



U-Seal 550FC

**Fast-curing one-part polyurethane multipurpose adhesive sealant
PVC- and smell- free**

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Description

U-Seal 550FC is a one-component, gun-grade, non-sag polyurethane high modulus multipurpose adhesive and sealant with excellent thixotropy. It cures rapidly under the influence of atmospheric moisture to form a high performance compound with permanent elasticity. Thanks to its special formulation, it is completely smell-free. The product can be easily brushed and tooled in order to match the original brush mark and give first equipment appearance to the seam.

Advantages

- Non-sag, exceptional thixotropy and short cut-off string
- Easy to gun with excellent tooling consistency
- Very fast curing through volume
- Over-paintable in a short time with many water and solvent based paints (preliminary tests recommended)
- Bonds and seals at the same time
- Permanently elastic over a wide range of temperatures
- Non-sticky / does not pick up dirt
- Performant adhesion on metal and plastic materials.
- Non-staining
- Allows equalised stress transfer due to permanent elasticity.
- Good resistance to ageing and weathering

Areas of Application

- Sealing and bonding between different materials
- Elastic bonding between metal, plastic, glass and other materials
- Replaces rivets and mechanical fasteners
- High mechanical/dynamic stress resistance – shock/impact resistance
- Increase torsional stiffness of final assembly
- Vibration and sound damping bonding



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NEW POLYURETHANE TECHNOLOGIES

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Technical data

Appearance	Non-sag thixotropic paste
Colour	White, grey, black
Chemical nature	Polyurethane
Curing Mechanism	Moisture-curing
Curing through volume [mm] (after 1 day at 23°C and 50% RH)	ca. 3,0
Shore A hardness (DIN 53505)	ca. 47
Density [g/cm³] (NPT Method 06)	ca. 1,41
Tack-free time [min] (NPT Method 17) (23°C and 50% RH)	ca. 45
Elastic modulus at 100% [N/mm²] (ISO 37 DIN 53504)	ca. 2,0
Tensile strength [N/mm²] (ISO 37 DIN 53504)	ca. 3,0
Elongation [%] (ISO 37 DIN 53504)	ca. 550
Application temperature [°C]	from +5 to +40
Temperature Resistance [°C]	-40/+90



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Application

Surface preparation

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 U-Seal 550FC 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.

For sealing purposes

Sealant should be tooled to a smooth finish ensuring a full contact to the sides and back up material into the joint, this will also contribute in breaking the air bubbles which may be formed inside the sealant. Masking tape should be used where sharp exact joint lines or exceptionally neat lines are required. Remove the tape whilst the sealant is still soft.

For adhesive purposes

Apply in spots or bead on the prepared surfaces then firmly press the parts which have to be bonded together. Cleaners and/or primers may be required to achieve optimal adhesion. Pre-test substrates for adhesion. As a rule, the substrates must be prepared in accordance with the NPT instructions; technical guidance regarding adhesion on specific surfaces may be obtained by submitting substrate samples for analysis to our laboratories.

Finishing indications and limitations

Tooling and finishing must be carried out within the tack-free time of the sealant. U-Seal 550FC 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. Since system is moisture-cured, permit sufficient exposure to air. Bonded elements may require additional holding or support during curing period.



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Cleaning of equipment

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

Personal protective measures

If skin contact occurs, remove immediately and wash with soap and water.

Packaging

Alu-cartridge 310 mL:	12 cartridges per box
Alu-PE bags 600 mL:	20 bags per box
Alu-PE bags 400 mL:	12 bags per box (on request)

Storage

U-Seal 550FC 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.

General Information

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.



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