POLYFINISH® MC-Zinc HS polyurethane

A single pack, moisture cured high solid polyurethane zinc rich primer.

- After curing, an excellent corrosion and abrasion resistant coating will be obtained.
- Can be recoated with Polyfinish MC-MIOX and various other epoxies and PU products.
- Curing at a relative humidity between 50 - 98 % and temperatures down to -5°C.

Application as anti-rust primer for steel structures under industrial, maritime and nuclear conditions.

- Suitable for application in C3 - C5 environment according ISO 12944.
- Complies with Cyclic Corrosion Test (Norsok and ISO 20340) in combination with Polyfinish MC-MIOX.
- The product complies to SSPC Paint 20, Level 1 with respect to zinc content.

Product information at 20 °C

Finish	Mat
Colour	Redgrey
Mass density	approx. 3.4 kg/L
Zinc	88% (w/w) in dry film
Solids content by volume	approx. 75 volume % (ISO 3251)
VOC	approx. 220 gr./L (volatile organic compound)
Recommended film thickness	60 - 120 µm d.f.t. per layer
Theoretical spreading rate	At 80 µm d.f.t. 9.4 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; Spraying 50-70% of the theoretical spreading rate
Flashpoint ISO 1523	Paint 44°C; Thinner BB 55 27°C
Dry temperature resistance	120°C
Shelf life	Approx. 6 months in unopened can. After opening the can, the coating should be used within two days, because moisture absorption can also continue in a closed can.

Drying/curing properties at substrate temperature and 70% R.H:

For d.f.t. up to 80 µm	20°C	10°C	5°C
Dust dry	20 minutes	30 minutes	1 hour
Transportable	2 hours	3 hours	4 hours
Completely through hardened	5 days	7 days	10 days
Recoatable:			
Minimum interval	2 hours	4 hours	8 hours
Maximum interval *	24 hours	36 hours	48 hours

*) This period can be extended by cleaning and sandig the coating prior to application of the next layer
Because zinc-dust coatings can develop zinc-salts on the surface, we recommend to recoat as soon as possible. Before recoating, remove possible pollution and zinc-salts.

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

Application instructions

Potlife after mixing	10 litre packaging:	approx. 3 hours at 10°C approx. 2 hours at 20°C approx. 1 hours at 30°C
Optimal application circumstances		During application and curing the temperature should be above -5°C, and the relative humidity between 50-98% 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	Airspray	Brush/roller
Type of thinner	Thinner BB 55	Thinner BB 55	Thinner BB 55
Recommended thinner (depending on application and equipment)	0-5 vol. %	0-10 vol. %	0-5 vol. %
Nozzle orifice	0,33 – 0,43 mm 0,013 – 0,017 inch	1,5 – 2,0 mm	
Nozzle pressure	150 – 200 bar	3 – 5 bar	
Typical d.f.t.	80 µm	70 µm	60 µm
Cleaning of equipment	Thinner BB 55		

Surface conditions

Obtaining the highest possible quality of the applied product it is very important that the substrate is prepared carefully and correctly. The required surface roughness and a dry and clean substrate are the main parameters. Prior to application of the coating, the substrate must be examined according to the ISO standard 8504:2000.

All soluble salts, oil, grease, dirt and other contaminates must be removed.

Steel

Initial steel:
Abrasive blasting (sharp edged) acc. ISO standard 8501-1: 2007 Sa 2½
Roughness profile Ra 10-12 µm Rz 50-60 µm.
Surface must be clean and dry.

Repair and maintenance:
Clean the surface carefully with a suitable solvent containing cleaning preparation, or a water-soluble emulsifier to remove oil, grease and dirt.
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 mechanically until St. 2-3.

Touch up on a clean and dry surface with a 'surface tolerant' coating like Polyfinish MC-ST.

Mechanical or hand derusting gives less quality than (water)blasting and will result in lower durability of the applied paint system.

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Product Characteristics

Due to the presence of solvents, applying this product in confined spaces, adequate ventilation has to be ensured.

Higher film thickness, insufficient ventilation, lower temperatures or humidity will require longer cure times and can result in solvent entrapment and premature failure.

A completely clean surface is mandatory to ensure intercoat adhesion, especially after long recoating intervals. Any dirt, oil and grease has to be removed, e.g. with suitable detergent. Salt to be removed by fresh water hosing.

Safety description

See safety data sheet

Ventilation rules

Minimum required quantity of air to comply with:		
	MAC	10 % LEL
Polyfinish MC-Zinc HS	450 m³/L	42 m³/L
Thinner BB 55	3935 m³/L	165 m³/L

MAC = Maximum Acceptable Concentration
LEL = Lower Explosion Limit
Also consult the security 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 4 General guidelines for steelpreservation
A 6 Pretreatment of construction steel
- material safety data sheet
- information hardeners and thinners
- sales & delivery condition