

Group standard

**TL 581**

Issue 2016-01

Class. No.: 55431

Descriptors: rearview mirror, mirror, adhesive tape, mirror backing, bonding, splinter protection, adhesive bond

## Adhesive Tape for Mirror Backing

### Material Requirements

#### Previous issues

TL 581: 1964-03, 1971-12, 1973-11, 1974-02, 1992-03, 2003-09, 2014-07

#### Changes

The following changes have been made to TL 581: 2014-07:

- Note on restricted use removed
- Section 3.3 "Structure" and Section 3.8 "Peel resistance" changed
- Technical responsibility updated
- Standard changed to new layout
- Applicable documents updated

#### 1 Scope

This Technical Supply Specification (TL) describes requirements for adhesive tape used as splintering protection on the backside of rearview mirrors and requirements for adhesive bonds that are produced with this tape.

#### 2 Designation

**Adhesive tape as per TL 581**

Always use the latest version of this standard.

This electronically generated standard is authentic and valid without signature.

The English translation is believed to be accurate. In case of discrepancies, the German version is alone authoritative and controlling.

Page 1 of 3

Technical responsibility	The Standards department
GQL-P/1 Hagen Rakus Tel.: +49 5361 9 22178	EKD/4 Ute Hager-Süß EKDV
GQL-P/1 Dr. Claudia Kühlmeyer-Freise Tel.: +49 5361 9 26163	Tel.: +49 5361 9 49035 Maik Gummert
GQL-P Dr. Jiping Liu	

### 3 Requirements

#### 3.1 Basic requirements

Approval of first supply and changes as per Volkswagen standard [VW 01155](#)

Avoidance of hazardous substances as per [VW 91101](#).

For complete testing, 10 mirror backing ASSYs (rearview mirror) and 2 m of adhesive tape as roll stock are required.

Unless otherwise specified, the measurements are performed 1 h after acclimatization in [VW 50554](#) – 23/50-2 standard atmosphere.

The required numerical values apply to each individual measurement.

#### 3.2 Requirements on delivery

The adhesive tapes are supplied bonded to the rearview mirrors. Width and thickness of the adhesive tape must be specified in the drawing.

#### 3.3 Structure

Substrate made of cellulose paper, slightly creped and impregnated; coated on one side with adhesive compound based on acrylate and natural rubber (NR).

#### 3.4 Shelf life

At least 6 months at temperatures from -5 °C to 30 °C.

#### 3.5 Properties

The backing must completely cover the back of the mirror, including the edges, and must not exhibit any flaws in the form of air inclusions or waviness. The adhesive bond must function properly in the temperature range from -40 °C to +110 °C.

#### 3.6 Tear strength

Test	Specimen width: 25 mm; traverse speed: 100 mm/min
Requirement	≥100 N/25 mm specimen width

#### 3.7 Elongation at tear

Test	Specimen width: 25 mm; traverse speed: 100 mm/min
Requirement	≥10%

#### 3.8 Peel resistance

Test	Specimen width: 10 mm Excess adhesive tape must be cut off using a sharp knife and removed from the back of the mirror. Peel angle: 180°; traverse speed: 100 mm/min
Requirement	≥5 N/cm

### 3.9 Temperature behavior

- After heat aging: 300 h at +110 °C in recirculated air
- After heat and humidity aging: 300 h at 70 °C recirculated air and 100<sub>6</sub><sup>+0</sup>% relative humidity
- After low-temperature aging: 48 h at -40 °C

After completion of the aging periods described above, the specimens must fulfill each of the following conditions:

No adhesive separation of the bond on the surface and at the edges (e.g. formation of blisters or waviness). A slight brownish discoloration of the crepe paper is permissible.

## 4 Applicable documents

The following documents cited in this standard are necessary to its application.

Some of the cited documents are translations from the German original. The translations of German terms in such documents may differ from those used in this standard, resulting in terminological inconsistency.

Standards whose titles are given in German may be available only in German. Editions in other languages may be available from the institution issuing the standard.

VW 01155	Vehicle Parts; Approval of First Supply and Changes
VW 50554	Standard Atmospheres and Room Temperatures; Requirements on Standard Atmospheres
VW 91101	Environmental Standard for Vehicles; Vehicle Parts, Materials, Operating Fluids; Avoidance of Hazardous Substances