

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
- Colour Light beige / brown Approx. match 10C33
- Remains resilient
- Non-slump
- Good initial grab

PERFORMANCE DATA:

Minimum Application Temperature: Air		+10°C
Flash Point:	Resin Hardener	+14°C Abel Pensky Closed Cup +220°C Abel Pensky Closed Cup
Maximum operating temperature:		+60°C
Adhesion Properties to correctly prepared surface:		
	~ Concrete	Excellent
	~ Metal	Excellent
	~ Timbers	Excellent
Appearance:	~ Resin ~ Hardener	Brown Paste Viscous Opaque Liquid

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
- For bonding untested materials
- Application to unstable substrates

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.

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****

Aquaguard 101 may be used to prime or seal off water on a concrete substrate (refer Aquaguard 101 technical literature)

PRODUCT PROPERTIES:

Pot Life (Usable Life) Pot life is based on 100gram samples.	+25°C– 50%RH	60 minutes
Cure Time	+25°C –50%RH	24 hours - Best after 48 hours **
SG kg/litre	1.41-1.42	
Coverage	Use as required: (0.001m ³ = 1 Litre) e.g. 1 litre covers 1m ² @ 1mm thick	
Clean up	Wash hands with warm soapy water after any skin contact Solvent HA for tools	
NZ Dangerous Goods Class ~ NPU Kit	Hazard Class 3 Packing Group II	
Packaging ~ NPU Kit Total Kit Size 6.5kg (9.16 litres)	NPU Adhesive Part A 5.94kg NPU adhesive Part B 0.56kg Packed in one 10 litre unit with a separator. I.e. The resin and the hardener are in the same pail.	
Shelf Life	6 months from date of manufacture. (After this period consult with allnex).	

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 require, 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

NPU MIXING RATIO: By weight

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.

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