

Technical Data Sheet



NPU - Polyurethane Adhesive System

DESCRIPTION:

NPU is a polyurethane two-part adhesive used for a range of specialist bonding and sealant applications. It has a semi-gelled structure allowing horizontal, vertical and overhead applications.

TYPICAL FEATURES | BENEFITS:

- Water resistant once cured.
- Resists oxidation (hardening).
- Prompt curing.
- Remains resilient.
- Non-slump.
- Good initial grab.

PERFORMANCE DATA:

Element	Value
Minimum Application Temperature:	~ Air ~ Floor +10°C <i>Never apply adhesive when floor temperature is 5°C or less.</i> +5°C <i>Tack off time will be very slow if floor temperature is 5-10°C</i>
Maximum operating temperature:	+60°C
Flash Point:	+14°C <i>Abel Pensky Closed Cup</i> +220°C <i>Abel Pensky Closed Cup</i>
Adhesion Properties to correctly prepared surface:	~ Concrete ~ Metals ~ Timbers Excellent Excellent Excellent
Appearance:	Brown Paste Viscous Opaque Liquid
Type:	Single stick trowelable paste
Base:	Polyurethane
SG kg/litre:	1.41 – 1.42
Colour:	Light beige / brown <i>Approx. match BS10C33</i>
Thinning:	Do Not thin
Coverage:	Use as required: (0.001m ³ = 1 Litre) e.g. 1 litre covers 1m ² @ 1mm thick
Pot Life (Usable Life) <i>Pot life is based on 100 gram samples.</i>	+25°C –50%RH 60 minutes <i>Dependent upon atmospheric conditions, air movement, air temperature and the porosity of the substrate.</i>
Cure Time:	+25°C –50%RH 24 hours - <i>Best after 48 hours</i>
Clean Up:	Wash hands with warm soapy water after any skin contact. Solvent HA for tools.
Dangerous Goods Class:	Refer SDS
Packaging:	NPU Adhesive Part A 5.94kg NPU adhesive Part B 0.56kg Packed in one 10 litre unit with a separator. <i>I.e. The resin and the hardener are in the same pail.</i>
Shelf life:	6 months from date of manufacture when stored in an unopened container at 5 – 30°C **Must not Freeze** <i>After this period consult with allnex.</i>

RECOMMENDED USES:

- Adhesive for Formwall Hygienic Wall Cladding.
- Adhesive for graphite core roofing system.
- Waterproof adhesive for exterior carpet and grass carpet.
- Durable sealant: good chemical resistance: rapid cure: Full thru-cure regardless of thickness. Non-slump.
- Adhesive for Timber Flooring.
- Waterproof adhesive.

NOT RECOMMENDED:

- Application uncured concrete (minimum cure 28 days).
- Application to Wet or Damp substrates.
- Application to unstable substrates.
- For bonding untested materials.

SURFACE PREPARATION:

The surface must be clean and sound.

Remove all dust, dirt, oil, scale, laitance, paint or any other contaminates.

Concrete: Acid etch | Shot blast | Diamond grind | Needle gun.

Metals: Degrease with Acetone > Abrade with medium grit abrasive paper > Degrease with Acetone again.

Timber: Prepare by way of mechanical sanding using 80 grit paper.

Note

Aquakem (*Aquaguard 101*) may be used to prime or seal off water on a concrete substrate. *Refer: Aquakem technical literature.*

COVERAGE RATES:

The coverage rates depend on the product being bonded and the condition of the substrate:

i.e. The bigger the unit to be fully bonded, the more adhesive is required, especially if the substrate is not flat and true.

Choose the correct type notch and notch size for your application.

A full adhesive spread rate is required on the back of the unit being bonded.

Notch trowel application rates:

On a square notch trowel the spaces between the ridges have the same size as the ridges themselves.

This will mean that the height of the ridges are split in half.

i.e. 12mm x 12mm trowel will leave a 6mm high bed of adhesive.

Notch Type	Notch Size	Adhesive Bed Thickness	NPU Kit Coverage
Square	12mm x 12mm	6.0mm of adhesive bed:	1.52m ²
Square	10mm x 10mm	5.0mm of adhesive bed:	1.83m ²
Square	8mm x 8mm	4.0mm of adhesive bed:	2.29m ²
Square	6mm x 6mm	3.0mm of adhesive bed:	3.05m ²
Square	5mm x 5mm	2.5mm of adhesive bed:	3.65m ²

On a u notch trowel the adhesive applied will be approximately 30% of the notch height.

i.e. 12mm trowel will leave a 3.6mm high bed of adhesive.

Notch Type	Notch Size	Adhesive Bed Thickness	NPU Kit Coverage
U Notch	12mm	3.6mm of adhesive bed:	2.54m ²
U Notch	10mm	3.0mm of adhesive bed:	3.05m ²
U Notch	8mm	2.4mm of adhesive bed:	3.81m ²
U Notch	6mm	1.8mm of adhesive bed:	5.08m ²
U Notch	5mm	1.5mm of adhesive bed:	6.10m ²

MIXING RATIO

NPU Mixing Ratio - By weight

Element	Value
Resin - Part A	5.94kg
Hardener – Part B	0.56kg

Note – *Refer: Cautions Section*

- The mix ratio must not be altered.
- The mix ratio is the only acceptable formula.
- Adding more hardener will make the mix softer and it will be uncured.
- Increased hardener levels will result in a weaker product.

MIXING METHOD:

- Carefully mix the product according to the stated mix ratio.
- Mix until uniform and no streakiness is evident.
- Use a slow speed paddle mixer. *Max 300rpm.*
- Care must be taken to avoid air entrainment.

Note

Use a long flat broad-knife to scrape the pail sides, reincorporate into the mix and then stir again

APPLICATION METHOD:

Adhesive

- Generally applied by way of a notched trowel
- Take care to apply evenly and consistently.
- Once applied quickly place the material being bonded into the wet adhesive and apply consistent and even force to ensure an even bond.
- Keep the pressure applied. (weight | tape etc.) until cured.

Sealant

- Joint sizes are normally twice as wide as deep. As NPU is a two-part , it is not susceptible to excessive shrinkage on curing.
- Therefore larger joints may be undertaken as required.
- NPU also makes a good sealant for around pipes through floors where movement is expected; e.g. thermal movement.
- Ensure the joint sides are freshly cut and dry clean. Ensure the joint base is clean.
- Use PEF foam rod as appropriate.
- Tape the surface of the sides of the joint and bag in the mixed NPU.
- Tool off the excess carefully and remove the tape.
- Protect the area until cured.

CAUTION:

NPU is a two part polyurethane that is mixed in the specified ratio. Only this ratio will produce the required results. Adding more hardener (with the aim of making the product cure faster) will not work and will only result in inhibiting the cure.

Only the stated mix ratio will work and exhibit the stated performance data.

HEALTH & SAFETY: Refer safety data sheets (SDS).

- Wear gloves wherever possible.
- Wash hands with warm, soapy water after any skin contact.
- Re-seal all containers tightly.

ADHESIVE RANGE:

Solvent-based

Product	Type	Colour	Application Method	Installation Type
CB103	Brushable Contact	Straw	Brush Roller	Various – Refer Technical Literature
CS110	Sprayable Contact	Straw	Brush Roller Spray	Various – Refer Technical Literature
CS107	Sprayable Contact	Red	Brush Roller Spray	Various – Refer Technical Literature
Quicktack	Trowel Grade	Cream	Trowel	Garage & Outdoor Carpet

Water-based

Product	Type	Colour	Application Method	Installation Type
Duracryl HSV	Acrylic	Off-white	Trowel	Vinyl – all types Vinyl Planks* ¹
Supacryl	Acrylic - Zero VOC	White	Trowel	Vinyl – all types Vinyl Planks
Truestik VA1	Acrylic - Zero VOC	Off-white	Trowel	Vinyl – all types Vinyl Planks
Supatack T9 -Gen 2	Acrylic	Off-white	Trowel	Vinyl – all types Vinyl Planks
Goldstix	Latex-based	Off-white	Trowel	Carpet
RMA 2000 CTA	Acrylic	Pink	Trowel Roller	Carpet Tiles Polystyrene
Super 7	Acrylic	Off-white	Trowel	Rigid Vinyl Tiles Direct Stick Carpet Underlay

Epoxy | Polyurethane

Product	Type	Colour	Application Method	Installation Type
NPU	2-part Polyurethane	Beige	Trowel	Various – Refer Technical Literature
Truestik EA	2-part Epoxy	Green	Trowel	Various – Refer Technical Literature* ²

**1 Recommended adhesive for vinyl plank*

**2 Recommended adhesive for vinyl planks in areas exposed to solar heat gain.*

FLOOR LEVELLING COMPOUND RANGE:

Patch Repairs

Product	Application Thickness	Mix Additive	Application Area	Use
Supaset	1 - 100mm in single application	Water	Interior	Rapid Set
Hardfast (<i>White Patch</i>)	0 -20mm in a single application	Water	Interior	Divots Isolated patching only

Bulk Fill

Screed 20 +	5 - 100mm in single application	Water	Interior	Heavy Duty Bulk Fills - Ramps
Supaset	1 - 100mm in single application	Water	Interior	Rapid Set Shower Falls
Unifloor	1 - 100mm in single application	Water	Interior Exterior	Economy Bulk Fills - Ramps

Two-Part Screed

Durabond Superfine	0 - 5mm in a single application	Latex Emulsion	Interior	General Purpose - Fine Finish
Matrix	0 - 3mm in a single application	Latex Emulsion	Interior	General Purpose - Fine Finish

Self-Levelling

Pourite SLC	1.5 - 10mm in single application	Water	Interior	Self-Levelling Installations
Pourite Max	5 - 30mm in single application	Water	Interior	Self-Levelling Installations

Fine Feather Finish

Mastertop 505	Very fine finishing	Water	Interior	Fine Smoothing of floors
Flawfix	Very fine finishing	Water	Interior	Fine Smoothing of floors

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