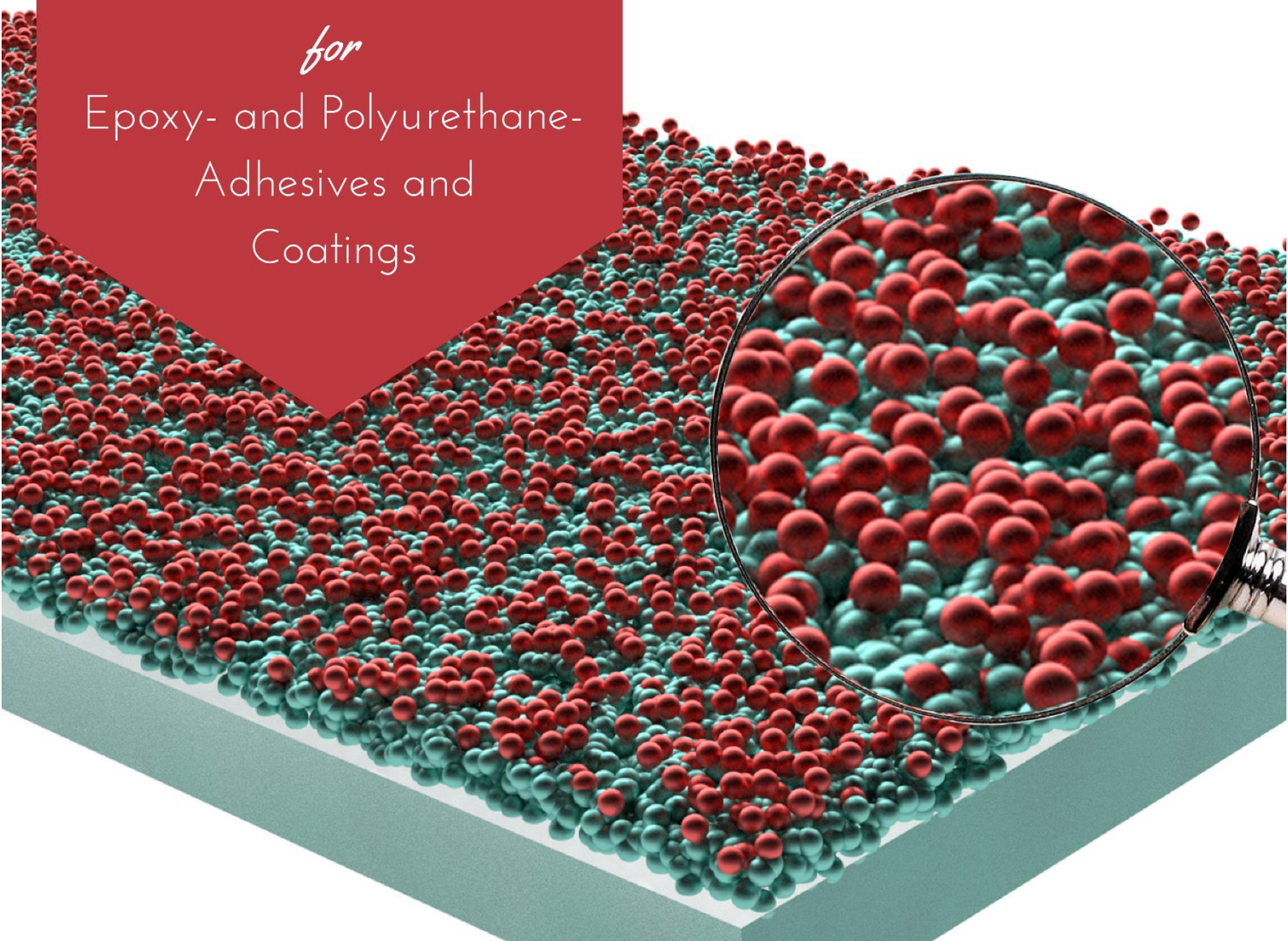


Adhesion Promoter  
**SurAChem<sup>®</sup> GA 139**

*for*  
Epoxy- and Polyurethane-  
Adhesives and  
Coatings



# Product Information

## Adhesion Promoter SurAChem® GA 139

SurAChem®  
GA 139

### 1. Introduction

The **SurAChem® GA 139** adhesion promoter is a liquid silane-based adhesion enhancing system, developed especially to apply with the SurABond® adhesives and SurACer® coatings but also with other utilizing products.

The SurAChem® adhesion promoter is appropriate for metal, glass, ceramics and, after appropriate activation, for plastic surfaces.



### 2. Surface Pretreatment

The surface to be pretreated should be clean and degreased. Furthermore, the surface can be effectively activated by a silication flame-treatment with the SurAChem® VG 02 and SurAChem® VG 03 pretreatment devices. It is advantageous, however not mandatory, to heat up the surface or component after applying the SurAChem® GA 139 adhesion promoter to about 70 °C for 1 to 3 minutes.

### 3. Processing

Depending on the shape of the component, the application of the SurAChem® GA 139 adhesion promoter should be carried out as thin as possible by spraying, dip coating, roll coating or at smaller components by a brush, cotton swap or similar to achieve a dense adhesive layer. After evaporation of the solvent and, if necessary, short-term heating to 70 °C, the adhesive or coating can be applied in liquid form, hot-melt or powder, depending on the requirements of the components.

**Caution!** Rest-amounts, which have been previously taken from the associate storage container, storage vessel etc., cannot be once more within them collected. If so, the storage stability will be significantly reduced.



**SurA Chemicals GmbH**

Am Pösender Weg 2  
D 07751 Bucha b. Jena - Germany

Phone: +49-36 41-35 29 0  
Fax: +49-36 41-35 29 29  
e-mail: info@surachemicals.de  
www.surachemicals.de

# Product Information

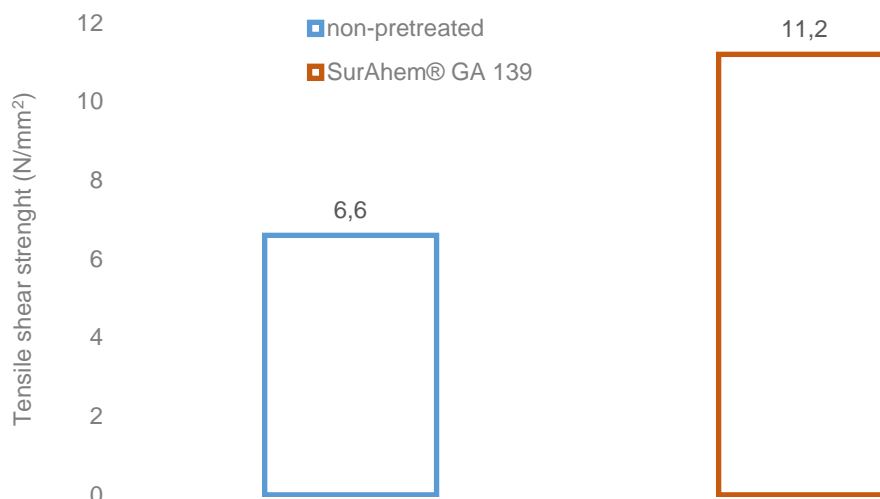
## 4. Performance Tests

Tensile shear strength test based on DIN 53283 standard.

The adhesion of an epoxy-based glue was tested by the determination of the tensile shear strength, based on the DIN 53283 standard. The jointing materials used were PMMA on sandblasted stainless steel. The measurement was performed with non-pretreated jointing material surfaces, as also with pretreated jointing material surfaces, pretreated by a silication flame-treatment (SurASil® process) and the SurAChem® GA 139 adhesion promoter.

The results (Figure 1) show a low tensile shear strength of only 6.6 N/mm<sup>2</sup> with the non-pretreated PMMA/stainless steel material. The pretreatment of the surface with the SurASil® process and the SurAChem® GA 139 adhesion promoter influences significantly the adhesion of the epoxy-based adhesive. As a consequence, the tensile shear strength can be increased by over 70%.

### Tensile shear strength test with the SurAChem® GA 139



**Figure 1:** Increase of the tensile shear strength by the application of the SurAChem® GA 139 adhesion promoter on PMMA/sandblasted stainless steel.

# Product Information

## 5. Delivery Form

The SurAChem® GA 139 adhesion promoter is available in bottles, starting from 250 mL.

## 6. Storage

The SurAChem® GA 139 adhesion promoter is in unopened condition and at +5 °C stable for 6 months after delivery.

## 7. Instructions to Occupational and Health Safety

The SurAChem® GA 139 adhesion promoter contains isopropanol. The occupational and health safety requirements relevant for this solvent must be taken into consideration. Any type of contact with the solvent is not harmful after its evaporation and the termination of its chemical reaction.

## 8. Technical Data

Adhesion promoter	Color	Form	Application
SurAChem® GA 139	colorless	liquid	Epoxy- and Polyurethane-based adhesives and coatings

For eventual questions or doubts concerning your product, we encourage you to get in touch with SurA Chemicals GmbH.

The information and technical consultation given by SurA Chemicals GmbH, verbally or written, is based on the company's best knowledge and shall only be considered as non-binding advice, also in respect of the protected rights of third parties. The company's technical consultation does not release the customer from own examination concerning the suitability and usability of the company's product. The manufacturer's liability extends solely to the value of the products supplied by SurA Chemicals GmbH and applied by the customer.

SurA Chemicals GmbH guarantees its products to be of perfect quality as stated in its general terms and conditions of sale and delivery.



**SurA Chemicals GmbH**

Am Pösener Weg 2  
D 07751 Bucha b. Jena - Germany

Phone: +49-36 41-35 29 0  
Fax: +49-36 41-35 29 29  
e-mail: [info@surachemicals.de](mailto:info@surachemicals.de)  
[www.surachemicals.de](http://www.surachemicals.de)