

ELASTOSIL® Solar 2210 A/B

Preliminary Datasheet

Silicone Encapsulant

Characteristics

ELASTOSIL® Solar 2210 A/B is a pourable, addition-curing, 2-part silicone rubber formulation that upon curing yields a silicone elastomer of medium hardness ShA and elevated thermal conductivity.

Special characteristics

- Two-part, 1:1 mixing ratio
- Low viscosity
- Medium hardness ShA
- Elevated thermal conductivity

Application

Encapsulation of electrical and electronic components for the PV industry.

Processing

Caution

Only A and B components with the **same lot number** may be processed together !

To ensure homogeneity of the material, the components must be stirred thoroughly before they are removed or processed in the containers, in order to uniformly disperse any filler that might have settled during storage.

Surface preparation

All surfaces must be clean and free of contaminants that will inhibit the cure of ELASTOSIL® Solar 2210 A/B. 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 in order to determine compatibility.

Product data (uncured)

Property	Test method	Unit	Value	
Component			A	B
Color			Yellowish	Light gray
Viscosity at 23 °C	ISO 3219	[mPa s]	1,700	1,400
Density at 23 °C		[g/cm³]	1.55	1.55

Product data (catalyzed A+B)

Property	Test method	Unit	Value
Platinum-catalyst in component			A
Mixing ratio		A : B	1 : 1
Viscosity of mix	ISO 3219	[mPa s]	1,600
Pot life at 23 °C		[min.]	< 3
Gelling time, 10g, 25 °C		[min.]	6

Product data (cured)

Property	Test method	Unit	Value
Color			Yellowish
Density at 23 °C, in water	ISO 2781	[g/cm³]	1.55
Hardness Shore A	ISO 868		45
Thermal conductivity, 50 °C		[W/m·K]	0.6

Curing conditions: 30 min at 150 °C in a circulating air oven.

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

Mixing

Component A of ELASTOSIL® Solar 2210 A/B contains the platinum catalyst, component B the crosslinker. Even traces of the platinum catalyst may cause gelling of the component containing the crosslinker. Therefore tools (spatula, stirrers, etc.) used for handling the platinum-containing component or the catalyzed compound must not come into contact with this component. The two components should be thoroughly mixed at a 1 : 1 ratio by weight or volume.

To eliminate any air introduced during mixing or trapped under components a vacuum deairing under a vacuum of 10-25 mbar for 5-10 min is recommended.

Curing

The curing time of addition-curing silicone rubber is highly dependent on temperature, size and heat sink properties of the components being potted. Indicative values are given below (curing time to the final level of hardness Sh A):

Temperature	Curing time
23 °C	12 h
100 °C	30 min
150 °C	10 min

After completion of the vulcanization process the product may be continuously exposed to constantly changing climatic conditions, UV radiation and temperatures as high as 180 °C (356 °F) without damage.

We recommend running preliminary tests to optimize conditions for the particular application. Comprehensive processing instructions are given in our leaflet "Wacker RTV-2 Silicone Rubber-Processing".

If removal of silicone rubber from machines or dispensing equipment is necessary, white spirit or similar non-polar solvents are recommended (if not otherwise mentioned in the manual of the dispensing equipment). However, cleaning ideally should take place before the rubber is fully vulcanized. Cured silicone rubber can be removed by mechanical means, preferably in combination with a swelling agent (solvent), which will help to remove sealant residues.

Storage

ELASTOSIL® SOLAR 2210 A/B should be stored between 5 °C and 30 °C 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 information

According to the latest findings, addition curing silicone rubber ELASTOSIL® SOLAR 2210 A/B contains neither toxic nor corrosive substances which might require special handling precautions. General hygiene regulations should be observed.

Detailed safety information is contained in each Material Safety Data Sheet, which can be obtained from our sales offices.

The data presented in this leaflet 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 leaflet 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 recommendations do 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 products for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001.

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

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