

High performance potable water approved polyurethane coating

Product Description

Corroline PWU100 is a high build solvent free urethane anticorrosive coating designed for the efficient long term protection of pipelines, pipe fittings, storage tanks and equipment.

The flexibility, adhesion and corrosion protection performance make Corroline PWU100 the ideal long term protection system for large surface areas subject to excessive movement.

Product Features

- Spray applied in single coat
- 750 - 1000 micron thickness
- 3:1 mix ratio
- Overcoat in 24 hours if hand applied
- Excellent flexural strength
- High adhesion
- Excellent corrosion resistance
- Water immersion resistance 70°C

Typical Application

Internal and external protection of:

- Pipelines
- Water Tanks
- Effluent systems
- Pumps
- Valves
- Marine Structures
- Potable Water Environments

Surface Preparation

General

Correct surface preparation is essential for the success of any protective coating system. All surfaces should be clean, dry and free from contamination. The substrate surface should be fully inspected and assessed after surface preparation has been completed before proceeding with the application of Corroline PWU100.

Steel Substrate

All steel surfaces to be coated should be abrasive blasted using a suitable blast medium to produce a minimum cleanliness of Swedish Standard SA 2.5 or equivalent and a minimum 75 microns angular profile. Remove all residual blast debris and inspect the surface. Profile checks should be taken and recorded. Once blast cleaned, the surface must be degreased and cleaned using Corroclean and all prepared surfaces must be coated before rusting or oxidation occur.

Where abrasive blast cleaning is not possible the surface should be roughened by MBX, needle gun or grinding.

Under these condition adhesion levels will not be optimal although still satisfactory for most applications.

NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above and left for 24 hours to allow any ingrained salt to come to the surface. After this period the surface must be washed with Corroclean prior to brush blasting to remove surface salts. This process must be repeated until all ingrained salts have been sweated out of the surface and removed.

Concrete

New concrete must be cured for at least 28 days before lightly abrading taking care not to expose the aggregate. Any obvious voids or damage should be repaired using a suitable epoxy mortar, and re-abraded. All dust and spent abrasive should be removed from the surface prior to coating. In some situations a primer coat will be necessary - please consult your local Corroline representative.

Mixing

Corroline PWU100 is a two component system supplied as a base and activator.

For brush or roll application stir the content of the base component and while continuing stirring, gradually add the total contents of the activator and continue agitating until a homogenous mix is obtained. Once mixed, the usable life of the product is 15-20 minutes at 20°C. this time will increase at lower temperature and decrease at higher temperatures.

Where small volume mixes are required, the mixing ratio is 3 parts base to 1 part activator by volume.

For spray application (see below) a suitable in-line static mixer should be used.

Application

Precautions

- Do not apply when relative humidity exceeds 90%, when the surface to be coated is less than 3°C above the dew point or when the ambient or substrate temperature is less than 5°C. For best results, especially when applying material by hand, the ambient or substrate temperature should be at least 10°C.
- To ensure coating integrity and minimum thickness, use a short bristled brush to stripe coat all welds, around bolt holes, edges and other sharp protrusions. Allow to cure until touch dry prior to carrying out the overall application of Corroline PWU100 and do not exceed the maximum over-coating time of 24 hours.

Application Method

Application should normally be carried out by plural component heated airless spray using a 60:1 ratio pump with an input pressure of 50 psi and a tip size of 0.019 – 0.025 inches. Warm the base to up to 50°C and ensure that the mixed material is at temperature of 35 - 40°C. Use as short line as possible to maintain product temperature. The applied film thickness should be between 750 and 1000 microns and the practical coverage rate for spraying is 0.75 – 1.125 m² per litre. The mixing ratio is 3 to 1 by volume.

Small units are available for hand application. Transfer the contents of the activator container into the base unit mixing thoroughly to ensure that the material is homogeneous and free of any streaks. From the commencement of mixing all of the material should be used within 15-20 minutes at 20°C.

Where more time is required, the material should be cooled before mixing and during use or smaller volume mixes used.

Apply in two coats by brush or roller at practical coverage rate of 1.7 m² per coat to give a film thickness of 500 microns per coat.

The second coat can be applied as soon as the first layer is touch dry. The maximum over-coating time is 24 hours. Where this time is exceeded the surface should be abraded and the surface cleaned prior to over-coating.

Cure Times

Curing Times	20°C
Usable life	15-20 minutes
Touch Dry	2 hrs
Hard Dry	4 hrs
Full Cure	3 days
Chemical contact	7 days

Technical Information

Test	Standard	Result
Tensile Strength	ASTM D1002	200 kg/cm ² (2850 psi)
Elongation at Break	@ 25°C	30%
Water Resistance	British Gas CW6 and FW0028 Draft Methods	Pass at 50°C
Cathodic Disbondment	British Gas CW6 and FW0028 Draft Methods	Pass
Impact Resistance	British Gas CW6	15 joules
Flexibility	FW0028 Draft Method	3% strain at 20°C – pass 3% strain at 5°C – pass 3% strain at 0°C - pass
Corrosion Resistance	ASTM B117	5000 hours
Hardness Shore	ASTM D2240	80

Inspection

Corroline PWU100 can be inspected for pinholes and holidays using a high voltage spark tester. Before testing, the coating should be washed down with clean water to remove any contamination on the surface and allowed to dry. Typical voltage for testing should be 4kV but please refer to the equipment manufacturer's recommendations as voltages may vary with equipment type.

Technical Support

Corrotech Construction Chemicals offer complete technical support and assistance from discussing application requirements to training approved local contractors. For further information please contact a Corroline representative or your nearest dealer.

Health & Safety

Please refer to the product material safety data sheet for detailed information on handling, storage, shipping and disposal.

Packaging and Storage

Supplied in either 5 & 20 litre packs. Bulk packaging available.

Shelf life is 2 years providing it is stored between 5°C and 35°C in original sealed containers.

Warranty

Corrotech Construction Chemicals guarantees this product will meet the performance claim stated herein when material is stored and used as instructed. Corrotech Construction Chemicals further guarantees that all its products are carefully manufactured to ensure the highest quality possible and tested strictly in accordance with universally recognized standards (ASTM, ANSI, BS, DIN, etc). Since Corrotech Construction Chemicals has no control over the use of the products described herein, no warranty for the application can be given.