

Pure Step 1K-80

80% Solids Polyurethane

PRODUCT DESCRIPTION

Pure Step 1K-80 is an 80% solids, clear, moisture-cure polyurethane based on an aliphatic polyisocyanate system. This advanced formulation ensures excellent durability, with the added benefit of being non-yellowing, even in UV-exposed areas. Fast-curing and highly resistant to traffic, Pure Step 1K-80 allows for a quick return to service, making it ideal for all types of flooring applications where toughness and longevity are essential. Its moisture-curing properties provide a seamless, high-performance finish suitable for both commercial and residential use.

Additionally, this single-component system can be pigmented using various Liquimix colours through a separate colour pack. The colour pack is simply added and mixed into the base material before application at a recommended ratio of 20% by volume, allowing easy customisation and flexibility to match design requirements.

INTENDED USES

- Flooring for commercial, residential, and industrial spaces
- High-traffic areas needing quick return to service
- UV-resistant coatings for various substrates
- Durable finishes for decorative and colored floors
- Patios and decks with indirect weather exposure

FEATURES

- Convenient moisture cure, no mix formula
- High abrasion & Impact resistance
- Fast cure at ambient temperature
- Good wear resistance
- Full cure down to 5°C

PRODUCT DATA

Volume Solids	80%
Theoretical Coverage	6 Square meters / litre at 125 Microns DFT
Finish	Clear or Pigmented
Colour	Available in Clear Finish and Factory Colours
Gloss	High
Mixing Ratio	Self-curing
Pot life	3 hours @ 25°C
Typical Thickness	87.5 to 105 Microns DFT (100 to 120 Microns WFT)
Cleaner	LM1 Thinner
Flash Point	23°C
VOC	750 Grams / Litre
Specific Gravity	1.01

CURE & RECOAT

Substrate Temp	Tacked	Hard Dry	Full Cure	Minimum Recoat	Maximum Recoat
10°C	3 Hrs	7 Hrs		7 Hrs	15 Hours
15°C	2 Hrs	4 Hrs		4 Hrs	9 Hours
25°C	1 Hrs	3 Hrs	7 - 14 Days	3 Hrs	6 Hours
40°C	0.5 Hrs	1 Hr		1 Hrs	3 Hours

Note: Exposure to UV will reduce the recoat window.

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ENGINEERING DATA

Property	Test Method	Result
Abrasion resistance	ASTM c501-84, 1,000rpm with 1,000g weight	
	H18 wheel	N/A
	CS17 wheel	N/A

POTLIFE

Mixed Product Temperature	Pot Life (Note 1)
10°C	12 hours
15°C	6 hours
25°C	3 hours
40°C	1 hours

Note 1: Potlife is dependent on product temperature as well as mix size. When using larger mix sizes, the potlife will be shorter. Keep products cool.

LIMITATIONS

- Gel time and thin-film dry times are heavily dependent on temperature, humidity and film thickness.
- Thick films will take longer to cure. High humidity and temperature will shorten thin-film cure time.
- Test the gel time and thin-film dry times before commencing a large job. Stop application 5 minutes before the product gels in order to minimise air-bubble entrapment.
- The only way to ensure colour-fastness of the product underneath is to use a coloured Pure Step 1K-80.

SURFACE PREP

Concrete Solid Colour

The concrete surface preparation must be conducted under the SSPC-SP13/NACE No. 6 surface preparation standard for concrete. This standard covers the preparation of concrete surfaces before the application of protective coating or lining systems.

The concrete should be at least 28 days old. Ensure that the moisture content of the concrete is less than 7% before applying any coatings. A moisture test, as outlined in ASTM D4263, can be used to confirm the moisture content.

1. Remove all oil, grease and release agents in the concrete. Ensure that any laitance or other invisible contaminants have been removed. Be especially careful with concrete surfaces that have been in contact with form ply or moulds that may contain release agents. These release agents commonly contain heavy hydrocarbon waxes or silicones that can adversely affect the adhesion.
Contaminant may also be present below the surface as it may have penetrated the concrete. This can be the case in food processing facilities for example. Depending on the depth of the contaminant this may require solvent and /or hot water high pressure cleaning.
Prepare the concrete surface to a clean, dry finish through ensuring that the water and air used in the decontamination of the concrete is clean.

Pure Step 1K-80

APPLICATION

Equipment

Roller:	Preferred
Airless 60:1 Pump:	Tip Range 21-26 Thou (0.53-0.66 mm). Output fluid pressure at spray tip not less than 3000 Psi (210 kg/cm ²)
Brush:	Suitable for small areas
Temperature of material at gun:	Ambient (20 – 30°C)

Environment

Relative humidity:	The relative humidity must be less than 85%
Dew point:	The substrate temperature must be at least 3°C higher than the dew point temperature
Substrate Temperature:	The substrate temperature must be a minimum of 5°C

Mixing

Always stir Pure Step 1k-80 in its original container well before use. Avoid entrapping air during mixing.

Thinning

Thinning of Pure Step 1K-80 is not considered necessary or desirable.

Cleanup

LM1 Thinner may be used for general clean-up of equipment and hoses. To remove cured material from metal parts, soak in Swell. Keep all gun part A side components in soak containers on the left side of the work bench and all part B side components on the right side of the work bench. The use of plastic soak containers with clip on lids and removable baskets makes the job easier. Replace the SWELL regularly as soon as it starts turning cloudy and dirty.

Concrete Solid Colour

1. Apply Pure Step 1K-80 thinned with thinner directly to the concrete to seal the concrete (two coats may be required if the concrete is 'hungry').
2. Apply one coat of Pure Step 1K-80 pigmented. For best results apply Pure Step 1K-80 in the evening when the concrete is cooling down and not outgassing.
3. The next coat of Pure Step 1K-80 clear can be applied as soon as the Pure Step 1K-80 has tacked or the following morning when the Pure Step 1K-80 has cured.

Concrete Flake or Aggregate

1. Apply Pure Step 1K-80 thinned with thinner directly to the concrete to seal the concrete (two coats may be required if the concrete is 'hungry')
2. Apply one coat of Pure Step 1K-80 before broadcasting decorative flakes directly onto the wet coat of Pure Step 1K-80. When dry, remove excess flakes with vacuum, blower or broom prior to application of Pure Step-1K Clear topcoat. For a smooth finish, sand the flakes prior to application of the clear Pure Step 1K-80 topcoat.
3. The next coat of Pure Step 1K-80 clear can be applied as soon as the Pure Step 1K-80 has tacked or the following morning when the Pure Step 1K-80 has cured.

Note 1: In all applications, it is important to follow the guidelines outlined in each product's TDS. Each product must be fully cured prior to application of the following coats. (See recoat schedule in the table below.)

COMPATIBILITY

Pure Step 1K-80

Primers

Pure Step 1K-80 (thinned)

Topcoats

Pure Step 1K-80

TYPICAL SYSTEM

Substrate	Environment	Substrate Prep	Coat	System	DFT
Concrete	Flooring Flake	Diamond Grind	1 st Coat	Pure Step 1K-80 (thinned)	6 m ² /L
			2 nd Coat	Pure Step 1K-80 (thinned)	87µm
			3 rd Coat	Pure Step 1K-80	87 µm

STORAGE & HANDLING

Store in dry, shaded conditions away from sources of heat and ignition and in properly sealed containers. Protect from heat and frost.

A shelf life of 24 months minimum is typical if stored under ambient conditions at 25°C.

PACK SIZE

5L Kits

1 xPure Step 1K-80 in a 5L Pail

20L Kits

1 xPure Step 1K-80 in a 20L Pail

10L Kits

1 x Pure Step 1K-80 in a 10L Pail

200L Kit

1 xPure Step 1K-80 in a 200L Drum

HEALTH & SAFETY

Pure Step 1K-80 is for professional use only.

This product should not be used without consulting the Safety Datasheet (SDS) as published on the Liquimix website first.

Observe all health and safety as well as environmental legislation.

DISCLAIMER

The information contained herein is offered without charge and is for use by technically qualified personnel at their own risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and no warranty of any kind is made with respect thereto.

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