

The adhesive tape engineers®

| TEST REPORT                                 |   |     | PRODUCT:   |                          | 654M          |        |
|---|---|-----|------------|--------------------------|---------------|--------|
| NISSAN NES M 8506 – 2008 CLASS 1 (Interior) |   |     | TEST SUBST | BSTRATE: Stainless Steel |               | el     |
| DOCUMENT<br>Tapes for Aut                   | TITLE: Pressure-Sensitive Adhesive Double-Coa<br>omobiles | ted | REPORT     | DATE:                    | ATE: 06/26/23 |        |
| DIVISION                                    | TEST ITEMS <b>0</b>                                       |     | REQT       |                          | RESULTS       | STATUS |
|   | 5.8 STORAGE STABILITY                                     |     |            |                          |               |        |

| BITIOION                |  |                         |                  | 011100 |
|-------------------------|--|-------------------------|------------------|--------|
| GENERAL<br>PROPERTIES   | 5.8 STORAGE STABILITY                                |                         |                  |        |
|                         | APPEARANCE   | Free (1)                | Free (1)         | PASS   |
|                         | PEEL STRENGTH [168H @ 40 °C]                         | >4.9 N/25mm             | 24.3 N/25mm [AF] | PASS   |
|                         | SHEAR STRENGTH [168H @ 40 °C]                        | > 98 kPa                | 221 kPa          | PASS   |
| WORK-<br>Abilities      | 5.9 RE-ADHESION                                      |                         |                  |        |
|                         | Primary Peel (30 S)                                  | Interfacial Failure (2) | AF               | PASS   |
|                         | Secondary Peel (10 H)                                | >60% of Orig.           | 19.1 N/25mm [AF] | PASS   |
| PHYSICAL<br>PROPERTIES  | 5.11 ADHESIVE STRENGTH IMMEDIATELY<br>AFTER AFFIXING |                         |                  |        |
|                         | 5°C X 30 SEC   | 2.9 N/25mm              | 18.9 N/25mm [AF] | PASS   |
|                         | 23°C X 30 SEC  | Report                  | 20.1 N/25mm [AF] | REPORT |
|                         | 5.12 ROOM TEMP ADH. PERFORMANCE<br>[23°C]            |                         |                  |        |
|                         | PEEL STRENGTH  | >4.9 N/25mm             | 24.2 N/25mm [AF] | PASS   |
|                         | SHEAR STRENGTH                                       | > 98 kPa                | 242 kPa          | PASS   |
|                         | SHEAR HOLDING FORCE [HR] 0.2 KG                      | Report                  | 168 Hours +      | PASS   |
|                         | 5.13 HIGH TEMP ADH. PERFORMANCE [90°C]               |                         |                  |        |
|                         | PEEL STRENGTH  | >1.47 N/25mm            | 12.5 N/25mm [CF] | PASS   |
|                         | SHEAR STRENGTH                                       | >1.47 kPa               | 125 kPa          | PASS   |
|                         | SHEAR HOLDING FORCE [HR] 0.1 KG                      | Report                  | 24 Hours +       | REPORT |
| ENDURANCE<br>CAPABILITY | 5.17 HEAT AGING (90°C X 168H)                        |                         |                  |        |
|                         | PEEL STRENGTH  | >90% of Orig.           | 33.8 N/25mm [MF] | PASS   |
|                         | SHEAR STRENGTH                                       | >90% of Orig.           | 222 kPa          | PASS   |
|                         | 5.18 HUMIDITY RESISTANCE                             |                         |                  |        |
|                         | PEEL STRENGTH  | >60% of Orig.           | 28.1 N/25mm [AF] | PASS   |
|                         | SHEAR STRENGTH                                       | >60% of Orig.           | 224 kPa          | PASS   |

+ = Static Shear in Hours - No Failure (Testing Discontinued)

(1) Shall be uniformly wound and free from significant deformations and cavities while both side faces shall be flat.

(2) During primary peel, the tape shall peel interfacially from the substrate.

Symbol Failure mode:

AF Interfacial separation of substrate and tape; MF Mixing of interfacial separation and tape failure; CF Cohesive split of tape.

• Products tested backed with 25 micron PET.

APPROVED:

Original Test Date: 1/25/2021 Berry Global Technical Service Department

Conditioning and Testing per NISSAN NES M 8506 – 2008