

# WACKER® PRIMER G 790

PRIMER FOR SILICONE ELASTOMERS

## Product description

WACKER® PRIMER G 790 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® RTV-2 and LSR as well as WACKER® POWERSIL® RTV-2 and LSR.

WACKER® PRIMER G 790 is especially suited for bonding addition-curing silicone rubbers 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 weight of 5 to 50 g/m<sup>2</sup> WACKER® PRIMER G 790.

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 primed 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. 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](http://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 WACKER® PRIMER G 790 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. 17 wt-%
Viscosity, kinematic	DIN 51562	1 mm <sup>2</sup> /s
Density at 20 °C, at 1013 hPa	DIN 51757	0,76 g/cm <sup>3</sup>
Flash point	ISO 13736	3 °C
Ignition temperature (liquids)	EN 14522	370 °C

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

The data presented in this medium 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 medium 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 information provided by us does 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 product 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:

Wacker Chemie AG  
Hanns-Seidel-Platz 4  
81737 München, Germany  
[info.silicones@wacker.com](mailto:info.silicones@wacker.com)

[www.wacker.com](http://www.wacker.com)