RESISTANCE TO SUNSCREEN LOTION AND INSECT REPELLENT

Application

This method is used to determine the resistance of finished surfaces to sunscreen lotion and insect repellant.

Materials Required

Insect Repellant
The insect repellent must have at least 20-30% N, N diethyl-meta-toluamide (DEET) and commercially available.

Sunscreen Lotion
The sunscreen or sunblock lotion must have a SPF factor of 30, water-proof and commercially available.

Crockmeter Squares
(Style 3, 50.8 x 50.8 mm (2"x 2"))
Available from:

Testfabrics, Inc.
PO Box 26
415 Delaware Avenue
West Pittson, PA 18643
Phone: (717) 603-0432
www.testfabrics.com

Apparatus Required

Aluminum Panel
(approximately 75 x 150 mm +/- 5 mm)
Available from:

ACT Laboratories
273 Industrial Drive
Hillsdale, MI 49242
Phone: (517) 439-1491
www.actlaboraties.com

Oven
Air circulating, capable of maintaining 75 °C, conforming to ISO 188/ASTM E145 type IIA normal oven 150 + 50 air changes per hour.

Weight, 500 grams (Method B Only)
(max. dimension 50 x 50 mm +/- 5 mm)

Date	Action	Revisions	Rev. 04
2015 07 16	Revised	See Summary of Revisions	J. Bilko, NA
2013 08 14	Revised	Revised Method A.	J. Bilko, NA
2005 12 20	Activated		C. Lin

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AATCC Gray Scale, 10 Step
(Per AATCC Evaluation Procedure 1 and 2 /ISO 105-A02 for evaluation of color change)

Available from:

British Standards Institution
3 York Street
Manchester M2 2AT
United Kingdom

AATCC
PO Box 12215
Research Triangle Park, North Carolina, 22709
USA
Phone: (919) 549-8141

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5% relative humidity for not less than 24 hours prior to testing and tested under the same conditions unless otherwise specified.

Method A: Painted Parts and Plaques

1. Place the crock cloth on the surface of the painted/coated sample.
2. Place 0.05g of solution on the center of the test cloth.
3. Place the aluminum panel immediately on top of the crock cloth.
4 The test exposures for each fluid are described below:
   - 1 hour at 74ºC +/-2 ºC (1-Sunscreen Lotion, 1-Insect Repellant)
   - 24 hours at 23 ºC +/-2 ºC (1-Sunscreen Lotion, 1-Insect Repellant)
5. Immediately remove the aluminum panel from on top of the crock cloth.
6. Peel the crock cloth from the surface.
7. Wipe off any excess material with a wet cloth.
8. After cooling to 23 ºC +/-2 ºC, evaluate the samples with the unaided eye from a distance of 300 +/- 30 mm at 20 °C. Rate the crock cloth and the sample for visual effect per the scale below.
9. Evaluate sample within one hour.
10. The rating should reflect the most significant visual change observed for discoloration, surface defect, or cloth impression/color transfer.

Method A: Rating Scale

1. No visual defect.

2. Light discoloration/spotting (AATCC Proc. 1, min. 4-5) and/or no surface defect and/or no cloth impression and/or no color transfer onto cloth (AATCC Proc. 2, min. 5).

3. Moderate discoloration/spotting (AATCC Proc. 1, min. 4) and/or no surface defect and/or very slight cloth impression and/or slight color transfer (AATCC Proc. 2, min.4-5).

4. Significant discoloration/spotting (AATCC Proc. 1, <4) and/or slight surface defect and/or significant cloth impression and/or color transfer (AATCC Proc. 2, min. 4)

5. Severe discoloration/spotting (AATCC Proc. 1, <3-4) and/or severe surface defect and/or severe cloth impression.

Surface defect = cracking, crazing, gloss loss, softening, swelling, wrinkling.

Very slight cloth impression= cloth mesh faintly visible to naked eye.

Significant cloth impression= cloth mesh visible to naked eye at all angles, could have fiber embedded into coating/substrate.

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