

Product reference: 5/36

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Product title: Plasmet AR3

Valid from: 2nd March 2007

Last reviewed: January 2022

Type

A two-pack solvent free cured epoxy, resistant to sulphuric acid at up to 98% concentration and other acids.

Suggested use

Primarily produced for coping with strong concentrations of sulphuric acid, this product can also be used for other acids and in some strong alkali service duties. Applications include bund areas, tanks, pipe work, floors, decking, structural steel etc.

Health & safety

Before handling or using this product, the material safety data sheet should be read and all precautions observed.

Surface preparation

Metallic Substrates: The surface should be grit blasted to ISO 8501-1 Sa 2½ or equivalent and blast residues removed in accordance with normal surface preparation procedures. Plasmet AR3 should be applied on top of the prepared substrate in two or more layers. Over-coating times should be strictly adhered to except on the advice of Corrocoat

Technical staff. It is essential that AR3 should be applied with stripe coating between each main coat to all welds edges and corners.

Concrete Substrates: Prepare the concrete as per data sheet SP5. Plasmet ECP should then be applied directly onto the concrete working the material into the profile to improve adhesion.

Application equipment

Brush, roller or airless spray. Airless spray using a 63:1 Graco or equivalent, tip size 17-19 thou. Except in warm weather it is recommended that a circulation system be used to warm

product and assist atomisation during spraying. (See also data sheet 8/22).

Application

Plasmet AR3 is designed for application at a wet film thickness of between 500 and 800 microns per coat. Dependent upon environment and service conditions, total dry film thicknesses will be in the order of 1000 to 1500 microns. Surface temperature must be at least 3°C above the dew point and RH below 85%.

Mixing ratio

Base 10 : 1 Activator.
Weight for weight.

Mixing

Remove the lids from the base and the activator. Pour all the activator into the base and mix thoroughly. Ensure that no unmixed activator remains. It is essential that a power mixer is used to mix the base and activator.

Pot life

50 minutes at 20°C and 30 minutes at 30°C.
(Values will vary subject to quantity and environmental conditions).

Maximum Service Temperature Limits

Immersed: 60°C
Non-immersed (Structural steel/Vapours): 100°C

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Overcoating time

No minimum value. Product may be re-applied as soon as the previous coat of AR3 has gelled sufficiently to support the weight of the next coat and logistics allow. Maximum value 16 hours at 20°C. Exponentially shorter at higher temperatures.

Dry / Cure time

Tack-free time 5 hours at 20°C.

Time to full cure 7 days.

Both values will vary dependent upon to temperature. For optimum performance this product should be post cured prior to service.

Thinners

DO NOT USE SOLVENTS OR THINNERS WITH THIS PRODUCT. The use of solvents or thinners will dramatically reduce the performance in concentrated acids.

Storage life

2 years minimum in unopened tins, stored at 5°C-40°C.

Colour availability

Unpigmented and red iron oxide colour.

(It is normal for the coating to be discoloured red in service with high concentration sulphuric acid. There can also be discolouration of the cargo where the contact time is high, this will diminish with time and usage. Discolouration will normally occur within a few days, but this does not affect the corrosion protection offered by the coating.)

Volume solids

100% Polymerizable solvent free. Dry film thickness will vary from wet film thickness dependent upon cure conditions, which affects ultimate density. It is advisable when calculating consumption figures to allow a minimum of 10% extra for this.

Theoretical spreading rate

3.3m² per litre at 300 microns dft. Practical coverage values vary dependent upon environmental and application conditions, surface profile, geometry of work and operator technique. An appropriate loss factor must be taken into account. Corrocoat accept no liability for any differences in calculated values or spreading rates obtained.

Specific gravity

Mixed: 1.05 gcm⁻³

Cleaning solvent

Xylene, Toluene, Corrocoat epoxy equipment cleaner.

Revised 03/2007
Reviewed 02/2014 (No changes)
Reviewed 05/2016 (No changes)
Revised 05/2018
Revised 07/2019
Revised 09/2019
Revised 01/2022

All values are approximate. Physical data is based on the product being in good condition before polymerisation, correctly catalysed and full cure being attained. Unless otherwise stated, physical data is based on a test temperature of 20°C, test results may vary with temperature. Information regarding application of the product is available in the Corrocoat manual. Should further information be required, please consult Corrocoat Technical Services.