

MAPSIL 213

Low outgassing encapsulating resin

Technical data sheet: RE 213
 Creation: January 1988
 Revision: 11
 Date: 07/05/2008
 Page 1/1



Licence n°89/CNES/6303

Coating characteristics

Polymer matrix	Two component purified silicone elastomer
Density	About 1.00
Solids content	100 %
V.O.C.	< 1 g / L
Thermal conductivity	$\lambda \cong 0.15 \text{ W/m.K}$
Outgassing	in compliance with ESA standard : ECSS-Q-70-02A
Electrical surface resistance	$R_s > 10^{12} \Omega$
Electrical volume resistance	$R_v > 10^{14} \Omega/\text{cm}^3$
Temperature range	From -100°C to +200°C
Surface preparation	Perfect cleaning (contact us). Any sticking on the resin being absolutely prohibited, the sticking areas must be masked beforehand.
Base/hardener weight ratio	100 / 10
Pot life	4 h @ 20°C without activator 2 h @ 20°C with activator
Applying conditions	<ul style="list-style-type: none"> • Pouring (encapsulating): De-air the mixture under vacuum (20mm Hg) @ room temperature. Pour the product into the mould in stages, while de-airing, or pour the whole product under vacuum (50mm Hg). The mould must be maintained under pressure @ 20mm Hg during the whole operation. • Brushing (300 to 500 µm coats): Add 1 to 2 doses of activator
Curing	<ul style="list-style-type: none"> • Encapsulating: 48 h @ 25°C or 12 h @ 65°C • Thin coats: <ul style="list-style-type: none"> - with activator: 24 h @ 25°C or 4 h @ 25°C then 4 h curing @ 80°C ± 20°C - without activator: 4 h @ 25°C then 4 h curing @ 100°C

Definition

Low outgassing two component silicone resin used as an encapsulating, adhesive or varnishing compound.

Aspect: **Transparent**
 AFNOR NFT 36005 classification: Family I Class 10c.

Purpose: encapsulating resin for electronic components used in the space industry & vacuum technologies. Used as an adhesive for solar cells or as varnish for printed circuits.

In compliance with safety standards for manned flights (non-flammability and non-toxicity).

ESA Metallurgy report 2523 (novembre 1998)

Properties

Test carried out	Qualification report
Outgassing	CNES 89/CT/DRT/TVE/TH n° 074
Electrical properties	ESA SP 1173
Damp heat	ESA MR 2523
Thermal cycling	
Physical properties	

Application parameters

MAPSIL 213 is delivered in two components that must be mixed thoroughly before use.

MAPSIL 213 can be applied by pouring (encapsulating), with a spatula (adhesive) or with a brush (varnishing).

Good adhesion to glass. The application of PSX primer is prerequisite on composites and metallic alloys.

Packaging

125g (110g Base + 15g Hardener)
 250g (220g Base + 30g Hardener)
 550g (500g Base + 50g Hardener)
 Dose of activator = 3 g (for thin coat application)

Storage

Up to 6 months in original unopened packaging between 5°C & 25°C. Keep away from humidity, without altering the properties.

Safety data

Labelling ➤ This preparation was classified in compliance with the directives in effect.

Precautions & Transport ➤ Please refer to our latest safety datasheet.

*Non-contractual technical data: for your information only.
 For further information, please contact us.*

This information, based upon literature and our testing experience to date, is offered as part of our service to customers, and is intended for use by persons having technical skill, at their own discretion and risk for their own investigation and verification. We do not guarantee favourable results and we assume no liability in connection with its use. This information is not intended as a licence to operate under, or a recommendation to infringe, any patent covering any material or use.