



Technical Data Sheet U-Seal 501  
Ver. 5.0 June 2021

# U-Seal 501

**Very fast curing car body repair one-part polyurethane elastic adhesive and sealant**

## DESCRIPTION

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U-Seal 501 is a one-part, very fast curing, polyurethane elastic adhesive and sealant designed for car body construction and repair. 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 mark. Once cured, the product reaches high levels of hardness that gives an OEM appearance to the material.

## AREAS OF APPLICATION

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U-Seal 501 is suitable for seam sealing like welded seams, lap panels in all internal vehicle bodywork and painted sheet metals, which includes the reproduction of original brush marks, 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 (2-c systems), painted plastics.

## FEATURES

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- One-component polyurethane
- Cold applied
- Wide spectrum of adhesion
- Bonds and seals at the same time
- 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
- Permanently flexible
- Vibration and sound dampening properties



## TECHNICAL DATA

<b>Appearance</b>	Non-sag thixotropic paste
<b>Color</b>	White, Grey, Black. Other on request
<b>Chemical nature</b>	Polyurethane
<b>Curing Mechanism</b>	Moisture-curing
<b>Curing through volume</b> [mm] (NPT Method 07) (24h - 23°C and 50% RH)	ca. 3.6
<b>Hardness Shore A</b> (DIN 53505)	ca. 58
<b>Density</b> [g/cm <sup>3</sup> ] (NPT method 06) (23°C and 50% RH)	ca. 1.26
<b>Skin time</b> [min] (NPT Method 17) (23°C and 50% RH)	ca. 20
<b>Elastic modulus at 100%</b> [N/mm <sup>2</sup> ] (ISO 37 DIN 53504)	ca. 1.8
<b>Tensile strength</b> [N/mm <sup>2</sup> ] (ISO 37 DIN 53504)	ca. 2.3
<b>Elongation at break</b> [%] (ISO 37 DIN 53504)	ca. 250
<b>Application temperature</b> [°C]	From +5 to +40
<b>Temperature Resistance</b> [°C]	From -40 to +100

## APPLICATION

The surfaces to be treated should be perfectly clean, dry and free from dust and grease. It is necessary to treat the bonding surface according to NPT application guidelines, eventually using a specific CLEANER or ACTIVATOR from NPT range. It is advisable to carry out preliminary adhesion tests on the support.

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.



Tooling and finishing must be carried out within the tack-free time of the sealant. U-Seal 501 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.

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 moisture-cured, permit sufficient exposure to air. Bonded elements may require additional holding or support during curing period.

## **CLEANING OF EQUIPMENT AND PERSONAL PROTECTIVE MEASURES**

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Clean the tools used with acetone or solvent. When the adhesive has not yet hardened, it can be removed using paper or a cloth. Once hardened, the product can only be removed mechanically. Avoid skin contact by using latex, rubber or polyethylene gloves. If it comes in contact with the skin, remove immediately and wash with soap and water

## **PACKAGING**

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Aluminum cartridges 310ml - 12 pieces per box  
Foilpack 400ml – 12 pieces per box  
Foilpack 600ml – 20 pieces per box

## **STORAGE AND SHELF LIFE**

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U-Seal 501 can be stored for 12 months in its original packaging (unopened container) between 10°C and 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.

## **GENERAL INFORMATION**

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The information contained in this technical data sheet is to the best of our knowledge correct, being based on our knowledge and experience to date and cannot be used as a guarantee, due to the various different materials present on the market and the fact that the application conditions are not under our direct control and supervision. NPT srl, however, guarantees constant product quality. NPT srl, has the right to modify or up-date this technical data sheet according to requirements. Customers are kindly requested to verify that they are in possession of the latest version.

**ALWAYS CONSULT THE MATERIAL SAFETY DATA SHEET BEFORE USING THE PRODUCT**