zandleven coatings

POLYFINISH® H2O 90 polyurethane

A two components, waterborne, high durable polyurethane coating with good weather resistance and colour lightfastness

- High gloss.
- After curing excellent mechanical resistance and elasticity.
- Waterborne
- Resistant to water and short contact with organic and inorganic acids and alkalis.

Application as chemical resistant, impact resistant coating for with polyurethane- or epoxy primer pre-treated steel, galvanised steel and aluminium.
- As finishing paint for which high aesthetic properties have been asked in the chemical industry, on offshore platforms, containers etc.

Product information

Finish	Highgloss (90 GU, depending on colour)
Colour	RAL colours (except Ral 9006 and Ral 9007)
Mass density	approx. 1.3 kg/L (mixed product, depending on colour)
Solids content by volume	approx. 47 volume % (mixed product, depending on colour)
VOC	approx. 68 gr./L (volatile organic compound)
Recommended film thickness	40 µm d.f.t. per layer 80 µm w.f.t. per layer (undiluted) When applying layers above 150 µm w.f.t. there is a risk of blistering.
Theoretical spreading rate	At 40 µm d.f.t. 11.8 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	Base n.a. Hardener 2V63 91.5°C
Dry temperature resistance	120°C, above 60°C there is a risk of yellowing.
Durability	At least 6 months, provided that it has been stored in closed original packing at a dry and cool spot.

Drying times

For d.f.t. up to 50 µm	30°C	20°C	10°C	5°C
Dust dry	½ hour	1 hour	1,5 hour	2 hours
Transportable	8 hours	16 hours	24 hours	30 hours
Complete hardening	2 days	4 days	7 days	10 days
Recoatable:				
Minimum interval	6 hours	10 hours	16 hours	24 hours
Maximum interval	7 days	14 days	14 days	1 month

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

Application instructions

Mixing ratio	Volume:	Base – hardener 2V63	83.4 : 16.6 (5:1)
	Weight:	Base – hardener 2V63	85 : 15

Mixing instructions

Base and hardener should be mixed and applied at temperatures above 10°C. At lower temperatures extra thinner is needed, which gives a slighter resistance against sagging and which will delay hardening.
The components should be mixed homogeneously, with a mechanical blender. Pay attention to the side and bottom of the can.

Induction time

At 20°C not necessary
At 10°C at least 10 minutes

Pot life after mixing

10 litre packing:	approx.	3 hours at 10°C
	approx.	2 hours at 20°C
	approx.	1 hours at 30°C

Application conditions

During application and curing the temperature should be above 5°C, to obtain maximum resistance against chemical and mechanical influences.

The surface should remain dry and the temperature of the surface should be at least 3°C above dew point.

During application and hardening in closed and small areas it is necessary to refresh the air continually to remove the solvent vapours, this because of curing, health and safety.

Usage information

	Brush/roller	Airspray	Airless/Airmix-spray
Type of thinner	Water	Water	Water
Recommended thinner (depending on application and equipment)	0 – 5 vol. %	5 – 15 vol. %	DIN-Cup4 45-55” Airless of Airmix application is less suitable because the optimal gloss will not be obtained.
Nozzle orifice		1.5 – 2.0 mm	
Nozzle pressure		2 – 3 bar	
Maximum attainable d.f.t.	50 µm	50 µm	40 µm
Cleaning of tools	water		

Surface conditions

Steel

New steel:
As primer Acraton HS-U, Monopox Metalcoat ZL 70, Monopox Metalcoat ZL 80, Monopox SF-HB, Monopox ZF-Universal or Acraton HS Premium can be applied.

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 derusting gives less quality than (water)blasting and will result in less protection of the applied paint system.

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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.

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

Condensation occurring during or immediately after application may result in a matt and an inferior film.

Colours/Colour stability:
Certain lead-free red and yellow colours may discolour when exposed to chlorine-containing atmosphere.
To obtain full opacity, an extra coat may be necessary, especially for certain lead-free colours in red,orange, yellow and green. Slight discolouration may occur at service temperatures above 60°C.

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.

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

First apply a tack layer, then let it evaporate for approx. 20 minutes to apply a flowing layer.

A completely clean surface is mandatory to ensure intercoat adhesion, especially at 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 H2O 90	120 m³/L	6 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 4 General guidelines for steelpreservation
A 6 Pretreatment of construction steel