

# SUPERBOND

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TECHNICAL DATA SHEET  
Cancels and replaces SIL 99 235 3

## Description

The **Sealant** is a one component silicone sealant which when exposed to atmospheric humidity, cures rapidly to form a permanently flexible and extremely durable weathertight seal. The cured sealant will accommodate joint movement of maximal amplitude of 25 % throughout a wide temperature range, resistance to severe weathering is excellent.

## Particular properties

The **Sealant** bonds strongly to clean uncoated glass, ceramics and glazed or painted surfaces without the need to prime. For most other substrates it is recommended that a primer be used, a range of high performance primers is available which will ensure optimal bonding to most commonly encountered substrates.

After cure, the **Sealant** will be resistant to many acids and bases diluted and salt spray and will tolerate short exposure to most industrial solvents and hydrocarbon based products, in the latter case some reversible swelling and softening will occur.

The exceptional translucent quality of the **Sealant** is such that it is ideally suited for use where the sealant is visually prominent, examples being , display cases and shop windows.

## Applications

The **Sealant** is a high modulus sealant and should be selected for use on applications where joint loads are high and where relative movement between substrates is to be minimised. When used on external joints a weathertight seal or high integrity will result.

- all classical glazing joints,
- door and window frames,
- cladding and curtain wall construction,
- shop windows, display cases, panels and signs,
- portable buildings, caravans and containers,
- conservatories and greenhouses,
- heating, ventilation and air conditioning (HVAC) ducting,
- construction joints,
- swimming pools,
- marine hardware.

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## Characteristics

### 1. Before curing

Type of sealant .....	acetic
Specific gravity (non cured), approx.....	1.04
Flow resistance (EN 27390), mm, approx .....	0
Viscosity ( strain 3000 N/m <sup>2</sup> , 20°C), Pa.s, approx .....	320
Extrudability g/min, approx.....	40
(standard NMRPS 495A 3mm/3 bars).	

### 2. Curing

Skin formation time*, min. approx. ....	7
Tack-free time*. min. approx.....	20
Curing rate*	
mm/1st day, approx .....	4.5
mm/3 days, approx .....	.8
mm/7 days, approx. ....	10
Application temperatures , °C.. ....	+5 to + 40

### 3. after curing

Shore A hardness (ISO 868), approx. ....	23
Elastic recovery (EN 27389), %, approx.....	100
Joint movement capability, %.....	25
Operating temperatures, °C., Black.....	- 50 to + 250
Other colors .....	- 50 to + 200

### Mechanical properties on a 2 mm thick film (NF T 46002)

Modulus at 100% elongation, MPa, approx .....	0.5
Tensile strength, MPa, approx. ....	2.1
Elongation at break, % approx .....	500

### Mechanical properties on slabs (EN 28339)

Modulus at 100% elongation, MPa, approx. ....	0.5
Tensile strength, MPa, approx .....	1.0
Elongation at break, %, approx. ....	300

\* at a temperature of 23°C and for relative humidity of 50%

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## Standards

The **Sealant** meets or exceeds the requirements of the following standards :

BS 5889 (1989) Type B  
DIN 18545  
UBATC (Class 5)  
JIS 5758 (cond. 9030)  
SNJF Elastomère 1re cat. (aluminium/primer, concrete/primer)  
SNJF DTU39 (glass, aluminium/primer)  
TTS 001543A (Class A)  
TTS 00230C (Class A)  
ASTM C920 (Type S Class 25)

Conforms to the requirements of MA 39 (Austria), NBI (Norway), and ISO 11600 - F&G – 25 LM – concrete/primer, glass, anodized aluminium/primer.

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## Processing

### Joint preparation :

The joint faces to be bonded must be clean, dry and free from dust, oil, grease, old sealant and any traces of contaminant which may affect adhesion. Surfaces should be degreased with solvent soaked cloth and then wiped with a clean cloth. To remove dust, use oil-free compressed air.

### Priming :

Although the **Sealant** will bond well to most clean and dry surfaces, it is recommended that a primer be used on certain substrates in order to ensure a strong and uniform bond :

- Cast, extruded or anodised aluminium.....10073
- Steels, ferrous metals, painted and most rigid plastics.....12078
- Concrete, wood..... 12076

In the case of particularly porous materials, apply a second layer after drying.

### Joint dimensions :

The movement capability of sealants as well as local regulations must be considered. Jointwidth should be twice the depth.

### Sealant application :

For good performance it is essential that the sealant is only bonded to the two facing sides of the joint. To achieve this install a backup material (closed cell polyethylene or open cell polyurethane foam). Apply the sealant in a continuous operation making sure all air pockets or voids are eliminated. Tool the sealant with light pressure to spread the material against the joint surfaces.

This operation should be made with a dry spatula before skin formation occurs.

Excess uncured sealant should be wiped and cleaned with a commercial solvent, cured sealant can only be removed by scraping (i.e. with a razor blade), or with a special silicone remover product.

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## Limits of use

The **Sealant** must not be used on sensitive surfaces which could react with the acetic acid which is released during cure, nor should it be used on materials where migration of constituents can take place, e.g. certain rubbers.

The **Sealant** must not be used for structural glazing applications.

The **Sealant** should not be painted (poor coverage and adhesion of paints).

The **Sealant** (once cured) can be used in applications in which there is a risk of occasional short term contact with water-based foodstuffs, but under no circumstances should it be used for permanent contact applications.

The **Sealant** is not recommended where abrasion or physical abuse will be encountered. For all uses in permanent immersion, please consult us.

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<b>Colours</b>	Translucent, white, black, dark aluminium, Manhattan grey, brown, bronze.
<b>Packaging</b>	The <b>Sealant</b> is available in 310 ml cartridges,
<b>Storage and shelf life</b>	The <b>3B Sealant</b> has a shelf life of 24 months in cartridge and of 18 months in drum, guaranteed by Rhodia Silicones from its date of manufacture (the expiry date is shown on the packaging), when stored at a temperature between $-5^{\circ}\text{C}$ to $+50^{\circ}\text{C}$ in its original unopened packaging.
<b>Safety</b>	Consult the Safety Data Sheet for the <b>3B Sealant</b>
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