DEP 511 UCEN

DEP 511 UCEN is a high build solvent-free epoxy novolac coating designed to provide outstanding chemical and corrosion protection of steel and concrete structures. The coating is particularly resistant to attack by strong acids including 98% sulphuric acid.

Typical applications include chemical containment and bund areas, tanks, pumps, chemical drains and channels and pipework.

Surface Preparation

1. Metallic Substrates
All oil and grease must be removed from the surface to be coated using an appropriate cleaner such as MEK.

The surface should be abrasive blasted to Swedish Standard SA2.5 and a minimum blast profile of 75 microns using an angular abrasive. Once blast cleaned, the surface must be degreased and cleaned using MEK and all prepared surfaces must be coated before rusting or oxidation occur.

NOTE: For salt contaminated surfaces the area must be repeatedly water washed, preferably by power washing, until ingrained salts no longer come to the surface on drying. The surface should then be abrasive blast cleaned as above prior to cleaning and degreasing with MEK.

2. Concrete
Remove any contamination and lightly abrasive blast or scarify taking care not to expose the aggregate before application of DEP 511 UCEN. Allow new concrete to cure for a minimum of 21 days and likewise treat to remove any surface laitance before coating. For optimum results on damp concrete, condition with DEP 505 Dampseal. Where the concrete is dry, it is recommended to condition with DEP 503 SPEP.

Mixing and Application

Warm the Base to 15-25°C before mixing and do not apply when the ambient or substrate temperature is less than 12°C or less than 3 degrees above the dew point.

Pour approximately half of the contents of the Activator unit into the Base container and mix carefully using a spatula. Once the two materials have been blended, add the remainder of the Activator ensuring that as much material is drained from the Activator container as possible. Mix the two components together until they are streak-free. The material, once fully mixed, has an application of time of 30-40 minutes at 20°C. This time will be extended at lower temperatures and shortened at higher ones.

Apply the mixed material onto the prepared surface by brush or roller. This should be in two coats at a target thickness of 250 microns per coat using a practical coverage rate of 3.5 sq metres per litre per coat. On rough concrete surfaces the coverage rate of the first layer in particular will be significantly reduced.

Apply the second coat as soon as possible after the first coat is dry and not in excess of 6 hours. Where the maximum over-coating interval is exceeded, the first coat should be sweep blasted and cleaned prior to over-coating.

Where small volume mixes are required, the mixing ratio is 4:1 by weight or 3:1 by volume.

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Cure Times

At 20°C the applied materials should be allowed to harden for the times indicated below before being subjected to the conditions indicated. These times will be extended at lower temperatures and reduced at higher temperatures:

Usable life	30-40 minutes
Movement without load or immersion	6 hours
Light loading	12 hours
Full loading/water immersion	4 days
Chemical Contact	7 days

For Optimum Performance

After an initial curing period of at least 12 hours at 20°C, raising the cure temperature progressively to 60 - 80°C for up to 8 hours will result in improved mechanical, thermal and chemical resistance properties

Technical Data and Performance

Hardness Shore D ASTM D2240	85
Compressive Strength ASTM D695	984kg/cm² (13,950 psi)
Flexural Strength ASTM D790	871 kg/cm² (12,300 psi)
Tensile Shear Adhesion(mild steel) ASTM D1002	208 kg/cm² (2950 psi)
Corrosion Resistance (ASTM B117)	5000 hours

Health and Safety

Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves and other recommended personal protective equipment must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read and fully understood the detailed Material Safety Data Sheet.

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