of fire alarms, fire extinguishers and evacuation routes. This product performs in accordance with ASTM 2030-06: Recommended Uses of Photoluminescent Safety Markings.



Face: 6 mil (152 microns) specialty polyester



Adhesive: Clear Permanent



Liner: 78# bleached Kraft



Durability: Up to 5 years INDOOR USE ONLY

**Application** Flat Surfaces:

### Features:

- High gloss finish
- Dimensionally stable liner for easy converting
- Excellent dimensional stability
- Non-toxic, non-radioactive
- Uses zero electricity

### Conversion:

- Flat Bed Sign-Cut
- Drum Roller Sign-Cut
- Steel Rule Die-Cutting
- Screen Printing
- UV Inkjet

### **Common Applications:**

- Safety Signs
- **Emergency Exit Markings**
- **Evacuation Signs**
- Illuminate Pathways
- Location Signs

## **Product Data Sheet**

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## **Physical Characteristics:**

| Property                        | Measurement               | Typical Values   |  |  |
|---------------------------------|---------------------------|--|--|--|
| Caliper, face                   |                           | 6 mil (152 μm)   |  |  |
| Caliper, adhesive               |                           | 2 mil (50 μm)  |  |  |
| Tensile at Yield                |                           | NA   |  |  |
| Elongation                      |                           | NA   |  |  |
| Gloss                           | Hunter Gloss @ 60 degrees | 121 GU   |  |  |
| Adhesion:                       | 15 min<br>72 hrs          | 6.9 lbs/in (1208 N/m)<br>6.9 lbs/in (1208 N/m)   |  |  |
| Flammability                    | Self Extinguishing        |  |  |  |
| Shelf-Life                      |                           | 2 years from date of manufacture (when stored at the following temperatures and humidity conditions 68°-77° F (20° - 25° C) and 50±5% R. H.) |  |  |
| Durability                      | Vertical Exposure         | Unprinted - 5 years, Indoor Only   |  |  |
| Min. Application<br>Temperature |                           | 50° F (10° C)  |  |  |
| Service Temperature             |                           | -40° to 176°F (-40° to 80° C) (Reasonable range of temperatures which would be expected under normal environmental conditions).              |  |  |
| Chemical resistance             |                           | Resistant to most mild acids, alkalis, and salt solutions including water. Resists Petroleum Vapors  |  |  |

Data represents average values where applicable, and is not intended for specification purposes.

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### Warranty:

This Warranty applies to the Product listed in this Data Sheet. All statements, technical information (including physical and chemical characteristics) and recommendations about Avery Dennison products are based upon tests believed to be reliable but do not constitute a guarantee or warranty. All Avery Dennison products are sold subject to the Purchaser's assent and agreement that Purchaser is responsible for, and has independently determined, the suitability of such products for its purposes or its customer's purposes. Avery Dennison products are warranted to be free from defects in material and workmanship (i) for two years from the date of manufacture, or (ii) from the date of manufacture until the expiration of the period stated on the specific Product Data Sheet in effect at the time of delivery.. Such time periods are subject in either case to the proper storing and application of said product, and the failure to properly store or apply the product, including without limitation the failure to follow any applicable Instructional Bulletin, negates any warranty. It is expressly agreed and understood that Avery Dennison's sole obligation and Purchaser's exclusive remedy under this warranty, under any other warranty, express or implied, or otherwise, shall be limited exclusively to: (a) repair or replacement of defective product without charge at Avery Dennison's plant or at the location of the product (at Avery Dennison's election), or (b) in the event repair or replacement are not commercially practical, a credit amount up to the price of the product taking into account the defect in the product in Avery Dennison's sole discretion.

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### **Chemical Resistance:**

All chemical tests are conducted with test panels to which a specimen has been applied.

| Reagent                         | 7 Day<br>Immersion | Dip Test | Rub Test |
|---------------------------------|--------------------|----------|----------|
| 30% Sulfuric Acid               | NE                 | NE       | NE       |
| 10% Sulfuric Acid               | NE                 | NE       | NE       |
| 30% HCL                         | NE                 | NE       | NE       |
| 10% HCL                         | NE                 | NE       | NE       |
| 50% NaOH                        | F                  | NE       | NE       |
| 10% NaOH                        | F                  | NE       | NE       |
| MEK                             | F                  | F        | F        |
| Acetone                         | F                  | F        | F        |
| 5% Sodium Hypochlorite (bleach) | NE                 | NE       | NE       |
| 10% Amonia                      | NE                 | NE       | NE       |
| Methanol                        | F                  | F        | F        |
| Isopropyl Alcohol               | F                  | F        | F        |
| ASTM #3 Oil                     | NE                 | NE       | NE       |
| SAE 20 Oil                      | NE                 | NE       | NE       |
| Alconox®                        | NE                 | NE       | NE       |
| Toluene                         | F                  | NE       | F        |
| Mineral Spirits                 | NE                 | NE       | NE       |
| Glacial Acetic Acid             | F                  | F        | F        |
| 5% Acetic Acid                  | NE                 | NE       | NE       |
| Diesel Fuel                     | NE                 | NE       | NE       |
| Heptane                         | NE                 | NE       | NE       |
| 10% NaCL                        | NE                 | NE       | NE       |
| Turpentine                      | NE                 | NE       | NE       |
| Kerosene                        | F                  | NE       | NE       |
| DI Water                        | NE                 | NE       | NE       |
| Gasoline                        | F                  | NE       | F        |

NE = No Effect

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 1 minute with swab soaked in reagent

Illuminescent Characteristics: Charge time of 5 minutes @ 1000 Lux will charge the sign for +10

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hours of glow time. Consistent glow life and unlimited

rechargeability throughout service life.

Illumination: 21.6 Lux (2 foot candles) for 2 hours with a 4100K cool

white fluorescent lamp

Luminance time (after illumination): 10 minutes > 25 mcd/square meter 60 minutes > 5 mcd/square meter 90 minutes > 3 mcd/square meter

Abrasion Resistance: CS-17 wheels, 1000g weights

Withstands up to 9000 cycles

ASTM D4060-14 Standard Test Method for Abrasion Resistance or

Organic Coatings by the Taber Abraser

Relevant Standards: Meets or exceeds the following standards. ASTM E-2072-00 /

ASTM E-2073-00, ASTM E-162, ASTM E-648, ASTM E-662, IMO Resolution A.752(18), ISO/CD 15370, Marine Safety Committee MSC.27(61), DIN 67 510 (Parts 1 - 4), and PSPA Standard 002

Part 2.

Meets OSHA 1910.37, Lloyd's Register SAS F050294.p

Revisions are italicized

#### Trademarks:

ANSI: American National Standards Institute (U.S.A.) ASTM: American Society for Testing and Materials (U.S.A.) PSPA: Photoluminescent Safety Products Association DIN: Deutsches InstitÜt fÜr Normung

IMO: International Maritime Association

OSHA: Occupational Safety & Health Administration Fed. Spec.: United States Federal Specification (U.S.A.) PSTC: Pressure Sensitive Tape Council (U.S.A.)

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