

PRODUCT DESCRIPTION

Protectakote is a single component aromatic polyurethane which forms a tough but flexible, abrasion resistant coating. It is supplied with either a textured surface for use as a slip-resistant coating; or a smooth texture for use as a protective coating. Protectakote 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)

Protectakote textured version is also available in a lower viscosity spray version supplied in a screw-on spray can.

RECOMMENDED USES.

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

- Load areas of pick-up trucks for protection and non-slip properties
- All indoor and outdoor flooring applications
- Floors and steps of transporters and busses
- Ramps for wheelchair access
- Emergency exits and fire escapes
- Non-slip areas around machinery
- Bridges, steps, walkways, decks and helicopter pads on ships
- Non-slip surfaces in showers, change rooms and ablution blocks

PRODUCT CHARACTERISTICS

Finish: gloss
Colour: range of 30 standard colours
Tinting: not recommended
Volume solids: textured: 65.4% \pm 2%; smooth: 32.1% \pm 2% (may vary by colour)
Weight solids: textured: 70% \pm 2%; smooth: 74% \pm 2% (may vary by colour)
VOC (EPA method #24): textured: <310g/l; smooth: <278g/l

Recommended spreading rate per coat:

Wet:

17 mil (425 microns) Dry:

12 mil (300 microns)

Coverage (m²/L): 3 m² per litre per coat, **OR** 1.5 m² per litre for a 2 coat application

Recommended number of coats: minimum 2, high wear areas require 3 coats

Recommended literage for normal application: 0.66 litre per square meter (2 coat application)

Drying time is temperature, humidity and film thickness dependent. Drying schedule @ 17 mil (425 microns) wet:

	@ 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: Application to substrates in excess of 35°C is not advisable due to the potential for surface defects and porosity. Above 45°C the drying may be impaired due to evaporation of the catalyst.

Accelerator: 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 Accelerator.

Shelf life: 18 months unopened.
Store indoors at 5 to 35°C.

Thinning/clean up: xylene / Fluidar 100 / ARO 100

Specific Gravity 1.03g/cm³ (rubberised version)
1.07g/cm³ (smooth version)
1.01g/cm³ (rubberised spray version)

Viscosity: manufactured: 68-72ku (textured) 78-82ku (smooth) 64-68ku(Transparent textured)
after 30 days: 80-110ku (textured) 85-95ku (smooth) 75-85ku (Transparent textured)

Flash point 27°C / 81°F

(Note: a version for seagoing vessels with a flash point of 51°C/124°F is also available. See Protectakote M26.)

PERFORMANCE CHARACTERISTICS

Tensile strength at break	16MPa (ASTM D638)
Elongation at break	225% (ASTM D638)
Service temperature	-30°C to 115°C
Abrasion resistance (Taber)	30.5 mg loss (ASTM D4060, 1000 cycles, 1000g load)
Accelerated weathering	yellowing and loss of gloss after 500 hours QUV no further change after 1000 hours QUV
Coefficient of friction	1.14 (dry); 0.47 (wet)
Minimum heat softening temperature	130°C
Exterior durability	6 months to 12 months depending on latitude

APPLICATION CONDITIONS

Temperature	5 – 35°C / 41 – 95°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:** Cement should preferably be primed with Duraprime water-based epoxy primer or other similar product in order to consolidate the cement, create a dry surface for application of the urethane and ensure its adhesion. In the absence of such a primer ensure that the concrete is dry, and ensure penetration of the first coat of Protectakote by thinning if necessary. To aid penetration, concrete should be acid etched or shotblasted to remove surface contaminants and open pores in the concrete. Always neutralise acids before proceeding. Oils and grease will prevent adhesion and must be removed.
- **Steel:** To be free of millscale, rust, grease and well abraded. Prime with Protectakote 2K metal primer or Protectakote Clear Primer Treatment or other similar products.
- **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 and apply directly.
- **Timber:** Abrade, clean and dry before applying Protectakote directly. Dilute the first coat with 10% xylene to aid penetration.
- **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.

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

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 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 120 – 150 minutes (when touch dry) depending on ambient conditions.

Brush/Roller: 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: If applied with a stipple roller, application is quicker and the final texture rougher with greater non-slip characteristics. Not recommended for smooth version.

- **Curing time:** Protectakote cures with atmospheric moisture. Without accelerator the coating will be touch dry in about 150 – 180 minutes, allowing light traffic after 8 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 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: 120 – 150 minutes at 25°C at 50% relative humidity.
- **Touch-up and repair:** Protectakote can easily be repaired or overcoated. The old surface should be well cleaned and then abraded by wire brush or sandpaper, damaged surfaces must be cut out to provide an area without loose edges. Follow application instructions. If Protectakote is left for more than 24 hrs after coating, it should be abraded before recoating to aid intercoat adhesion.

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, toluene or Fluidar 100.
- Do not apply to bare metal without an appropriate primer.
- Protectakote is highly flammable in its wet state due to its solvent content, observe all fire precautions.
- Remove any overspray immediately; Protectakote is very difficult to remove once cured.
- Once opened use Protectakote 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 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, CO2 or halogens.
- Eye contact: rinse with water.
- Skin contact: wash with soap and water.
- Should Protectakote be swallowed seek medical advice.

QUALIFICATIONS

VOC ≤310 gram/litre (2.5 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.

SALES DATA

Pack size: 11 & 41

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 user conduct his own suitability tests before use.

MANUFACTURED BY : ZEST POLYURETHANES AT DURAM (PTY) LTD

DISTRIBUTED BY : UNION COATING CO., LTD.

Published: April 2011