

X² OffShore

Selection & Specification Data

Generic Type

Reinforced Polyamine Epoxy

Description

Ultra-high build coating for use on steel and concrete substrates subject to aggressive chemical fume and spill exposure. X²

OffShore provides exceptional resistance to thermal shock and abrasion, and has found wide acceptance in a broad variety of heavy industrial applications e.g. off shore.

Features

- Ultra-high build capabilities provides a voidfree film and excellent edge protection
- Follows Norsok M-501
- Wide chemical resistance to acids, caustics and aliphatic solvents
- Excellent saltwater resistance
- VOC compliant to current AIM regulations

Color Yellow and Gray

Primers Self-priming, X²Zinc for Offshore recommended

Dry Film Thickness

1 coat system: 150-500 microns
500 microns not to be exceeded

Solids Content By Volume: 88% ± 2%

Theoretical Coverage Rate

6.0 m²/l at 150 microns
Allow for loss in mixing and application

VOC Values

72 g/l These are nominal values and may vary slightly with color.

Dry Temp. Resistance

Continuous: 120°C
Non-Continuous: 150°C

Discoloration and loss of gloss is observed above 140°F (80°C).

Limitations

Epoxies lose gloss, discolor and eventually chalk in sunlight exposure. This coating commonly develops an *amineblush* during cure. While this condition will not adversely affect performance of the coating, this blush must be removed before applying additional coats and may require removal before placing into service.

Substrates & Surface Preparation

General

Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.

Steel

Immersed application Sa3
Other Sa 2 1/2

Concrete

Concrete must be cured 28 days at 75°F (24°C) and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing.

Application Equipment

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

General Guidelines:

Spray Application (General)

Recommended for application by single or plural component airless spray. This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

Conventional Spray

Not recommended

Airless Spray

Pump Ratio: 30:1 (min.)*

Material Hose: ½" I.D. (min.)

Tip Size: 0.015"-0.021"

Output : 150 – 160 bar

Filter Size: 60 mesh

*Teflon packings are recommended and available from the pump manufacturer. Contact Scandex Technical Service for plural component equipment recommendations.

Brush & Roller (General)

Not recommended for tank lining applications except when striping welds.

Brush For touch up and limited areas only.

Roller For touch up and limited areas only.

Mixing & Thinning

Mixing

Power mix separately, then combine and power mix.

DO NOT MIX PARTIAL KITS.

Thinning Not recommended. Use of thinners other than those supplied or recommended may adversely affect product performance and void product warranty, whether expressed or implied.

Pot Life

45 minutes at 75°F (24°C). Pot life ends when material begins to thicken and starts

to heat up. Pot life times will be less at higher temperatures.

Cleanup & Safety

Cleanup

Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

Safety

Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

Ventilation

Vapors and/or spray mist may cause explosion. When used as a tank lining or in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapour concentration from reaching the lower explosion limit for the solvents used. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel.

Caution

This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	60°-85°F (16°-29°C)	60°-85°F (16°-29°C)	60°-90°F (16°-32°C)	0-80%
Minimum	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	125°F (52°C)	110°F (43°C)	90%

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions. To reduce outgassing when applying to concrete substrates, do not apply in direct sunlight or when surface temperatures are increasing. Best results are obtained when ambient and surface temperatures are decreasing or constant.

Curing Schedule

Substrate Temp. & 50% Relative Humidity	Dry to touch	Time to recoat	Total cure
5°C	8 Hour	24 Hours	18 days
10°C	4 Hours	15 Hours	14 days
15°C	2 Hours	10 Hours	8 days

These times are based on a 20.0 mil (500 micron) dry film thickness. Higher film thicknesses, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Condensation on the surface or humidity above 25% during application and curing will result in a surface haze or blush. Any haze or blush must be removed by water washing before recoating. During high humidity conditions, it is recommended that the application be done

while temperatures are increasing. If the maximum recoat time is exceeded, the surface must be washed with detergent and water, then abraded by sweep blasting prior to the application of additional coats. For force curing, contact Scandex Technical Service for specific requirements.

Packaging, Handling & Storage

Shipping Weight (Approximate)

(20 kg)

Flash Point (Setaflash)

Part A: >205°F (96°C)

Part B: >205°F (96°C)

Storage (General)

Store Indoors.

Storage Temperature & Humidity

50°- 85°F (11°-30°C)

0-100% Relative Humidity

Shelf Life

Part A & B: 6 months if stored at 50°- 85°F. To ensure maximum film build, X² Tank and Pipeline Protect 309 is best if applied within three (3) months of the manufactured date.

***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**