

**PYROSIL®**

## Coating Device GVE2 HB

The PYROSIL® pre-treatment devices GVE 2 HB are surface silication devices which operate with the flame pyrolysis method. A several nanometers thin silicon dioxide layer on metal, glass, ceramics and plastics is formed, which is hard and strongly adhesive.

The GVE 2 HB is used for silicization of surfaces of medium and large sized parts. The integration into production lines is possible, due to the fact that a continuous operation mode exists.

For large sized parts it is used as a hand unit. In case of large number of equally sized parts a automatic unit with fixed burner is advantageous. The mutual gas source is usable in a fixed manner. Please note, the device must be monitored by a person permanently because there

### Technical application

For the pre-treatment always the non luminous part of the flame (oxidizing flame part) should be used. A flame coating to any materials with the luminous part of the flame (reductive flame part) has strictly to be avoided. The flame should be moved gently up and down the substrate. Do avoid local overheating.

The optimum treatment time should be estimated by own investigations. It depends on the kind of material to be treated. Usually treatment time for plastics is shorter than the treatment time for metal, glass or ceramics. Especially for the last mentioned materials it is favourable to warm them up before the treatment. Material temperatures of 40 to 50 °C are sufficient to avoid the formation of condensation water.

Approximately 15 - 30 seconds are necessary for the treatment of an area of 0.5 m<sup>2</sup> with the burner. For plastics, 1 to 3 flame cycles are sufficient, for metal, glass or ceramics (depending on the velocity of the hand movement) 4 to 8 cycles are sufficient to obtain the PYROSIL® effect.

The PYROSIL® - surface coating shows reactivity for some time at room temperature (dry air). Nevertheless a speedy processing within 30 Min. (12 h max.) is recommended. To get even better results in individual cases the use of SURALink® adhesion promoters is indicated.

Do not hesitate to contact us, we would like to consult you.



SURA Instruments Coating Device  
GVE 2 HB

## Parts GVE 2 TB & GVE 2 HB

The complete coating equipment GVE 2 TB consist of:

- \* basic device with pressure indicator
- \* mounted with a 2 step pressure minimizer evaporator unit
- \* 2 valves for switching the gas flow
- \* pressure hose connect the basic unit with Burner
- \* burner consist of:  
burner unit, power supply  
rechargeable accu  
Nozzle

The complete coating equipment GVE 2 HB consist of:

- \* basic device with pressure indicator:
- \* 2 step pressure minimizer evaporator Unit
- \* 2 valves for switching the gas flow
- \* pressure hose from basic device to Hand burner
- \* hand burner consist of:  
hand lever for operating flame  
adjusting screw for regulating flame  
Burner nozzle

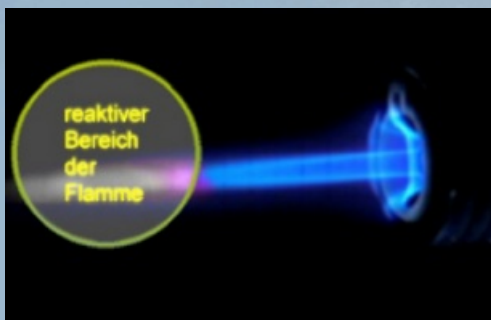
Accessory are 2 PYROSIL® - cartridges for usable substrate



## Advices for industrial and health safety

The correct use of SURA PYROSIL® flame equipments garantes that no harmful gases or fumes are released. Pay attention on the manufacturer to prevent fire. The use of a fume hood is recommended for longer work.

**Caution is needed during the flame pyrolytic surface treatment of PTFT and other fluorine containing polymers. Contact the manufacturer of SURA Instruments GmbH for further information.**



## Safety and transport precautions

PYROSIL® is a propane-butane gas mixture and produces as well as pure propane-butane explosive mixtures with air.

Ignition sources of each kind have to be removed, because of a possibility of an accidental ignition. Smoking is strictly prohibited during handling and working with PYROSIL®.

- \* No toxic or harmful reaction products are formed. But, for longer work ensure a good aeration or use an exhausting Device.
- \* For the transport of PYROSIL® cartridges the safety instructions class 2 Kl.-Code 5F GGVS/ADR have to be met.

# PYROSIL®

## Technical Data

Device	GVE2 HB	GVE2 TB
basic device:		
Size:	300 x 210 x 400 mm	
weight:	12,8 kg	
filling volume		
cartridges:	330 g 4 - 5 bar gas pressure	
service time:	about. 150 min	
flame temperature:	1300 °C	
flame size:	about 100 mm	
burner:	55 mm	
hand burner temperature sensor		
working pressure	0,5 bar	

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Certificated  
EN ISO 9001