



MACROPOXY® 950 F

HEAVY DUTY COATING FOR STEEL AND CONCRETE

Revised 07/2023 Issue 1

PRODUCT DESCRIPTION

A resistant two-pack epoxy coating with low solvent content and with mineral fillers.
Low solvent content according to Protective Coatings Directive of German Paint Industry Association (VdL-RL 04).
After complete curing Macropoxy® 950 F is:

- Tough, hard and heavy duty
- Resistance to abrasion and impact
- Excellent resistance to water and chemicals

RECOMMENDED USE

Can be used as a protective coating for concrete and steel. Suitable for buried and submerged structures for hydraulic engineering constructions and as internal coating for tanks and reservoirs, e.g. sewage treatment, agricultural and chemical industries etc.
Also suitable where application onto damp concrete is inevitable.
Macropoxy® 950 F can be exposed to water immediately after application. But take into consideration that solvents get into the water which leads to temporary contamination.
Immediate exposure to water should therefore only be considered in special cases and after consulting the authorities for the protection of environment. Not suitable for surfaces in contact with drinking water.

PRODUCT TECHNICAL DATA

Volume Solids: 75 ± 2% (ISO 3233-3)

Weight Solids: 88 ± 2%

VOC: 228 g/l determined practically in accordance with Protective Coatings Directive of German Paint Industry Association (VdL-RL 04).
184 g/l calculated from formulation to satisfy EC Solvent Emissions Directive.
97 g/kg calculated from formulation to satisfy EC Solvent Emissions Directive (UK).

Colours: Black, tinted red

Flash Point: Base: 38°C, Hardener: 85°C.

Cleaner/Thinner: Cleaner 26 (for cleaning).
Thinner S for thinning with max. 5% to adapt the viscosity, only thin material where stated.
In this case an immediate exposure to water is not possible.
Thinning will affect VOC compliance, sag tolerance and dry film thicknesses.

Pack Size: A two component material supplied in separate containers to be mixed prior to use:
35 kg (18.4 litre) and 15 kg (7.9 litre) units when mixed.
Volume will vary with colours and density.

Mixing Ratio: 93 parts base to 7 parts hardener by weight.
100 parts base to 14 parts hardener by volume.

Density: 1.9 kg/l (may vary with colours).

Shelf Life: 2 years from date of manufacture, stored in originally sealed containers in a cool and dry environment.

Recommended Application Methods:
Airless Spray, Brush and Roller

Typical Thickness:

	Recommended Spreading Rate Per Coat	
	Typical	Maximum Sag
Dry	150 µm	500 µm
Wet	200 µm	600 µm
Theoretical Consumption*	0.380 kg/m ² 0.200 l/m ²	
Theoretical Coverage*	2.63 m ² /kg 5.00 m ² /l	

* This figure makes no allowance for surface profile, uneven application, overspray or losses in containers and equipment.

Film thickness will vary depending on actual use and specification.

Pot Life:

+ 20°C	+ 30°C
90 min	45 min

Pot life is dependent on temperature and volume.



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AVERAGE DRYING TIMES

For 150 µm Dry Film Thickness:

	+ 20°C
Dry to touch	4 hours
Dry to handle	12 hours

To Recoat time between operations up to max. 150 µm dry film thickness:

	At + 10°C	At + 15°C	At + 20°C	At + 25°C	At + 30°C
Min.	30 hours	24 hours	12 hours	8 hours	6 hours
Max.	72 hours	60 hours	48 hours	36 hours	24 hours

Recoat time between Zinc Clad[®] R and Macropoxy[®] 950 F: 24 h at + 20°C.

Prior to further applications all contamination must be removed. In the case of extended recoating times the surface must be sweep-blasted. Final cure: Full mechanical and chemical resistance after 7 days at + 20°C.

Curing also takes place at lower temperatures – below + 10°C – but it takes longer.

These figures are given as a guide only. Factors such as air movement, film thickness and humidity must also be considered.

APPROVALS & ENDORSEMENTS

Epoxy coating for concrete protection according to EN 1504-2, DoP, with CE-mark.

SURFACE PREPARATION

Concrete

Solid and gripping, free of cement laitance, dust, loose and friable particles and other contamination. Concrete moisture content max. 6%. Sweep blasting increases adhesion. This is particularly important in case of underwater exposure.

Steel

Ensure surfaces to be coated are clean, dry and free from all surface contamination such as oil, grease, dirt and corrosion products to achieve satisfactory adhesion.

Steel surfaces shall be blast-cleaned to Sa 2½ according to ISO 8501-1 (ISO 12944-4).

Average surface profile Rz ≥ 50 µm.

MIXING

Stir component A very thoroughly using a mechanical paint mixer (start slowly, then increase up to approx. 300 rpm). Add component B carefully and mix both components very thoroughly (including sides and bottom of the container). Mix for at least 3 minutes until a homogeneous mixture is achieved. We recommend to fill the mixed material into a clean container and mix again shortly as described above to avoid incorrect mixing. During mixing and handling of the materials always wear protective goggles, suitable gloves and other protective clothing.

APPLICATION CONDITIONS

Substrate temperature shall be above + 10°C and at least 3°C above the dew point.

Material temperature shall be above + 10°C.

Relative air humidity shall be below 85%.

Under unfavourable conditions, e.g. influence of high air humidity into the fresh coating, surface damages and possibly little alligating may occur. However, this will not affect the quality.

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for satisfactory application characteristics. Always purge spray equipment before use with listed cleaner. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Airless Spray

Unit: Efficient airless equipment

Tip Size: 0.38 – 0.58 mm (0.015 – 0.023 inch)

Fan Angle: 40° - 60°

Operating Pressure: min. 180 bar (2600 psi)

Spray hoses: Ø ¾ inch (10 mm)

Temperature of material and equipment at least + 15°C. Remove sieves.

The airless spray details given above are intended as a guide only.

Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent satisfactory atomisation.

As conditions will vary from job to job, it is the applicators responsibility to ensure that the equipment in use has been set up to give the best results.

If in doubt consult Sherwin-Williams customer service.

Brush and Roller

The coating is suitable for brush and roller application.



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RECOMMENDED SYSTEMS

Concrete

2 - 3 x Macropoxy® 950 F
1st coat to be thinned with max. 5% by weight Thinner S, 2nd coat as supplied.

Steel

2 - 3 x Macropoxy® 950 F
Preferably alternating colour shades.
In case of heavy mechanical exposure priming with Zinc Clad® R is recommended.

ADDITIONAL NOTES

Drying times, curing times and pot life should be considered as a guide only.

Epoxy Coatings - Tropical Use

Epoxy coatings at the time of mixing should not exceed a temperature of 35°C. Use of these products outside of the pot life may result in inferior adhesion properties even if the materials appear fit for application. Thinning the mixed product will not alleviate this problem. If the air and substrate temperatures exceed 40°C and epoxy coatings are applied under these conditions, paint film defects such as dry spray, bubbling and pinholing etc. can occur within the coating.

Chemical resistance:

Resistant to freshwater, process water, brackish water, seawater, domestic sewage, faeces, diluted inorganic acids and alkalis, neutral salts, mineral and fuel oils, grease, detergents etc.
Industrial wastewater upon request, based on wastewater analysis.
Not resistant to exposure to benzene-hydrocarbons and tar oil.

Temperature resistance:

Dry heat up to approx. + 100°C
Warm water up to approx. + 60°C
Not resistant to warm water at significant differential of temperature gradient.
In case of higher temperatures consult Sherwin-Williams customer service.

Numerical values quoted for physical data may vary slightly from batch to batch.

HEALTH & SAFETY

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.

WARRANTY

Whilst all statements made about our products (whether in this data sheet or otherwise) are correct and accurate to the best of our knowledge, we have no control over the quality or the condition of the substrate, the application conditions or the many other factors affecting your use and application of our product.

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