

TECHNICAL DATA SHEET



R100 C

Nov. 2016

SILICONE RTV2 TRANSPARENT

R100 C is an addition room temperature vulcanizing rubber. These two-component products are supplied with curing agent in matched kits which are designed for use at a convenient 1:1 ratio by weight. R100 C is a low viscosity, easily pourable liquids with viscosity between 4-6000 cps.

Can be mixed by hand or by mixing machine, R100 C provides an excellent electrical insulation and shock resistance, can be accelerate by heat. Transparence permits visual inspection for easy identification and repair. The main property of the product to be vulcanized is its remarkable fluidity.

Key Features

- High chemical resistance to the aggressive components of some types of resin;
- Extremely high tear strength (this feature guarantees high resistance to wear and tear);
- High dimensional stability in time and indeformability;
- Remarkable resistance to high temperatures and aging;
- Excellent anti-stick effect.

Main Field of Application

R100 C is dedicated for protection of electronic components and assemblies against shock, vibration, moisture, ozone, dust, chemicals, and other environmental hazards by potting or encapsulation of the components and assemblies.

Instructions for use

Take the two bi-component products supplied by ABchimie (base and catalyst) and shake before use. Weight an equal amount of catalyst and base (ex. 100 grams of catalyst and 100 grams of base; within a 5% error range the end result is not altered).

Once the product is weighed and it is assured that the base and catalyst are equal, the two components are inserted in a recipient and mixed thoroughly. It is important to check while mixing that no residue remains on the base and sides of the recipient.

Mix energetically until the colour of the product is homogeneous.

Once the product is mixed it is poured, preferably 30cm above the recipient into the mould. The working time is approximately WT (see table below) from the beginning of the mixing at 23°C. It is advised to vacuum the mixture to prevent air pockets. If the quantity used is less than what is needed to complete the duplication, complete the hardening of the silicone and than proceed with the addition (within 24 hours from the hardening of the first mould) of the remaining silicone needed. The material attaches to the silicone without altering the final result.

The setting time (time the silicone needs to vulcanize) is about ST at 23°C (see table below). The silicon rubber is compatible with all gypsums, coatings, polyurethane resins and acrylic resins

Note: The working time and thus the setting time are reduced if the temperature exceeds 23°C (ex. If the temperature is 40°C, the working time is halved and the setting time is approximately halved). If the temperature is less than 23°C both the working time and setting time increase considerably. (ex. If the temperature is 4°C, the working time doubles and the Setting time increases three times the minutes indicated at 23°C).

Important recommendations

The exact proportions 1 : 1 must be respected to obtain the correct times and not to alter the final characteristics of the product. The surfaces with which the material enters in contact must be perfectly clean, free of grease and dry.

Note: Before use, we recommend the two components be homogenized so as to avoid sedimentation.

Chemical and Physical properties

Mixing and curing	
Mixing ratio	1 : 1
Viscosity of pre-catalyzation mixture (cP)	< 6 000
Density (g/cc)	1,05
Working time at 23°C (73°F) (min)	WT= 15' – 20'
Setting time at 23°C (73°F) (min)	ST= 60' – 90'
Heat cure time at 100°C (min)	30'
Heat cure time at 150°C (min)	8'
Mechanical and thermal properties	
Shore A hardness after 24 hours	43 ± 3
Breaking load (N/mm ²)	3.5 ± 0.5
Elongation at break (%)	370±40
Tear strength (N/mm)	19.0 ± 2.0
Tensile Strength (psi)	940
Shrinkage (%)	0.2
Refractive Index	1.4
Useful Temperature Range, °C	-50 to 220°C
Coefficient of Expansion, cm/cm, °C	27 x 10 ⁻⁵
Specific Heat, cal/gm, °C	0.3
Linear CTE (pm/ °C)	300
Thermal Conductivity, cal/sec, cm ² , °C/cm	0.00045
Electrical properties	
Dielectric Strength, kv/mm (1.9 mm thick)	20
Dielectric Constant @ 1000 Hz	2.7
Dissipation Factor @ 1000 Hz	0.0006
Volume Resistivity, ohm-cm	1.75 x 10 ¹⁵

Notice

If the application requires the adhesive to fully cure in a closed environment (including non-ambient temperature), customers are required to conduct their own verification as to whether or not unintended effects will be produced.

Safety

- The safety data sheets are available at ABchimie
- The preparation is not to be considered hazardous in accordance with directive 88/379/CEE and subsequent amendments.
- R100 C is compliant with REACH and RoHS regulations. If you want a certificate, please contact us (info@abchimie.com).

Shelf life and storage

Shelf life: 18 months from the date of manufacture, if stored correctly at a temperature of between 5° - 27°C (41° - 80°F).

Close the bottles after use, do not invert the caps or lids between the base and catalyst.

Packing

- R100 C K10K 5kg + 5kg
- R100 C K50K 25kg + 25kg

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