

SEMICOSIL[®] 821 UV A



Room Temperature Curing Silicone Rubber (RTV-2)

SEMICOSIL[®] 821 UV is a non-slump silicone adhesive that is cured by UV conditions with unique cure behavior for automotives.

This is specially designated for the combination process of screwing and UV curable gluing and oven-free processing or wet bonding during processing with fast adhesion built-up at oven processing.

Properties

Special characteristics

- Long and controllable liquid retention time after UV
- Primerless adhesion to many substrates
- Liquid or gel state during processing after UV exposure
- Fast curing and adhesion built-up at the minimum energy input
- Thixotropic for non-slump
- Long pot-life of the A+B mixed

Specific features

- Addition Curing
- Non-slump
- Two-component
- UV curing

Technical data

Properties Uncured

Property	Condition	Value	Method
Milky transparent (Translucent)	-	-	-
Viscosity of mix at 0,5/s	25 °C	125,000 ± 25,000 mPa.s	-
Viscosity of mix at 25/s	25 °C	12,500 ± 2,500 mPa.s	-
Mix ratio	-	10 : 1	A : B

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

Properties Uncured

Property	Condition	A	B	Method
Viscosity at 25/s	25 °C	15,500 ± 2,500 mPa.s	1,000 ± 100 mPa.s	-

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Catalyzed

Part B : ELASTOSIL CAT UV as A:B=10:1

Property	Condition	Value	Method
Density	-	1.1 - 1.13 g/cm ³	-
Pot life ⁽¹⁾	-	≥ 24 h	Brookfield
Hardness Shore A	-	40 - 50	DIN 53505 A
Tensile strength	-	≥ 5 N/mm ²	-
Elongation at break	-	≥ 600 %	-
Gel time ⁽²⁾	-	280 - 320 min	-
Lap shear strength ⁽³⁾	-	≥ 3.5 N/mm ²	-
Skin formation time ⁽⁴⁾	-	≤ 1 min	internal method
Skin formation time ⁽⁵⁾	-	≥ 5 min	-

¹Time to 25% viscosity up at 25°C under dark place

²Gel time(wet bonding limit) : Time to 1,000,000 mPa.s viscosity up after 3,000mJ/cm² UV(365nm LED)

³Glass/Glass with T=300µm

⁴4,500mJ/cm² Metal halid

⁵1,500-3,000 mJ/cm² 365nm LED

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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

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

Application details

- Assembly glue for displays

- Bonding material or sealing agent in electronics, automotive and other industrial applications

Processing

Processing

Surface preparation

All surfaces must be clean and free of contaminants that will inhibit the cure of SEMICOSIL® 821 UV A and ELASTOSIL® Cat 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 ratio

Part A (SEMICOSIL® 821 UV A) : Part B (Elastosil® Cat UV) = 10 : 1

Curing

Curing speed can be adjusted by UV irradiation and time. Also, heat can accelerate the curing process.

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

- Recommended Lamp Type: UV-A, Mercury, 365 nm LED
- For Normal process, Metal Halid is recommended
- For Hybrid process (UV first, then laminate); UV energy should be controlled depending on the open time from UV activation to Lamination

If the applied lamp is 365nm LED lamp, the higher UV irradiance would be better (ex. 2,000 mW/cm²).

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

Packaging and storage

Packaging

1KG BOTTLE PE

18KG HOBBOCK PE

Storage

SEMICOSIL® 821 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 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.

Safety notes

According to the latest findings, SEMICOSIL® 821 UV A being an addition-curing silicone rubber 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 SEMICOSIL® 821 UV A



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

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