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TEST REPORT

PRODUCT: FBD 8393
SUPPORT: PEU FOAM

SUBSTRATE: TPO

CERT NO.: 221215 - 1448

GMW 16443-TYPE-II-EXTERIOR-CYCLE-C

OEM Rev Date: Aug 18

Adhesion Performance Requirements For Adhesive Backed Light Trim and Foam

Type II - An adhesive backed foam composite that is retained by the adhesive for the life of the vehicle

ACCREDITED

TESTING LABORATORY

Status

Pass

Pass

Pass

Pass

Results

Stable, No Lifting or Removal

Passing Type II Meets and Exceeds 3.5.1 Type I Exposure Requirements

Specification

Securely Bonded

Securely Bonded

Securely Bonded

Securely Bonded

TAPE REQUIREMENTS:

3.5.2 TYPE-II Exposure

SECTION 3.3.3 Edge Adhesion

3.5.3, Initial, As Received - 24 hrs @ RT

3.5.4, Heat Aged 168 hrs @ 80°C per ISO 188

3.5.5, Humidity 168 hrs @ 38°C / 100% RH per GMW 14729 Option A

3.5.6, Cycle Exposure, GMW 14124, 2x Cycle C

17 hrs @ -30°C

72 hrs @ 70°C

24 hrs @ 38°C / 100% RH

7 hrs @ -30°C

24 hrs @ 38°C / 100% RH

7 hrs @ 70°C

24 hrs @ 38°C / 100% RH

3.5.8, Cold Shock, 72 hrs @ 54°C, 4 hrs @ -30°C Securely Bonded Stable, No Lifting or Removal Pass

SECTION 3.4 **Peel Adhesion** Specification Results ISO 8510-2 <u>Mode</u> Status 525 N/m 1504.9 3.5.3, Initial, As Received - 24 hrs @ RT AF-P **Pass** 525 N/m 1143.6 3.5.4, Heat Aged 168 hrs @ 80°C per ISO 188 AF-P **Pass** 3.5.5, Humidity 168 hrs @ 38°C / 100% RH per GMW 14729 Option A 525 N/m 1462.3 AF-P **Pass** 525 N/m 1180 9 3.5.6, Cycle Exposure, GMW 14124, 2x Cycle C AF-P **Pass**

17 hrs @ -30°C

72 hrs @ 70°C

24 hrs @ 38°C / 100% RH

7 hrs @ -30°C

24 hrs @ 38°C / 100% RH

7 hrs @ 70°C

3.5.8, Cold Shock, 72 hrs @ 54°C, 4 hrs @ -30°C **525 N/m** 1596.6 AF-P **Pass**

SECTION 3.5.8 Cold Shock
3.5.8, Cold Shock, 72 hrs @ 54°C, 4 hrs @ -30°C

No Separation from 2

No Impact Separation

Pass

SECTION: 3.7.1 Release Liner Specification Results Status (65 N/m 15.8 Pass)

CERTIFIED BY:

Dave Nichols Jr. Automotive Lab Technician

ISSUE DATE: <u>1-1-24</u>

8-4-2021

Page 1 of 1

Original Test Date:

Materials tested to OEM requirements @ 72°F +/- 2°F and 50% RH +/- 5%. Test uncertainty and minor exclusions are available online or upon request.

This certificate or report shall not be reproduced except in full, without the written approval of the Avery Dennison® Performance Tapes.

Status opinion based upon measurements obtained by personnel with appropriate training and professional experience.

PRODUCT: FBD 8393

SUPPORT: **PEU FOAM** Appendix A Table A2

SUBSTRATE: TPO

221215 - 1448 CERT NO.:

| Table A2: GMW16443 Type II Applications Test Data Form | | | | | | | | | |
|--|--|------------|---|--------|-------------------------------|----------|--------------|--|--|
| Section | Test | Standard | Requirements | Sample | Visual Edge Adhesion | Peel N/m | Failure Mode | | |
| 3.5.3 | Initial, As Received - 24 hrs @ RT | ISO 8510-2 | Minimum of 525 N/m and Cohesive Failure of One or Both of the Adherends | 1 | Stable, No Lifting or Removal | 1178.6 | AF-P | | |
| | | | | 2 | Stable, No Lifting or Removal | 1670.7 | AF-P | | |
| | | | | 3 | Stable, No Lifting or Removal | 1665.5 | AF-P | | |
| 3.5.4 | Heat Aged 168 hrs @ 80°C per ISO 188 | | | 1 | Stable, No Lifting or Removal | 1197.9 | AF-P | | |
| | | | | 2 | Stable, No Lifting or Removal | 1150.6 | AF-P | | |
| | | | | 3 | Stable, No Lifting or Removal | 1082.3 | AF-P | | |
| | Humidity 168 hrs @ 38°C / 100% RH per GMW 14729 Option A | | | 1 | Stable, No Lifting or Removal | 1497.3 | AF-P | | |
| 3.5.5 | | | | 2 | Stable, No Lifting or Removal | 1388.8 | AF-P | | |
| | | | | 3 | Stable, No Lifting or Removal | 1500.8 | AF-P | | |
| 3.5.6 | Cycle Exposure, GMW 14124, 2x Cycle C | | | 1 | Stable, No Lifting or Removal | 1175.1 | AF-P | | |
| | | | | 2 | Stable, No Lifting or Removal | 1250.4 | AF-P | | |
| | | | | 3 | Stable, No Lifting or Removal | 1117.3 | AF-P | | |
| | | | | 1 | | | | | |
| | | | | 2 | | | | | |
| | | | | 3 | | | | | |
| 3.5.8 | Cold Shock, 72 hrs @ 54°C, 4 hrs @ -30°C | | | 1 | Stable, No Lifting or Removal | 1581.4 | AF-P | | |
| | | | | 2 | Stable, No Lifting or Removal | 1598.9 | AF-P | | |
| | | | | 3 | Stable, No Lifting or Removal | 1609.4 | AF-P | | |

| Section | Test | Standard | Standard Requirements | | Result | |
|---------|------------------------|--|----------------------------------|---|------------|--|
| 3.6 | | GMW 15851 is restricted and we cannot purchase | | 1 | Not Tested | |
| | Tape Wet Out, GMW15851 | | 85% Tape Wet Out | 2 | Not Tested | |
| | | | | 3 | Not Tested | |
| 3.7.1 | Release Liner Contact | To Be Determined @ Tier | No Lift Prior To Vehicle Install | 1 | TBD | |
| | | | | 2 | TBD | |
| | | | | 3 | TBD | |
| 3.7.2 | Liner Removal | ISO 8510-2 | | 1 | 15.8 | |
| | | | Less Than or Equal To 65 N/m | 2 | 15.8 | |
| | | | | 3 | 15.8 | |