

ECCOSORB[®] COATING 300

TWO PART POLYURETHANE COATING

Description:

Eccosorb Coating 300 is a two-part polyurethane thixotropic lossy absorber coating that is heavily loaded with iron filler. It is a thixotropic coating that can be brushed or sprayed using common spray equipment. Typical frequency range of 1 GHz and above.

Application:

Eccosorb Coating 300 is designed for use on compound surfaces where flat sheet elastomers or foam absorbers are not desirable. It can reduce the radar cross section of objects, reduce false echo or ghost images on a ship's radar, and attenuate surface currents that are generated by radiation impinging on metal surfaces. To operate as a specular absorber such that resonant absorption at a particular frequency is obtained, it is necessary for the Eccosorb Coating 300 to be bonded to a metal surface. The overall thickness of the coating is critical to perform as a specular absorber and is attained through applying several layers until the desired performance is achieved.

Physical Properties:

Colour	Dark grey
Density (g/cm ³)	4.6
Surface weight of 0,7 mm thick coating (kg/m ²)	3.22
Mix ratio paint :catalyst	100:1
Recommended thickness of each coating (µm)	100 - 150
Pot life	2h
Maximum service temperature (°C)	150

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Electromagnetic Properties:

Frequency GHz	3	8.6
Dielectric Constant	22.8	4.6
Dielectric Loss Tangent	0	0
Magnetic Permeability	3.79	1.09
Magnetic Loss Tangent	0.69	1.98
Attenuation (dB/cm)	20	63
Impedance magnitude (Z/Z_0)	0.4	0.4

Availability:

Eccosorb Coating 300 is available in kits of 2 kg containers for Part A (coating) and 25 g for Part B (catalyst). Diluent for Coating 300 in 450gr package is available if thinning is required.

Instructions for use:

The system has to be applied in dry conditions.

Make sure that the surface to be coated is clean and free of oil and dusts.

The temperature should be higher than 15°C during application and curing.

Thoroughly mix the paint until homogeneous.

Add the catalyst in the correct weight ratio, see typical Properties Table.

Pot Life is 2 hours.

It is recommended to build up the total thickness of the coating in steps of 100 - 150 µm with flash times of one hour between steps. The total layer should be cured for 24 hours minimum at room temperature. For layers thicker than 500 µm, the curing steps should be 24 hours after each 500 µm layer.

For slightly accelerated curing of the final thickness, 2 hours at 80 °C is recommended.

Flash point between layer applications must be maintained to ensure that the solvent has evaporated. For thinning, Coating 300 diluent is recommended. Extended flash points are required to evaporate solvent.

Thickness Note: Eccosorb Coating 300 is applied in thin layers until the correct thickness is obtained.

Correct thickness is determined on a case by case situation depending on application and frequency of operation.



Safety Considerations: It is recommended to consult the EMERSON & CUMING MICROWAVE PRODUCTS product literature, including material safety data sheets, prior to use EMERSON & CUMING MICROWAVE PRODUCTS products. These may be obtained from your local sales office.

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