

**Technical Data Sheet**

Date of issue: 23.01.2023

Revision no: First release

NP 1® Construction Crystal

**Elastic**

# NP 1® Construction Crystal

**PRODUCT CHARACTERISTIC**

- ✓ SMP (silane modified polymer) based adhesive and sealant
- ✓ Curing by humidity in the air
- ✓ One-component
- ✓ Ready-to-use
- ✓ Transparent

**FEATURES**

- ✓ Waterproof
- ✓ Bonding and sealing
- ✓ Crystal clear transparency
- ✓ Paintable with most water and solvent based paints
- ✓ Bonds without primer to most of materials used in construction industry
- ✓ It has good UV resistance; however, its color may change with prolonged exposure to UV rays
- ✓ Bonds also with slightly moist surfaces
- ✓ Solvent- and isocyanate-free and odorless
- ✓ Does not cause any corrosion on metals
- ✓ Extremely strong and permanently elastic
- ✓ No loss of volume and bubble formation
- ✓ Good resistance to fungi's

**TECHNICAL SPECIFICATION**

Base	Silane modified polymer
Curing system	By humidity in the air
Number of components	1
Skin formation time (23°C and 50% R.H)	30min
Curing speed (23°C and 50% R.H)	3.0mm / 24h
Density	1.05 g/cm <sup>3</sup> ± 0.02
Solvent & isocyanate content	0%
Shore A hardness (DIN 53505)	40
Elastic recovery (ISO 7389)	≥ 70
Joint movement capability (ISO 11600)	±20%
Modulus at 100% elongation (DIN 53504)	0.68 N/mm <sup>2</sup>
Elongation at break (DIN 53504)	%327
Modulus at break (DIN 53504)	1.59 N/mm <sup>2</sup>
Processing temperature	+5 - +40°C
Shelf life (with original packing in dry conditions between +5 - +25°C)	12 months

\* Technical data are approximately provided for +23°C and 50% relative humidity.

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## AREAS OF APPLICATIONS

- ✓ Construction materials such as aluminum, galvanized and stainless steel, zinc, copper, HPL panels, glass, natural stones etc.
- ✓ Bonding the materials which have different colors or transparent
- ✓ Glass doors and balconies, interior walls and shops, bathrooms and kitchens where flexibility, transparency and appearance are important

## METHOD OF USE

### Preparation

The application surface must be fixed and rigid enough. It may be slightly damp. It should be clean, grease- and dust-free.

The materials to be joined must be clean. They should be grease- and dust-free.

If necessary, MEK, alcohol, or ethanol can be used for degreasing and cleaning the application surface.

### Primer

It is user's responsibility to check the compatibility of the product for their application.

If necessary, technical support could be supplied about primers for specific applications.

### Application

#### Using as adhesive:

- ✓ Apply NP1 cartridge with the supplied nozzle in strips or dots to the materials to be bonded by **MayGun** or a sealant gun. The tip of the nozzle can be cut as needed for application.
- ✓ If strips are applied, they should be applied in vertical rows. Also, they should be applied parallel to each other. This is important to allow the humidity to reach out the entire adhesive applied.

- ✓ Put together the parts to be joined as quickly as possible, averagely in 15min. (This will be depending on the temperature and relative humidity). The materials still will be adjustable at this stage.
- ✓ After adjusting push down the materials to be attached to each other. If necessary, use a rubber hammer.

#### Using as sealant:

- ✓ Use a self-adhesive tape or foam tape to prevent triple-sided bonding around the joints on the application area.
- ✓ The joints should be filled without gaps.
- ✓ The sealant depth of the movable joint should amount to approx. 2/3 of the joint width. If the joints are too deep should be filled with suitable filler foam (PE or PU-filler foam) as back-up filling material.

### Tooling

Rubber sealant smoothing tool can be used for smooth finishing.

### Cleaning

Adhesive residue can be cleaned with alcohol or white spirit on application areas or on tools while it has not cured yet.

It can be removed only mechanically after cured.

### Painting

Paintable with most water- and solvent-based paints.

Paint can be applied after 48 hours adhesive applied. The surface first must be cleaned before it can be painted.

Alkyd paints require an extended drying time.

Because of many different paint options and qualities, users should test their own application on cured sealant.

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**LIMITATIONS**

- ✓ Joints that are exposed to constant submersion under water and rooms with permanent high relative humidity
- ✓ Joints with a width or depth < 5 mm and width > 20mm
- ✓ Gluing PE, PP, PA and Teflon®. The adhesion and compatibility with plastic materials should be tested.
- ✓ Proper ventilation during processing and hardening is important.

- ✓ Opened cartridges and sausages should be consumed as quickly as possible.

**PACKING AND COLORS**

**Cartridge:** 25 cartridges of 290 ml/box - 60 boxes / pallet

**HEALTH AND SAFETY**

For health and safety instructions please refer to safety data sheet which is available on request.

This technical data sheet replaces all previous editions. All advices, figures and safety directives in this document are based on our careful research and last laboratory reports. Although, the document was compiled with the greatest care, because of a wide variety of different substrates and applications and possible different processing conditions **YOLDAS ENDUSTRI** does not accept responsibility for obtained results. Users need to ensure that the product is suitable for their application before use. Our general sales conditions apply. **YOLDAS ENDUSTRI** reserves all rights to modify the products without prior notice.