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# 5100

## 1K Bond and Seal Polyurethane

### Characteristics

4CR 5100 is a one-part, very fast curing, polyurethane elastic adhesive and sealant designed for car body construction and repair which cures on exposure to atmospheric moisture.

Specifically developed to meet the car industry requirements, thanks to its balanced viscosity the product can easily be brushed and tooled in order to match the original brush mark.

Once cured, the products reach high levels of hardness that gives a first equipment appearance to the material.

### Tech Tip

- Very fast skinning and curing time
- Over-paintable, even in a short time, with many water and solvent based paints (preliminary tests recommended)
- Can be easily tooled, brushed and smoothed
- Capable of withstanding high dynamic stresses
- Bonds and seals at the same time
- Wide spectrum of adhesion
- Permanently flexible
- Vibration and sound dampening properties





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## Application

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4CR 5100 is suitable for sealing, seam sealing (welded seams, lap panels in all internal vehicle bodywork and painted sheet metals which includes the reproduction of original brush marks and seam sealing), simple bonding as well as for vibration reduction and sound deadening measures in car body repair and car body construction.

Suitable substrates are metals, metal primers and paint coatings (2K systems), painted plastics.

### Surface preparation:

Pre-test substrates for adhesion. Cleaners and/or primers may be required to achieve optimal adhesion.

As a rule, the substrates must be prepared in accordance with the 4CR instructions; technical guidance regarding adhesion on specific surfaces may be obtained by submitting substrate samples for analysis to our laboratories. Surfaces must be clean, dry, free of water, oil, grease or rust and of sound quality.

Remove all loose particles or residues with a jet of compressed air, sandpaper or hard brush. Glass, metal and other non-porous surfaces must be free of any coatings and wiped clean with solvent.

- Pierce through the protective membrane in the front threaded section.
- Screw on the plastic nozzle and cut it at an angle according to the desired bead thickness and profile.
- Fit the cartridge into a manual or pneumatic air operated gun (provided with telescopic piston) and extrude the adhesive/sealant carefully preventing air entrapment.
- Once opened, packs should be used up within a relatively short time.

The optimum operating temperature for both substrate and sealant is between 15°C and 25°C.

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## Finishing indications and limitations:

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Tooling and finishing must be carried out within the tack-free time of the sealant.

4CR 5100 can be over-painted.

The paint must be tested for compatibility by carrying out preliminary trials. Attention must be observed with the use of alcohol or alkyd-resin since they may interfere with the curing process of the sealant and reduce the drying time of the paint itself. It should be understood that the hardness and film thickness of the paint may impair the elasticity of the sealant and lead to cracking of the paint film.

- Avoid exposure to high levels of chlorine (avoid sealing joints in chlorinated swimming pools).
- Do not cure in the presence of curing silicone sealants.
- Avoid contact with alcohol and other solvent cleaners during cure.

When applying sealant, avoid air-entrapment. Since system is moisturecured, permit sufficient exposure to air. Bonded elements may require additional holding or support during curing period.



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## Chemical Resistance

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Long term resistance to fresh water, seawater, lime water and cleaning agents. Short term resistance to petrol, grease and mineral oil. Not resistant to organic acids, concentrated mineral acids, pool water, caustic solutions or solvents.

This information is offered for general guidance only. Advice on specific applications will be given on request.

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## Cleaning of equipment

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Clean tools with acetone or alcohol immediately after use. Cured material can only be removed mechanically.

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## Technical Data

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Appearance	Thixotropic paste
Colour	White, Grey, Black
Chemical nature	Polyurethane
Curing Mechanism	Moisture-curing
Curing through volume	≥ 4 mm (1 day at 23°C and 50% r.h.)
Non-sag properties	good
Shore A	52 (23°C and 50% r.h; DIN 53505)
Tack-free time	25-30 min. (23°C and 50% r.h.)
Density (23°C and 50% r.h.)	1,24 - 1,30 g/cc
Tensile strength	≥ 2,0 N/mm <sup>2</sup> (ISO 37 DIN 53504)
Elongation	≥ 250 % (ISO 37 DIN 53504)
Application temperature	from +5 to +40°C
Temperature Resistance	-40/+90 with brief point at 120°C
Packaging	310 ml aluminium cartridge

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## Storage and Transportation

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4CR 5100 can be stored for 12 months in its original packaging (unopened container) at 10°- 25°C in a cool, dry place. The storage temperature should not exceed 25°C for extended periods of time. Keep away from wet areas, direct sunlight and heat sources.