Product Information
Protectakote Smooth UVR

DESCRIPTION

Protectakote UVR Smooth is a single component aliphatic polyurethane coating, which forms a colour-fast, abrasion and weather resistant film. It can be used as a protective coating for all industrial maintenance and new installations including marine installations. Protectakote UVR is available in a variety of standard colours. Other benefits include:

- Easy to apply, no skilled labour required
- Will not taint water or food once cured
- Bonds to most surfaces
- Can be overcoated or repaired
- Resists many solvents, good chemical resistance to organic and inorganic acids
- Drying time can be accelerated if necessary (low temperatures or time constraints)
- Excellent weather resistance and outdoor longevity

PRODUCT USES

Just some of the various areas where Protectakote UVR Smooth may be applied are:

- Automotive parts requiring protection and abrasion resistance
- All indoor and outdoor flooring applications
- Demarcations on floors and steps
- Emergency exits and fire escapes
- Demarcations around machinery
- Bridges, steps, walkways, decks and helicopter pads on ships
- Industrial tanks, piping and machinery requiring outdoor protection

PRODUCT CHARACTERISTICS

Finish: gloss
Colours: white, safety yellow, light grey and clear
Tinting: not recommended
Volume solids: 32.1% $\pm$ 2% (may vary by colour)
Weight solids: 74% $\pm$2% (may vary by colour)
VOC (EPA method #24): <278g/l
Recommended number of coats: minimum 2, high wear areas require 3 coats
Coverage (m^2/L): approx 1.6 – 1.8 m^2 per litre (with 2 coat application)
Recommended spreading rate per coat:
Wet film thickness: 250 microns
Dry film thickness: 170 microns
Drying time is temperature, humidity and film thickness dependent.
Drying schedule @ 250 microns wet film thickness:

	@ 10°C/50°F	@ 20°C/68°F 50% RH	@ 30°C/95°F
Tack free:	6 hours	3 hours	2 hours 15 min
Light traffic:	18 hours	9 hours	6 hours 45 min
Full traffic:	72 hours	36 hours	27 hours
Full cure:	4-7 days depending on conditions		
To recoat:			
minimum:	6 hours	2 hours 30 min	2 hours 15 min

maximum before re-preparation of the surface becomes necessary: 24 hours
Note: Do not apply to substrates greater than 35°C

An accelerator is available for use below 10°C when extended drying times are undesirable. Use at higher temperatures can cause surface defects. Consult the data sheet for Protectakote UVR Accelerator.

Shelf life: 18 months unopened.
Store indoors at 5 to 35°C.
Thinning/clean up: Xylene
Specific Gravity 1.07g/cm^3

Flash point	27°C / 81^{0}F

DILUTIONS

Protectakote Smooth may be diluted with xylene in order to acheive better coverage where a lesser film thickness is acceptable.
With 10% xylene added: maintaining a wet film thickness of 250 microns, a coverage of up to 2.0 m^2 per litre can be achieved.
With 20% xylene added: maintaining a wet film thickness of 250 microns, a coverage of up to 2.2 m^2 per litre can be achieved.

PERFORMANCE CHARACTERISTICS

Tensile strength at break	26MPa (ASTM D638)
Elongation at break	600% (ASTM D638)
Service temperature	-30°C to 115°C
Abrasion resistance (Taber)	30.5 mg loss (ASTM D4060, 1000 cycles, 1000g load)
Accelerated weathering	no change after 1000 hours QUV
Coefficient of friction	1.21 (dry); 0.64 (wet)
Minimum heat softening temperature	130^{0}C
Exterior durability	~10 years depending on conditions

APPLICATION CONDITIONS

Temperature	5 – 35^{0}C / 41 – 95^{0}F
Relative humidity	85% maximum (loss of gloss above 85% RH)

Refer to drying schedule above.

SURFACE PREPARATION AND PRIMING

Substrates differ significantly, and so all new applications should be tested first. All surfaces must be sound, dry and free of oils or greases.

- **Cement** Old and new cement or concrete surfaces must be acid-etched, rinsed well, dried and primed with Duraprime water-based epoxy primer. Good quality concrete, not subject to any rising damp can be applied without a primer and the first coat diluted 10% with Xylene. Oils and grease will prevent adhesion and must be removed.
- **Mild Steel:** To be free of millscale, rust, grease and well abraded. Prime with Protectakote 2K metal primer or Protectakote Clear Primer Treatment or a corrosion inhibiting primer such as red oxide.
- **Galvanized steel:** Scour with alkaline detergent or galvanized pre-cleaner to a water break free surface. Prime with Protectakote 2K metal primer, Protectakote Clear Primer Treatment or other similar products.
- **Aluminium:** Clean and prime with Protectakote 2K metal primer or Protectakote Clear Primer Treatment or similar.
- **Fibreglass:** Abrade well, solvent wipe, dilute the first coat by 10% with Xylene and apply directly.
- **Timber:** Abrade, clean and dry before applying Protectakote directly. Dilute the first coat with 10% xylene to aid penetration. Damp timber requires a moisture barrier such as Duraprime. Porous woods such as MDF or standard ply will need to be sealed with dilute PVA and allowed to fully dry first
- **Gloss Paints and Varnish:** Abrade to remove all gloss, wipe with solvent, dry and apply directly.
- **Rubber (nitrile or chloroprene):** Abrade and clean well using detergent or cleaning solvent. Allow to dry. Apply directly. Adhesion test recommended.
- **Glazed tiles:** Glazed tiles must be cleaned and treated with Protectakote Clear Primer Treatment (an organosilane) for adhesion of Protectakote UVR.

Note: Alkyd, epoxy and polyurethane primers can be used with Protectakote UVR.

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APPLICATION INSTRUCTIONS

Ensure substrates have been prepared; tests for adhesion completed and areas not to be coated have been masked off. Stir well before use.

Spray: Dilute with 10% xylene. Use a minimum pressure of 5 bar. Protectakote UVR should be applied in thin coats to prevent "mudcracking" during drying. Depending on the application, two or more coats can be applied, allowing time for all solvent to evaporate between coats. Intercoat time approximately 60 – 90 minutes (when touch dry) depending on ambient conditions.

Brush/Roller:

Brush: Protectakote should be "laid" onto the surface with a brush (do not brush backwards and forwards as with an enamel paint). Two coats will result in a final dry film thickness of 0,6mm to 0.8mm. Second or subsequent coats should be applied at right angles to the previous coat.

Roller: Recommended as application is quicker. Use a short mohair roller. A brush may be required after initial spreading to remove bubbles introduced.

- **Curing time:** Protectakote UVR cures with atmospheric moisture. Without accelerator the coating will be touch dry in about 60 – 90 minutes, allowing light traffic after 6 hrs, and achieves full strength and chemical resistance in 4 to 7 days, but normally coating can be put to use after 24 hours.
- **Accelerated cure:** In areas of low atmospheric moisture or when shorter curing times are required, an accelerator can be added prior to use. The data sheet for 'Protectakote UVR Accelerator' lists drying times for the unaccelerated product under various conditions of temperature and humidity. This will help users determine when accelerator will be required.
- **Overcoating time:** Ideal: 60 – 90 minutes at 25°C at 50% relative humidity. If Protectakote UVR is left for more than 24 hrs after coating, it should be abraded before recoating to aid intercoat adhesion.
- **Touch-up and repair:** Protectakote UVR can easily be repaired or overcoated. The old surface should be well cleaned and then abraded by wire brush, abrasive pad or sandpaper, damaged surfaces must be cut out to provide an area without loose edges. Follow application instructions.

SOLVENT/CLEANING

If thinning is necessary, use up to 10% of xylene. Do not use any solvent containing water or alcohols. Spills and brushes can be easily cleaned with xylene after the drying time but before final cure.

To clean the coating: use hot soapy water.

PRECAUTIONS

- Do not clean surfaces with Lacquer thinners or other alcohol-containing solvents.
- Do not thin with any solvent other than xylene.
- Do not apply to bare metal without an appropriate primer.
- Protectakote UVR is highly flammable in its wet state due to its solvent content, observe all fire precautions.
- Remove any overspray immediately; Protectakote UVR is very difficult to remove once cured.
- Once opened use Protectakote UVR within 2 hours or 1 hour if accelerator is used.
- Ensure good ventilation to prevent build up of flammable solvents.
- Protect from moisture and do not expose unopened cans to temperatures above 50°C.
- Wear goggles and rubber gloves. Protectakote UVR bonds to the skin and can only be removed with a pommel stone.

ACCIDENT MEASURES

Refer to the Material Safety Data Sheet

- Spillage/leakage: Do not empty into drains; keep away from sources of ignition. Ensure ventilation in working area. Take up with absorbent material. Fill into sealable containers.
- Extinguishing media: extinguishing powder, CO_2 or halogens.
- Eye contact: rinse with water.
- Skin contact: wash with soap and water.
- Should Protectakote UVR be swallowed seek medical advice.

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QUALIFICATIONS

VOC ≤310 gram/litre (2.58 lb/US gallon) as supplied (EPA Method 24)
Note the VOC value is typical and may be subject to variation depending on factors such as differences in colour and texture.
REACH Conforms to EC regulation number 1907/2006 REACH, Annex (II).
MIL SPEC MIL-PRF-32171A Types I and III, Classes 1 and 2 - Deck coatings, high durability. (US Navy)

SALES DATA

Pack size:	1l & 4l
No of components:	Single

Technical details above are provided in good faith. We are an ISO 9001 2000 registered company and our products are manufactured to the highest standards using raw materials of superior quality. Consequently we believe in the quality of our products and will willingly replace any product in the unlikely event of a quality related performance failure. Whilst we are confident in guaranteeing the quality of our products, we cannot however accept any liability for performance failure due to the incorrect application of our products. Correct application is critical to the successful performance of our products and as this process falls outside of our control we are unable to cover the application under our product performance warranty. Where there are doubts, it is recommended that users conduct their own suitability tests before use.

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