

# DENSO ST EPOXY

## Surface Tolerant Liquid Epoxy Glass Flake Coating

### Description

Denso ST Epoxy is a two-part, high solids, fast drying, glass flake epoxy coating for application directly onto steel, galvanised steel or concrete. Its good penetration and adhesive properties ensure excellent protection in long term exterior exposure.

### Uses

Used wherever steel grit blasting is not possible. Denso ST Epoxy can be used alone or in combination with Denso Weatherseal Topcoat Acrylic or Denso Weathershield 65 for long term exposure to water in applications such as: structural steel, pipe externals, pipe racks, tanks, offshore platforms, locks, gates, and bridges. Provides long term corrosion protection and weathering resistance as per Denso Steelcoat 400 & 700 Systems.

### Features

- Minimal surface preparation (SSPC-SP2/3)
- Long term exterior protection.
- Excellent water/sea water resistance
- Good resistance to acids and alkalis
- Good flexibility, hardness and adhesion to steel and concrete
- Good impact resistance
- Low VOC's
- ST Epoxy (Grey): AS/NZS 4020:2005 approved for contact with drinking water up to exposed volume ratio of 15,000 mm<sup>2</sup>/L at 20°C ± 2°C.

### Application

Prepare surfaces by removing all loose scale, rust or other foreign matter in accordance to SSPC-SP2 "Hand Tool Cleaning" or SP3 "Power Tool Cleaning". High pressure water wash of 3,000 - 7,000 psi (20.68 - 48.26 MPa) is also suitable. This can be achieved using power brushing or machine grinding. If the surface is severely corroded, chipping hammers and needle guns will be required. The surface should finally be cleaned with a vacuum cleaner, clean dry with compressed air or a clean brush. The steel should then have a faint metallic sheen. Abrasive blasting is recommended for severe environments.

Concrete preparation: remove laitance and other surface contaminants.

Use as supplied in pre-weighed packs Part A (base component) with Part B (hardener). Pour all of Part B into Part A and thoroughly mix with a power whip for at least 2 minutes. Allow to stand for 10 minutes prior to use.

The substrate temperature must be a minimum 10°C and 3°C above the dew point temperature before proceeding with the coating operation. The first coat can then be applied by brush, roller or airless spray to a wet film thickness of 300 ± 100 microns (255 ± 85 microns DFT). Check the film thickness of the coating regularly with a wet film gauge during application. Minimum wait time for overcoating is 4 hours at 23°C.

Spraying is carried out using a 17 to 21 thousands of an inch tip (0.43 mm - 0.53 mm) to achieve nominal DFT of 255 micron. Thin with no more than 5% Epoxy Thinner (usually not required). Recoating should occur prior to full cure of preceding coat. If full cure has been reached, abrade the coating surface prior to recoating. Apply the second coat at 255 micron dry film thickness in the same manner as the first. When dry, a final weather resistant top coat such as a Denso Weatherseal Topcoat Acrylic or Denso Weathershield 65 can be applied by brush, roller or spray.



# Denso ST Epoxy

## TECHNICAL DATA

PROPERTIES	VALUE
Pot Life @ 25°C	1 hour
Touch Dry / Re-coat	
@ 10°C	8 h
@ 23°C	4 h
@ 35°C	2.5 h
Full Cure	
@ 10°C	14 days
@ 23°C	7 days
@ 35°C	3 days
Theoretical Wet Film Thickness (typical)	300 micron per coat
Theoretical Coverage	3.75 ± 1.25 m <sup>2</sup> /L
Solids by Weight (ISO 1515)	82 ± 2 %
Mixing Ratio by Volume	4 Parts Base:1 Part Hardener
Specific Gravity @ 25°C (ASTM D1475)	
Base	1.74
Activator	0.96
Mixed	1.58
Application Temperature	10°C to 50°C. Note: If temperature falls below 10°C, surface must be preheated.
Service Temperature	-34°C to 80°C (Continuous Service) 85°C (Peak)
Dry Film Thickness	
First coat Denso ST Epoxy	255 micron
Second coat Denso ST Epoxy	255 micron
Final coat Denso Weatherseal or Weathershield 65 Topcoat	50 - 125 micron
Adhesion to Steel (ASTM D4541)	12.4 MPa
Hot Salt Fog @ 35°C % 100% RH (ASTM B117)	1500 hours
Humidity Test @ 40°C w/100% (ASTM D1735)	1500 hours
Holiday Detection (Quality Control)	≤ 2 kV
Colour	Black, White, Grey

**STORAGE:** Store the containers in a cool, dry, well ventilated area away from heat and direct sunlight. The containers should be kept tightly sealed. Shelf life: 12 months, when stored between 5°C to 35°C.

**CLEANING:** Clean equipment with MEK, acetone, xylene or equivalent solvent cleaner.

**HEALTH AND SAFETY:** Spray or brush under well ventilated conditions. Wear suitable protective clothing and glasses. See safety data sheets for further information.

**PACKAGING:** 4 L & 20 L kits.



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