

LUMISIL[®] 201 FLEX UV A/B



Room Temperature Curing Silicone Rubber (RTV-2)

LUMISIL[®] 201 Flex UV is a 2-part transparent silicone gel that is designed for plastic substrates with high tackiness and gel bonding process as OCA-like silicone OCR with curing by UV condition for displays.

Properties

- Stable adhesion performance to plastics(e.g. polycarbonate, PMMA, PET etc.)
- Low viscosity for multi-purpose dispensing
- Long liquid retention time after UV for wet bonding
- Gel bonding: applicable
- Excellent stress relaxation with high elongation and damping factor by soft gel structure
- No oxygen inhibition
- Excellent optical stability with high transparency
- Excellent thermal stability by siloxane backbone
- Low volume shrinkage

Specific features

- Addition Curing
- Flowable
- No chemical shrinkage
- Two-component
- UV curing

Technical data

Properties Uncured

Property	Condition	A	B	Method
Color	-	Clear	Clear	-
Density	23 °C	0.97 g/cm ³	0.97 g/cm ³	-
Viscosity	25 °C	1100 - 1700	900 - 1100	-

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	1000 - 1600	-

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Properties Cured

Property	Condition	Value	Method
180° Peel strength (Glass/PET) ⁽¹⁾	-	> 0.5 N/mm	-
180° Peel strength (PC/PET)	-	> 0.4 N/mm	-
Damping Factor in Shear (δ)	-	> 1.0	-
Density	23 °C	0.97 g/cm ³	-
Dielectric constant	100 Hz	2.7 - 2.8	-
Elongation at Break ⁽²⁾	-	> 2000 %	-
Haze	-	< 0.10 %	-
Loss Modulus in Shear (G'') ⁽³⁾	-	1000 - 3000 Pa	-
Refractive index	25 °C	1.405	-
Storage Modulus in Shear (G') ⁽⁴⁾	-	1000 - 3000 Pa	-
Transmittance ⁽⁵⁾	550 nm	> 99.0 %	-
Volume shrinkage	-	< 0.1 % deformation	-
Yellowness index	-	< 0.20 %	-

¹Cure condition: 3,000mJ/cm² (365nm LED, EIT detector) + 50 °C/30min

²T=2mm

³1Hz

⁴1Hz

⁵Double sided with 0.7mm LCD bare glass

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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 for Automotives, Electronics, Industry etc.
- 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® 201 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.

Degassing before Mixing

In mass production, Degassing is essential process before mixing of materials in case of air peeding system (No need for RAM pressing system)

Mixing

LUMISIL® 201Flex UV A (Part A) : ELASTOSIL® Cat UV (Part B) = 10:1

Curing

Curing speed can be adjusted by UV irradiation and energy. Also 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 (ex. Mercury, Metal Halide etc.), 365 nm LED
- To lead Wet bonding, the proper UV nenergy should be employed based on open time from UV esposure to laminating

If the applied lamp is 365nm LED lamp, the higher UV irradiance would be better.

Packaging and storage

Packaging

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

Storage

LUMISIL® 201 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® 201 Flex UV A : 1year
- ELASTOSIL® Cat UV : 6 month

Safety notes

According to the latest findings LUMISIL® 201 Flex UV being 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® 201 FLEX UV A/B



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

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