

# LUMISIL<sup>®</sup> 245 GEL FLEX UV A/B



## Silicone Gels

LUMISIL<sup>®</sup> 245 Gel Flex UV is a 2-part transparent silicone gel that is designed for a stencil printing lamination system with curing by UV condition for displays.

## Properties

- Stable adhesion performance to plastics(e.g. polycarbonate, PMMA, PET etc.)
- Low flowability for stencil printability
- Low modulus for efficient stress relaxation
- No oxygen inhibition
- Excellent optical stability with high transparency
- Excellent thermal stability by siloxane backbone
- Low volume shrinkage

## Technical data

### Properties Uncured

Property	Condition	A	B	Method
Color	-	Clear	Clear	-
Density	23 °C	0.97 - 0.99 g/cm <sup>3</sup>	0.97 - 0.99 g/cm <sup>3</sup>	-
Viscosity	25 °C   10 1/s	60000 - 70000 mPa·s	900 - 1100 mPa·s	ISO 3219

These figures are only intended as a guide and should not be used in preparing specifications.

### Properties Catalyzed A+B

Property	Condition	Value	Method
Mix ratio	-	10 : 1	A : B
Platinum-catalyst in component	-	B	-
Pot life	23 °C	> 24 h	-
Viscosity of mixture	25 °C   10 1/s	40000 - 50000 mPa·s	ISO 3219

These figures are only intended as a guide and should not be used in preparing specifications.

## Properties Cured

Property	Condition	Value	Method
Density	23 °C	0.97 - 0.99 g/cm <sup>3</sup>	-
Dielectric constant	100 Hz	2.7 - 2.8	-
Elongation at break <sup>(1)</sup>	-	> 2000 %	DIN 53504
Haze	-	< 0.10 %	-
Penetration <sup>(2)</sup>	-	40 - 60 1/10mm	-
Pull strength (Glass/Glass) <sup>(3)</sup>	-	> 0.5 N/mm <sup>2</sup>	-
Pull strength (Polycarbonate/Glass)	-	> 0.4 N/mm <sup>2</sup>	-
Refractive index	23 °C	1.405	-
Storage modulus in Shear (G') <sup>(4)</sup>	-	2000 - 5000 Pa	-
Transmittance <sup>(5)</sup>	550 nm	> 99.0 %	-
Volume shrinkage	-	< 0.1 % deformation	-
Yellowness index	-	< 0.20 %	-

<sup>1</sup>Instron, T=2mm

<sup>2</sup>SEQ170, 9,38 hallow cone

<sup>3</sup>T=300mm, Test speed=300mm/min

<sup>4</sup>1Hz

<sup>5</sup>Double sided with 0.7mm LCD bare glass

These figures are only intended as a guide and should not be used in preparing specifications.

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be downloaded via WACKER web site <http://www.wacker.com>.

## Applications

- Automotive Electronics
- Automotive, Aerospace & Railway
- Displays & Optical Bonding
- E-Mobility
- Electrics & Electronics
- Electronics

## Application details

- Optical bonding or DAM for displays
- Encapsulation of optical & electronic components
- Production of damping elements
- Bonding with plastic substrates (e.g. polycarbonate, PMMA, PET etc.)

## Processing

### Surface preparation

All surfaces must be clean and free of contaminants that will inhibit the cure of LUMISIL® 245 Gel Flex UV.

Examples of inhibiting contaminants are sulfur-containing materials, plasticizers, urethanes, amine-containing materials, and organometallic compounds – especially organotin compounds. If a substrate's ability to inhibit cure is unknown, a small-scale test should be run to determine compatibility.

### Mixing

LUMISIL® 245 Gel Flex UV A (Part A) : ELASTOSIL® Cat UV (Part B) = 10:1

### Curing

Curing speed can be adjusted by UV power and time. Heat can accelerate the curing process.

We recommend running preliminary tests to optimize conditions for particular applications. Comprehensive processing instructions are given in below.

- Recommended Lamp Type : UV-A, Mercury, 365 nm LED
- For Normal process : Metal halide is recommended
- For Hybrid process (UV first, then laminate) :

UV energy should be controlled depending on the open time from UV exposure to lamination

If the applied lamp is 365nm LED lamp, the higher UV irradiance would be better (ex. 2,000 mW/cm<sup>2</sup>).

Tack free time can be increased or decreased depending on the applied irradiance of energy source.

## Packaging and storage

### Packaging

- 1 KG Bottle PE
- 9 KG Bottle PE
- 18 KG Hobbok

### Storage

LUMISIL® 245 Gel Flex UV A and ELASTOSIL® Cat UV should be stored between 5 °C and 30 °C and below 60%RH in the tightly closed original container.

The 'Best use before end' date (Shelf life) of each batch appears on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable.

In this case, however, the properties required for the intended use must be checked for quality assurance reasons.

Shelf life

- LUMISIL® 245 Gel Flex UV A : 1 year
- ELASTOSIL® Cat UV : 6 month

## Safety notes

According to the latest findings LUMISIL® 245 Gel Flex UV, an addition-curing silicone gel, contains neither toxic nor aggressive substances which might require special handling precautions.

General industrial hygiene regulations should be observed.

Comprehensive instructions are given in the corresponding Material Safety Data Sheets.

They are available on request from Wacker subsidiaries.

## QR Code LUMISIL® 245 GEL FLEX UV A/B



**For technical, quality or product safety questions, please contact:**

**Wacker Chemie AG**, Hanns-Seidel-Platz 4, 81737 Munich, Germany  
productinformation@wacker.com, www.wacker.com

The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.