

## Approvals and conformities

AIRBUS HELICOPTERS	ECS 2395
BOEING	BMS 10-128 QPL Rev A Type I Grade A, Class A
BOEING	BMS 5-162 QPL Rev A Type I Form 2S
PRATT & WHITNEY	PWA 79706*

## Pre-bond surface preparation sol-gel. Improves adhesion of aerospace adhesive bonds and paints on metallic and composite surfaces.

SOCOGEL B0102 is a sol-gel using a technology licensed by BOEING.

Solgel conversion products are aqueous solutions of zirconium salts activated by an organo-silicon compound, they are particularly effective for surface preparation prior to adhesive bonding. After application and curing the Solgel solution forms a high performance hybrid coating enhancing the adhesion of bonding systems on metals and alloys such as Aluminium, Titanium and Stainless Steel.

SOCOGEL B0102 performances comply with current aeronautical requirements and are an interesting alternative to anodizing technologies (chromic, sulphuric...) that are recognised as highly harmful for workers (classification R45: may cause cancer) and which generate increasing waste treatment costs (baths, effluents). SOCOGEL B0102 is more economical in terms of operating costs and effluent treatment. No rinsing is required after application. The product can be dried at ambient temperature.

SOCOGEL B0102 is available in the form of 2 component kits, in a colourless version.

This coating technology is covered by one or more of the following patents: US20080111027 - EP2102384

*\* Additional testing is required to meet the specifications of PWA 79706. Orders and RFQ's must indicate if material is required to meet PWA 79706 standards as pricing and lead time are affected. Under normal circumstances and without prior customer notification, SOCOGEL B0102 is not certified to the requirements specified in PWA 79706.*

## USES

SOCOGEL B0102 is designed for surface preparation prior to bonding. It provides high adhesion properties to all types of adhesives on metallic surfaces as well as on composite materials.

SOCOGEL B0102 can be applied on basic parts, sub-units, or complete aircraft. It is designed for OEM and for MRO during airframe maintenance operations.

## ***DIRECTIONS FOR USE***

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### **MIXING PROCESS**

- Two component product : one part C and one part G.
- Dispense Part C into part G.
- Depending on the kit size, mix or shake thoroughly for a minimum of 30 seconds. (for kits exceeding 1 litre, use a clean mixer).
- Allow the solution to induct for a minimum of 30 minutes. Remix prior to application.

WARNING! the two parts must be free of precipitates. If not, the material must be rejected. The original packaging must be perfectly closed. SOCOGEL B0102 is a two-component product with a limited shelf life. These are single-use kits.

### **SURFACE PREPARATION**

SOCOGEL B0102 must be applied on a surface that has been perfectly degreased and deoxidised to be water break-free, either chemically, mechanically or by manual sanding. The manual deoxidation can be carried out by stripping, abrasive paper grade 180 or more, or with a Scotch Brite.

### **APPLICATION**

SOCOGEL B0102 can be applied by spraying, brushing or by dipping.

Note: Apply **SOCOGEL B0102** within 24 hours of deoxidising. Protect coated surface from contamination if the bonding operation is not done straight after the SOCOGEL treatment process is finished.

By spraying: Spray the product onto the surface until it is completely wetted, but without product flowing. An uneven drainage may result in non-uniform appearance. Apply so that the surface remains wet with the SOCOGEL solution for about two minutes. Remove excess solution where it becomes trapped such as along drip edges. Blot or sponge excess solution so as to leave a thin, wet film on the part surface.

Dry to overcoat:

- Minimum 1 Hour, may be reduced by forced air heating at 60°C (120°F) for about 10 to 15 minutes(min)
- Maximum 12 Hours, according to your OEM specifications. May be extended to 168 Hrs for other applications and after testing.

## ***TECHNICAL CHARACTERISTICS***

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Appearance ..... slightly coloured after mixing  
Induction time ..... 30 minutes  
Pot life of the product after induction ..... 24 hours (max) after mixing  
Covering power ..... 30 m<sup>2</sup>/litre

Freezing point ..... -24°C/-11°F

## ***PRECAUTIONS FOR USE AND STORAGE***

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Store in original closed packaging below 40°C/104°F.

Shelf life: 12 months.

The kits must be used in a single operation. Don't use previously opened units.

All of each part must be entirely mixed. Do not partially dispense product and mix.

In confined spaces, adequate ventilation and personal protective equipment are recommended.

Trimethoxysilanes are capable of forming methanol when hydrolysed (mixing parts).

For more information regarding the danger of the product, please consult the product safety data sheet according to local regulation.

For professional use only.

**This technical data sheet replaces and cancels the previous one.**

The above details have been compiled to the best of our knowledge. They have, however, an indicative value only and we therefore make no warranties and assume no liability in connection with any use of this information, particularly if a third party's rights are affected by the use of our products. The above information has been compiled based upon tests carried out by SOCOMORE. All data is subject to change as SOCOMORE deems appropriate. The data given is not intended to substitute for any testing you must conduct in order to determine the suitability of the product for your particular purposes. Pictures are not contractual. Please check your local legislation applicable to the use of this product. Should you need any further information please contact us.