

Setseal PU100

Water based, matte polyurethane sealer



Description

Setseal PU100 is a clear, non-yellowing, two-component, water-based polyurethane matte sealer designed to protect and seal Cemflow screeds and concrete surfaces, providing an abrasion resistant, hygienic and durable floor. The application of Setseal PU100 helps to protect the floor surface and ease maintenance by reducing the adhesion of dirt and other debris, whilst eliminating dusting.

Setseal PU100 can also be used as sealer over existing epoxy/polyurethane flooring systems, to improve slip and abrasion resistance, as well as provide an anti-stain matte finish. Setseal PU100 cures by a chemical crosslinking reaction, providing durability, toughness and chemical resistance that far exceeds that of one-component acrylic or polyurethane sealers.

Applications

Setseal PU100 is designed to seal a variety of Cemflow, Strongcoat and Griptop flooring systems, as well as screeds in the following:

- ▲ Retail spaces such as stores and showrooms.
- ▲ Health care facilities such as hospitals and clinics.
- ▲ Business facilities such as offices and lobbies.
- ▲ Museums, theatres and shopping malls.
- ▲ Educational premises such as universities, schools and colleges.
- ▲ Industrial facilities such as warehouses, production, maintenance and assembly areas.
- ▲ General food processing and manufacturing plants.

Advantages

- ▲ Excellent UV stability, non-yellowing.
- ▲ Provides a slip resistant matte finish.
- ▲ Extremely easy to clean and maintain.
- ▲ Low VOC content, and low odour.
- ▲ Resistant to many of the chemicals commonly found in industrial applications.
- ▲ Water based, environmentally friendly.
- ▲ Excellent abrasion and scratch resistance.
- ▲ High bond strength to porous and non-porous substrates.
- ▲ Excellent water and stain resistance, prevents penetration of oils and liquids.
- ▲ Excellent resistance to dust and dirt pick up.

Technical Properties:

Specific gravity:	1.05 ± 0.05
Solid content:	44 ± 1%
Pot life:	4 hr @ 75°F (24°C) 3 hr @ 95°F (35°C)
Tack free time @ 75°F (24°C):	Porous surfaces 20 - 30 min Non-porous surfaces 30 - 40 min
Light foot traffic time:	After 24 hr
Full cure:	After 3 days @ 75°F (24°C)
Bond strength: ASTM D4541	360 psi (2.5 MPa) (concrete failure)
UV resistance: ASTM G53	8 hr UV light @ 60°C Excellent 4 hr condensation @ 47°C Pass QUV accelerated weathering 2000 hr
Glossiness @ 140°F (60°C)	< 3.0 (Matte)
Abrasion resistance: ASTM D4060, CS-17, 1000 cycle, 1 kg	< 60 milligram
Slip resistance: BS 7976, Slider 96	Dry 65 Wet 41
VOC:	< 10 g/ltr (comply with LEED)

Method of Use

Substrate Preparation

Absorbent surfaces (cementitious screeds):

Surfaces to be sealed must be clean, dry and free from dust, debris or other contaminants. Setseal PU100 can be used to seal Cemflow screeds, make sure to wait 24 hour after the application of the screed, dependent on temperature and humidity conditions.

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Old or existing non-absorbent surfaces:

These include existing epoxy or polyurethane coatings, and tiles such as glazed ceramic or porcelain. The existing surface must be clean, dry and free from dust, debris or other contaminants. Make sure the existing flooring system is intact and properly bonded to the substrate before the application of Setseal PU100. It is recommended to solvent wipe the surface clean using acetone to improve performance.

Mixing

For best results, mix component A with component B for a minimum of 2 minutes using a high speed mixer, such as a drill with paddle attachment. Once mixed leave to rest for 5 minutes, and then remix to consistency at a slow speed.

Application

Setseal PU100 may be applied using roller (short nap or foam roller) or airless spray to completely cover and seal the surface. Most consistent finishes are obtained by spray.

For cement based surfaces and absorbent substrates, it is recommended that a dilute coat of 1:1 Setseal PU100:Water is applied prior to application of neat Setseal PU100. This should be followed by 1 or 2 coats of neat Setseal PU100 applied at a rate of approximately 400 ft²/gal (9.8 m²/litre).

For non-absorbent substrates such as glazed ceramic and porcelain tiles, existing epoxy or polyurethane coatings, Setseal PU100 should be used neat without dilution, applied in 1 or 2 coats at a rate of approximately 400 ft²/gal (9.8 m²/litre).

When using rollers, wet them out when starting application, taking into consideration the amount of material the roller will absorb. The roller will absorb approximately 8.5 – 13.5 fl. oz. (250 - 400 ml) of the material. Start coating the floor by cutting in the edges with a brush and/or small roller.

To minimize roller marking when the finish is applied by this method, pour neat Setseal PU100 into a roller tray and apply it evenly in the same direction over the surface. The material is then cross rolled in the opposite direction. Do not overlap more than 2 inches (50 mm) onto the prior pass.

Occasional Spillage.

Chemical Resistance after full cure (3 days @ 25°C), ASTM D1308 (Spot - test @ 24 hr)

Organic Acids

Lactic Acid 8%	R
Balsamic Vinegar 6%	R
Acetic Acid 10%	R

Inorganic Bases

Sodium Hydroxide 50%	R
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Aqueous Solutions

Sodium Chloride 3.5%	R
Tap Water	R

Household Chemicals

Ketchup	R
Mustered	RS
Mayonnaise	R
Olive Oil	R
Coffee	R
Floor Cleaner	R
Ethanol 76%	R

Oil & Fuels

Engine Oil	R
Diesel	R
Jet Fuel	R

Inorganic Acids

Sulfuric Acid 10%	R
Hydrochloric Acid 10%	R

R: Resistant

RS: Resistant with slight discoloration

SS: Slight softening

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When applying a second coat of Setseal PU100, it is recommended that this be applied at an angle of 90 degrees to the first coat to ensure complete coverage. Under typical conditions, a second coat can be applied approximately 4 - 6 hours after the first.

Limitations

- ▲ Do not pour Setseal PU100 directly onto the surface of Cemflow Cementitious Flooring Range.
- ▲ Setseal PU100 has no visible end of pot life. It is critical that you keep track of the time and temperature to ensure that you are working within the pot life. Typically, it is best to apply the product within 4 hours of mixing at 75°F (24°C) ambient temperature. If a "wet" edge is maintained throughout the application, a seamless finish can be created.
- ▲ After application, the surface should be protected from direct contact with water for at least 24 hours.
- ▲ Surface and ambient temperature during coating applications should be between 50°F (10°C) and 95°F (35°C).
- ▲ Material temperatures should be at least 50°F (10°C) and rising. It is recommended to precondition material for at least 24 hours at temperatures between 60°F (15°C) and 75°F (24°C).
- ▲ Low temperatures and/or high humidity will increase curing time.
- ▲ Avoid condensation by ensuring that the substrate temperature is at least 6°F (3°C) above the measured dew point. Keep in mind that the substrate temperature may be lower than the ambient temperature.
- ▲ The use of Setseal PU100 as a UV resistant top coat may not prevent discolouration of underlying coatings.
- ▲ Do not puddle or apply at excessive thicknesses as this will extend drying times and may cause the product to cure to a cloudy white finish.

Cleaning

Once mixing, application and finishing are complete, tools can be cleaned with warm soapy water.

Curing Time

Setseal PU100 should be tack-free in approximately 20 - 40 min at 75°F (24°C) and ready to accept light foot traffic after 24 hours. In heavy-duty applications, the floor should not be used after 3 days to allow full drying and curing of the sealer.

Packaging

Setseal PU100 is available in 1 gal (3.8 liter) and 5 gal (18.9 liter) kits.

Coverage

On porous absorbent surfaces, Setseal PU100 should be diluted 1:1 with water and applied as a primer at a rate of 400 ft²/gal (9.8 m²/litre) of diluted material. Subsequent coats should be applied neat.

The typical coverage of subsequent coats is 400 ft²/gal (9.8 m²/litre) litre of neat material.

Note: Coverage rates are approximate and will vary according to amount of overcoating during application and substrate porosity. Each subsequent coat will generally require less material.

Storage

Setseal PU100 has a shelf life of 12 months from date of manufacture if stored in dry conditions at temperatures between 40 - 85°F (5 - 30°C), in original unopened containers and under good conditions.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

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Cautions

Health and safety

Care should be taken during use and storage to avoid contact with skin, eyes and mouth.

Wear suitable protective clothing, gloves and eye/face protection.

Should accidental skin contact occur, remove immediately with plenty of clean water. If swallowed, seek medical attention immediately - do not induce vomiting.

For further information refer to the Material Safety Data Sheet.

Fire

Setseal PU100 is water based and nonflammable.

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- ▲ Surface treatments
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- ▲ Concrete repair.
- ▲ Flooring systems.
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- ▲ Waterproofing.
- ▲ Adhesives.
- ▲ Tile adhesives and grouts.
- ▲ Building products.
- ▲ Structural strengthening.

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Note:

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