

Casting compound Wepesil VU 4675

The casting compound **Wepesil VU 4675** protects and insulates electronic components and assembled printed circuit boards from extreme climatic influences and aggressive media.

- Base: silicone (SR)
- good flow
- addition cross-linking
- highly elastic
- very low heat generation and very low shrinkage pressure when cured
- suitable for sensitive electronic components, as it reduces material tension during temperature changes
- temperature range **-65 to +200 °C* (-85°F to 392 °F)**
- good thermal conductivity (approx. 0.9 W/mK) owing to ceramic fillers
- excellent resistance against chemicals and weathering conditions
- dielectric properties remain almost unchanged over wide temperature and frequency ranges
- hardly flammable due to its chemical characterisation
- good resistance to corona and glowing
- good protection against shock, impact and vibration
- easy to remove for repair

* Both at the lower and upper ends of this range the performance and reliability of the material can be negatively affected in some applications. In these cases, additional pre-trials and tests are required.

Characteristics

Colour/ appearance		grey
Viscosity* at 20 °C [68 °F] DIN EN ISO 3219	component A	50 ± 10 dPas
	hardener (component B)	50 ± 10 dPas
	mixture	50 ± 10 dPas
Density at 20 °C [68 °F] DIN EN ISO 2811-1	component A	2.10 ± 0.05 g/cm ³
	hardener (component B)	2.20 ± 0.05 g/cm ³
	mixture	2.15 ± 0.05 g/cm ³
Pot life of mixture at 19 - 21 °C [66.2 °F-69.8 °F] in acc. with DIN EN 14022, approx. 200ml, tenfold viscosity		180 ± 20 min

* Viscotester VT-06, DK 1, viscosity measuring unit from RION CO., LTD., Japan, rion-svglobal.com

Physical and mechanical properties

These properties are reached after 14 days storage at room temperature (18-23°C [64.4-73.4°F]).

Property	Test method	Result
Shore-A hardness	ISO 48-4	47 ± 5
Water absorption	DIN EN ISO 62 24 h/23 °C [73.4 °F] 30 min 100 °C [212 °F] / 15 min 23 °C [73.4 °F]	≈ 0.02 % ≈ 0.06 %
Coefficient of thermal expansion CTE	TMA (-40 to 150 °C [-40 to 302 °F])	≈ 160 ppm/°C
Temperature shock	in accordance with IPC-TM-650, 2.6.7.1, -65 bis +125 °C [-85 to 257 °F]	passed

Electrical properties

These properties are reached after 14 days storage at room temperature (18-23°C [64.4-73.4°F]).

Property	Test method	Result
Dielectric strength	IPC-TM-650, 2.5.6.1	≥ 15 kV/mm
Surface resistance	DIN EN 62631-3-2	≥ 2 x 10 ¹⁴ Ohm
Specific volume resistivity	DIN EN 62631-3-1	≥ 4.2 x 10 ¹³ Ohm x cm
Comparative tracking index (CTI, tracking resistance)	DIN EN 60112	CTI ≥ 600

Processing



Please read this technical report and the publications listed below carefully before using the product. These sheets are enclosed with the first shipment of product or sample.

MSDS

The corresponding material safety data sheet contains detailed information and characteristics on safety precautions, environmental protection, transport, storage, handling and waste disposal.

TI

[Technical information TI 15/2](#) "Selection criteria and processing instructions for casting compounds"

TI

[Technical information TI 15/3](#) "Protective measures when using chemicals including lacquers, casting compounds, thinners, cleaning agents"

TI

[Technical information TI 15/10](#) "Processing of 2-pack systems"

TI

[Technical information TI 15/18](#) "Handling of silicones"

Due to the formulation of ceramic fillers having a mohs hardness of 9.0 one has to expect abrasion. For this reason, it is not possible to process this product in mixing and dosing units.

Since the many different permutations make it impossible to evaluate the whole spectrum (parameters, reactions with materials used, chemical processes and machines) of processes and subsequent processes in all their variations, the parameters we recommend are to be viewed as guidelines only that were determined in laboratory conditions. We advise you to determine the exact process limitations within your production environment, in particular as regards compatibility with your specific follow-up processes, in order to ensure a stable fabrication process and products of the highest possible quality.

The specified product data is based upon standard processing conditions/test conditions of the mentioned norms and must be verified if necessary while observing suitable test conditions on processed products.

Feel free to contact our application technology department (ATD) if you have any questions or for a consultation.

Mixing



Stir before use



Component A : hardener (component B) = 1 : 1 (parts by weight)

Auxiliary products recommended

- [Grip coating G 4660](#)
promotes the adhesion of addition cross-linking **Wepesil** casting compounds
- [ELPESPEC® sealing mastic EH 13.271](#)
solvent-free paste for sealing jobs in electronics and electrical engineering, self-adhesive and permelastatic
- [ELPESPEC® cleaning agent R 13.780](#)
for the cleaning of work place and tools; cleaning should be effected immediately after processing as cleaning becomes increasingly difficult the further the curing process progresses and is impossible after final curing

Drying/Curing

The following specifications for a quantity of 25 g serve as a guideline:

	Room temperature (18-23 °C [64.4-73.4 °F])	60 °C [140 °F]	80 °C [176 °F]	100 °C [212 °F]	125 °C [257 °F]
Tack-free	24 h	15 min	< 5 min	< 5 min	< 5 min
Cured	14 days	2–3 h	40 min	30 min	15 min

Packaging

The packing units available are indicated in our offer which we will send you upon request.

Shelf life and storage conditions



Shelf life: In sealed original containers at least 6 months



Storage conditions: +5 °C to +25 °C [+41 °F to +77 °F]



Protect against humidity

For warehousing reasons, isolated cases may occur where the shelf life upon shipment is less than the shelf life indicated in this technical report. However, it is ensured that our products have **at least** two-thirds of their shelf life remaining when they leave our company. Labels on containers show shelf life and storage conditions.

Disclaimer

All descriptions and images of our goods and products contained in our technical literature, catalogues, flyers, circular letters, advertisements, price lists, websites, data sheets and brochures, and in particular the information given in this literature are non-binding unless expressly stated otherwise in the Agreement. This shall also include the property rights of third parties if applicable.

The products are exclusively intended for the applications indicated in the corresponding technical data sheets. The advisory service does not exempt you from performing your own assessments, in particular as regards their suitability for the applications intended. The application, use and processing of our products and of the products manufactured by you based on the advice given by our Application Technology Department are beyond our control and thus entirely your responsibility. The sale of our products is effected in accordance with our current terms of sale and delivery.

Any questions? We would be pleased to offer you advice and assistance in solving your problems. Samples and technical literature are available upon request.

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