ELASTOSIL® AUX G 800

PRIMER FOR SILICONE ELASTOMERS

Product description

ELASTOSIL® AUX G 800 is a solution of reactive siloxanes and silanes in an organic solvent. The primer composition can be applied to the substrate as such or diluted. During evaporation of the solvent and on exposure to atmospheric humidity at ambient temperature a rigid primer film is formed which firmly adheres to the substrate. Application of a silicone rubber onto the primed substrate and subsequent vulcanization will then result in a tight bond between the silicone rubber and the substrate.

Application

Bonding agent preferably used with addition-curing silicone rubbers like WACKER® ELASTOSIL® HCR and WACKER® POWERSIL®HCR. ELASTOSIL® AUX G 800 is especially suited for bonding addition-curing POWERSIL® 3100 silicone rubber to metallic and non-metallic substrates.

Processing

Surfaces to be primed have to be dry and free from grease, oil, wax, dust, rust or other contaminants. The surface should be cleaned, e.g. with a non-polar solvent such as mineral spirits (boiling range between 80 °C and 140 °C), followed by a polar solvent, such as acetone. Very smooth surfaces may be roughened by grinding. In case of metals the substrate should be given several hours time to regenerate its oxygen layer before applying the primer. Loose particles must be removed.

The primer can be applied by spraying, immersion or dipping, blade coating or brushing. The primer can be applied as such or diluted with mineral spirits or an alcohol such as ethanol or 2-propanol. In any case, the primer film should be applied as thin as possible and free of air bubbles. Usually the best results can be achieved with a primer layer between 1 and 10 µm thickness corresponding to a coating weigth of 5 to 50 g/m² ELASTOSIL® AUX G 800. In most cases it is helpful to dilute the primer in organic solvents like white spirits or ISOPAR® E to a ratio of 1 : 1 – 1 : 10.

Evaporation of the solvent should be done at ambient temperature. The formation of a consistent primer film which firmly adheres to the substrate requires a certain atmospheric humidity. Higher or lower humidity will reduce or prolong the necessary reaction time. As a guiding value an evaporation or drying time of 1 – 2 h at ambient temperature and 40 % relative humidity should be applied, to allow for a formation of a consistent primer film. In some cases the adhesion can be improved by heating the primered substrate at 100 – 150 °C for up to one hour after evaporation of the solvent at room temperature. Tests should be performed if special conditions are needed.

The silicone rubber should be applied to the primed surface soon after the drying or heating process, if possible. It is recommended that this is done not later than approximately 5 hours after priming the substrate. Otherwise a drop in adhesive strength may occur. Prior to the application of the silicone rubber, the primed surface has to be kept free of contaminations.

Important

Initial adhesion directly after vulcanization of the rubber will in many cases be high already. In some cases, however, initial adhesion will be sufficient for handling the composite while maximum adhesive strength will only be achieved after about 4 days. For HCR silicone rubber annealing after vulcanization is recommended according to the respective rubber technical data. ELASTOSIL® AUX PRIMERS are sensitive towards humidity. In contact with moisture the liquid primer becomes turbid and the adhesive strength of the primer is impaired. The ELASTOSIL® AUX PRIMERS should therefore be stored in a sealed container after usage.

For detailed information, refer to brochures on www.wacker.com.

Storage

The 'Best use before end' date of each batch is shown 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

Due to its high content of organic solvent, ELASTOSIL® AUX G 800 is subject to the same safety regulations as these, i.e., it is a flammable liquid. Appropriate precautions are an absolute must.

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site http://www.wacker.com.

Product data

Typical general characteristics	Inspection Method	Value
Color		clear, yellowish
Active substance content		approx. 20 wt. %
Viscosity, kinematic at 25 °C	DIN 51562	1,0 mm²/s
Density at 25 °C, at 1013 hPa	DIN 51757	0,750 g/cm³
Flash point	ISO 13736	3 °C
Ignition temperature (liquids)	EN 14522	380 °C

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

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

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