ACRATON® HD-500

epoxy

The two components Acraton HD-500 is a 100% solids, cycloaliphatic glass flake epoxy coating, formulated with a unique moisture insensitive polymer.

- The product provides a very low permeability
- with excellent impact, chemical
- and abrasion resistance.
- Acraton HD-500 may be applied on wet surfaces, or underwater without effect on cure.
- A special resin modification produces a low modulus, flexible film, making
- Acraton HD-500 ideal for painting over existing sound paint without “lifting”.
- In general, a universal high performance air cured chemical coating. Recommended for steel and concrete surfaces.

Product information

Finish	Gloss (approx. 80 GU)
Colour	Grey
Mass density	approx. 1.57 kg/L (mixed product)
Solids content by volume	approx. 100 volume % (mixed product)
VOC	0 gr./L (volatile organic compound)
Recommended film thickness	100-200 µm d.f.t. per layer High film build – 500 µm d.f.t. per coat on horizontal surfaces
Theoretical spreading rate	At 100 µm d.f.t. 10.0 m²/L At 250 µm d.f.t. 4.0 m²/L
Practical spreading rate	Depending on several factors like shape of object, profile of surface, method of application, application circumstances and experience. A few guiding principles are: Brush/roller 85-90% of the theoretical spreading rate Spraying50-70% of the theoretical spreading rate
Flashpoint ISO 1523	Base > 61 °C Hardener 2V31 > 61 °C Thinner HH 55 -7 °C
Dry temperature resistance	80 °C
Durability	At least 12 months, provided that it has been stored in closed original packaging a dry and cool spot.

Specific qualities

- Excellent barrier properties, quantified by standard TNO IV 34 Electrochemical Impedance Spectroscopy (EIS) test method with results Rc = 1,1 * 108 Ω/cm2 de Y0 = 5,4 * 10-11sn/Ω, de n = 0,97 and fraction of water absorbed over the first 24 hours ϕt = 0,05
- Excellent adhesion on marginally prepared surface, may be applied on wet or under water surfaces.
- 100% solids
- Excellent impact and abrasion resistance.

Chemical resistance / Splash and short term immersion

Sulphuric acid,	60%	Fresh & Salt water
Hydrochloric acid,	32%	Distilled water
Acetic acid,	5%	Gasoline
Ammonium hydroxide,	10%	Jet fuel
Sodium hydroxide,	50%	Crude oil
Sodium Hypochlorite,	5%	Black liquor
Hydrogen peroxide,	5%	Lactic acid
Aqueous salt solutions		Xylene

Drying times

For d.f.t. up to 500 µm	30°C	20°C	10°C
Dust dry	1 - 2 hour	3 - 4 hours	8 - 12 hours
Transportable	5 hours	10 hours	16 hours
Complete hardening	2 days	4 days	10 days
Recoatable:			
Minimum interval	4 - 6 hours	6 - 8 hours	36-48 hours
Maximum interval	3 days	7 days	10 days

Film thickness, ventilation, temperature and relative humidity are of great influence on the drying times.

Application instructions

Mixing ratio	Volume: base – hardener 2V31 3 : 1
Mixing instructions	Base and hardener should be mixed and applied at temperatures above 10°C. At lower temperatures extra thinner is required, which gives a slighter resistance against sagging and which will delay hardening. The components should be mixed homogeneously, with a mechanical blender.
Induction time	Not necessary
Pot life after mixing	15,2 litre packaging: approx. 20 minutes at 20°C
Application conditions	During application and curing the temperature should be above 7°C. During application and hardening in closed and small spaces it is necessary to refresh the air continually to remove the solvent vapours, this because of curing, health and safety.

Usage information

	Airless-spray	Brush/roller
Type of thinner	HH 55	HH 55
Recommended thinner *(depending on application and equipment)*	0 – 20 vol. %	0 – 5 vol. %
Nozzle orifice	0.48 – 0.63 mm 0.019 – 0.025 inch	
Nozzle pressure	170 – 200 bar	
Typical d.f.t.	500 µm	150 µm
Cleaning of tools	Thinner FGM 631	

Surface conditions

Steel New steel:	Blast according to ISO standard 8501-1:1988 Sa 2½. Roughness profile Ra 10-12 µm Rz 50-60 µm. Surface should be clean and dry.
Repair and maintenance:	Clean the surface thoroughly with a suitable cleaning preparation or by steam cleaning. Remove salts and other water-soluble impurity by spraying with clean tap-water under high pressure. Remove rust a.o. by (water) blasting Sa 2½ or derust mechanical until St. 2-3. Apply the recommended paint system on a clean surface. Mechanical or hand de rusting gives less quality than (water) blasting and will result in less protection of the applied paint system.
Hot-dip Galvanised steel	Blast with a fine, non-metallic blasting preparation until a smooth roughened surface is obtained, or degrease the surface followed by phosphatising or chromatizing it (according to the instruction of the manufacturer).

ACRATON® HD-500 epoxy

Product Characteristics

No coating work shall be carried out when the temperature of the surface is less than 3°C above dew point and when the substrate temperature is below 5°C.

When using thinner by applying this product in confined spaces, adequate ventilation has to be ensured.

At low temperature and under humid conditions, amine blushing can occur, which can effect the intercoat adhesion negatively. Prior to the application of the next layer, the previous layer must be checked for these phenomena.

This coating product is based on epoxy technology. It is recommendable that it should be overcoated with a durable finish.

Maximum film build in one coat is best attained by airless spray. Application by other techniques, it may be necessary to apply multiple coats in order to achieve the total specified dry film thickness.

Safety description

See safety data sheet

Ventilation rules

Minimum required quantity of air to comply with:		
	MAC	10 % LEL
Acraton HD-500	0 m³/L	0 m³/L
Thinner HH 55	1355 m³/L	138 m³/L

MAC = Maximum Accepted Concentration
LEL = Lower Explosion Limit
Also consult the safety information sheets

Pretreatment / Labeling / Technical Terms (downloadable from www.zandleven.com)

A 1 Labeling of paint products in the European Community
A 2 Physical data
A 3 Persistency list for Monopox HB systems
A 4 General guidelines for steel preservation
A 5 General guidelines for the application of Acraton plastics
A 6 Pretreatment of construction steel