

Securea SC

The aromatic Polyurea coating

Description

Securea SC is a two component, solvent free elastomeric polyurea coating which cures rapidly to form a highly durable film exhibiting a high degree of abrasion and chemical resistance; recommended for metal and concrete substrates.

Formulated to achieve an optimum balance of physical properties such as outstanding tensile strength, tear strength, impact resistance and elongation, Securea SC is applied using high pressure, plural component equipment, enabling to yield a tough, yet flexible film of 1mm thickness and above. It exhibits excellent hydrolytic stability to withstand a wide range of temperature extremes in dry or aqueous environments.

Uses

- Sewage plants
- Internal and external pipelines
- Secondary containment areas
- Pond liners
- Thermal power plants
- Marine and offshore installations
- Waste water treatment linings
- RCC roofs, podium, walls, fountains etc.

Key features

- Solvent free
- Rapid return to service
- Fast setting : within seconds
- Excellent wear and tear resistance
- Excellent toughness and flexibility
- Resistant to acids, alkalies and microbial wastes
- Available in grey, black and tan shades

Properties

Type	: Pure polyurea
Mixing ratio (R:H)	: 1 : 1 by volume
Gel time	: ≥ 10 sec
Dry to touch	: ≥ 25 sec
Substrate temperature	: -5°C to +55°C
Return to service	: ≥ 2 hrs
Ambient temperature	: 5°C to 50°C
Ambient moisture	: Max. 85% R.H.

Flash point	: Part A : 220°C
ASTM D 3278	: Part B : 110°C
Cleaning solvents	: MEK, Ethyl Acetate
Packaging	: 200 litre MS drums
Theoretical coverage	: 1 sq m / litre @ 1mm.
Recommended thickness	
Steel	: 1000-3000 microns
Concrete	: 1500-3000 microns

Performance data

Solids content by weight	≥ 98%
ASTM D 2369 C	
VOC contents	
ASTM D 2369	<1 gm / litre
Tensile strength	
ASTM D 638	≥ 15 MPa
Adhesion	
ASTM D 4541	
Primed steel	≥ 8 MPa
Primed concrete	≥ 2 MPa
Recoverable elongation	
ASTM D 638	≥ 300%
Surface hardness, Shore D	
ASTM D 2240	≥ 40
Water vapour permeability	
ASTM D 1653	≤ 5 gm/m ² /24 hrs.
Salt spray,	
ASTM B-117-73, 6000 hrs	Passes
Impact resistance	
ASTM D 91	Passes
Tear strength	
ASTM D 1004	≥ 40 KN/m
Abrasion resistance	
weight loss	
ASTM D 4060	≤ 10 mg loss
Cathodic disbondment	
ASTM G-8 and G – 95	No disbondment
Tolerance Level to Surface	Upto 5%
Moisture	
Tolerance Level To Humidity	Upto 85%
Accelerated weathering	
ASTM G 154 (2000 hrs)	No effect
Temperature resistance	-5°C to +85°C

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Chemical resistance

Excellent resistance is observed against acids, alkalis and varied chemicals. Chemical spillages should always be wiped up as quickly as possible and not be allowed to concentrate up by evaporation. The data on the list of the chemicals found resistant to this product during our lab study is available on request.

Directions to use

Metals : Decontaminate the surface as per SSPC SP-1. Abrasive blast clean is done as per SSPC SP-10. Surface must be dry and dust free before priming. Apply primer ACPC 60 / Cipoxy 16D by airless spray @ 50-100 microns. Allow to cure for 3-4 hours. If the time is lapsed for more than 12 hours, abrade the primed surface to have mechanical key.

Concrete : Clean the concrete surface with grinder or abrasive blast cleaning as per site condition and fill the porosity or honeycomb area or any other concrete blemishes with epoxy putty made by mixing Cipoxy 16D with Talc / and FAG as per the desired consistency of epoxy putty at site. Surface must be free of condensation and moisture before priming. Apply prime coat of Cipoxy 16D by airless spray / brush / roller @ DFT of around 100-150 microns. DFT to be checked on volumetric consumption Allow to cure for max 5-6 hours. If the time is lapsed for more than 24 hours, abrade the primed surface to have mechanical key or apply another thin coat of primer Cipoxy 16D

Application method by spray equipment

Securea SC must be applied utilizing a high pressure plural component pump such as Graco Reactor equipped with a problem gun. The application equipment must be capable to have the capacity to continuously maintain high temperature and high pressure. Low pressures or temperatures can result in poor mixing of Securea and subsequent failure of the coating films. During spray application, the spray pressures between resin and hardener components should be balanced. If there is difference, an off ratio situation may occur,

resulting in blisters, pinholes and soft or brittle films.

Processing parameters :

Material temperature : +70°C to +80°C

Hose temperature : +70°C to +80°C

Volume ratio : 1 : 1

Pressure : 120 - 150 bars

Packaging : Securea SC is packed in 200 litre MS barrels and has a shelf life of 12 months in the unopened containers.

Storage and handling : The product should be stored in accordance with national regulations. It should be kept in a cool, well ventilated area, away from heat, direct sunlight, sparks and children. Handle with care. Mix resin and hardener as per the recommended ratio.

Health and safety precautions : Please refer to MSDS. Observe reasonable care and employ ordinary hygienic principles such as washing the hands with soap and water before eating or smoking. It is recommended to wear gloves, goggles and nose masks while application. In case of splashes on the skin, dampen the cloth with thinner PUT 503 and wipe the hands with the cloth. Wash then with soap and water. Dried film is non toxic. In case of contact with eyes, rinse with plenty of water and seek medical advice. In case of continuous exposure to vapours, the applicator should be immediately moved to get fresh air. The disposal of excess or waste material should be carried out in accordance with the local legislations.

Disclaimer : All information contained in this data sheet is given to the best of our knowledge but no warranty is made with respect thereto. This data sheet becomes invalid as soon as a new edition has been published. Please contact us for latest edition. Description and advice regarding Cipy's products are based on long term field and laboratory tests carried out by us. No condition of warranty is given covering the results from the use of materials in the circumstances of any particular application, because the storage, handling and application of the materials are beyond our control.

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