

## Test Report

### tape:

tesa LaserLabel 6930 PV3/PV6 (color black/white)  
tesa LaserLabel 6937 PV6 (color black/white with security feature)  
(including information: characters, barcodes)

**substrate:** steel

### Overview of test methods:

| Environmental Exposure                       | Test  | Result     |
|--|---|------------|
| <i>Outdoor-weathering test</i>               |   |            |
| Xenontest                                    | 2.000 hours   | no changes |
| Florida test                                 | 15 month  | no changes |
| Kalahari test                                | 15 month  | no changes |
| Arizona test                                 | 15 month  | no changes |
| Humid conditions                             | +50 °C/95% rel. humidity-20 days                    | no changes |
| Sun simulation                               | 15 cycles humidity/15 cycles dry (4 weeks)          | no changes |
| Xenon (UV) Test                              | 3.000 hours (equal to 3-4 years outdoor-weathering) | no changes |
| Xenon (UV) Test – long term                  | 10.000 hours  | no changes |
| Ultraviolet Light and Water (Wheatherometer) | 720 hours / 20 min. UV and 3 min. UV&water          | no changes |
| Heat aging (short term)                      | 90 °C circulating air/20 weeks                      | no changes |
| Heat aging (short term)                      | 180 °C circulating air/19 days                      | no changes |
| Heat and Cooling cycles (long term)          | 150 °C and – 40 °C (5.000 hours)                    | no changes |
| Low temperature                              | - 30 °C / 7 days                                    | no changes |

|  |   |              |
|--|---|--------------|
| Corrosion long-term test EK4   | 18 weeks                                | no influence |
| Galvanostatic Cathodic Polarization of Coated Panels<br>Electrochemical Corrosion Shorttime Test | 5 days                                  | no changes   |
| Shrinkage  | 240 hours / 23 °C and 98% rel. humidity | < 0.05 %     |
| Shrinkage  | 180 °C / 7 days                         | < 0.1 %      |
| Shrinkage  | 270 °C / 15 min.                        | < 0.2 %      |
| <i><u>Condensation water climatic testing</u></i>  |   |              |
| water climate testing  | 20 weeks / 23 °C<br>98% rel. humidity   | no changes   |
| water climate testing  | 20 weeks / 45 °C<br>98% rel. humidity   | no changes   |
| <i><u>Mechanical testing</u></i>   |   |              |
| Crockmeter (dry)   | 2.000                                   | no changes   |
| Crockmeter (with super petrol)   | 1.000                                   | no changes   |
| Taber Test (10N / dry)   | 500 strokes                             | no changes   |
| <i><u>Chemical resistance testing</u></i>  |   |              |
| Water immersion  | 48 hours / 70 °C                        | none         |
| Super petrol   | 1 hour / 23 °C                          | none         |
| Sulfuric acid (30%)  | 1 hour / 23 °C                          | none         |
| Sodium Hydroxide (1%)  | 1 hour / 23 °C                          | none         |
| Toluol   | 1 hour / 23 °C                          | none         |
| Motor oil (SAE 20 S)   | 1 hour / 23 °C                          | none         |
| Preservative (Wax Henkel)  | 1 hour / 23 °C                          | none         |
| Washer Detergent   | 48 hours / 65 °C                        | none         |
| Dishwater Detergent  | 48 hours / 23 °C                        | none         |

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a400-A.Koops  
March 2006

|   |  |              |
|---|--|--------------|
|   |  |              |
| Detergent for inside (Sidolin)                  | 1 hour / 23 °C   | none         |
| Lubricating Oil                                 | 48 hours / 23 °C   | none         |
| Cooking Oil                                     | 48 hours / 23°C  | none         |
| Gasoline Splashing (immersed in gas atmosphere) | 1 hour / 23 °C   | none         |
| high-pressure cleaner                           | 50 bar, 45° angle to substrate, 1m distance, 40° temperature for 10 minutes<br>substrate: lacquer panel, polypropylene | none         |
| Hot engine oil                                  | 120 °C / 4 hours   | no changes   |
| Hot engine coolant (50:50: ethylglycol&water)   | 95 °C / 4 hours  | no changes   |
| Brake Fluid (DOT 3 or DOT 4)                    | 23 °C / 4 hours  | no changes   |
| <u>Other</u>                                    |  |              |
| flammable test                                  | US 571.302   | no flammable |

## Laser-Label Certifications / Specifications

Institution/Cert-No.                      tesa Label                                      is certified on (date)  
Address

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### **UL MH 18055 (M)**

|  |        |                           |
|--|--------|---------------------------|
| Underwriters Laboratories<br>1285 Walt Whitman Road<br>Melville, New York<br>11747-3081<br>USA | (6930) | 13.09.94, revised 15.3.99 |
|--|--------|---------------------------|

### **BWB Normentwurf VG 95 530**

|  |        |           |
|--|--------|-----------|
| Bundesamt für Wehrtechnik<br>und Beschaffung<br>Postfach 7360<br>Konrad-Adenauer-Ufer 2-6<br>Koblenz | (6930) | Sept.1986 |
|--|--------|-----------|

### **KBA Fabrikschild i.S. der StVO**

|   |        |            |
|---|--------|------------|
| Kraftfahrt-Bundesamt<br><br>24932 Flensburg | (6930) | 10.01.1995 |
|---|--------|------------|

### **Natec**

|   |  |            |
|---|--|------------|
| NATEC Institut GmbH<br>Behringstr. 154<br>22763 Hamburg | (6931)<br>Methode DINV ENV 1186<br>Grenzwert nach §8<br>Bedarfsgegenstände eingeh. | 06.11.1996 |
|---|--|------------|

**CSA C22.2 No. 015-95 Part II** (6930/6931) 12.02.1996

Canadian Standards Association  
178 Rexdale Boulevard  
Etobicoke  
Ontario  
Canada M9W 1R3

**DB DBL 8230** (6930)

Daimler Benz

**VW TL 52038 C** (6930) Freigabe auf lackierter Oberfläche 16.08.1993  
(Abschlußbericht)

Volkswagen AG  
Forschung & Entwicklung  
Wolfsburg

**Opel GME 00 008-A1** (6930)

Opel  
Technical Development Centre  
Europe

**BMW N 60045.0** (6930) 13.06.1997

BMW AG  
Sparte Labor  
Postfach 1120  
84130 Dingolfing