

MAPSIL 213-B

Low outgassing encapsulating resin



Licence n° 89/CNES/6303
 Licence n° 99/CNES/0171

Coating characteristics

Polymer matrix	Two component purified silicone elastomer
Density	About 1
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	-100°C ↔ +200°C
Surface preparation	<p>perfect cleaning (please contact us).</p> <p>Any sticking on the resin being absolutely prohibited, the sticking areas must be masked before any paint application.</p>
Base/hardener weight ratio	100 / 10
Pot life	1 h @ 20°C
Applying conditions	<ul style="list-style-type: none"> Pouring (encapsulating): De-air the mixture first, under vacuum (20 mm Hg) @ room temperature. Pour the product into the mould in stages, while de-airing each time, or pour the whole product under vacuum (50 mm Hg). The mould must be maintained under pressure @ 20 mm Hg during the whole operation. Brushing (thin coats): 300 µm to 500 µm thickness
Curing	<ul style="list-style-type: none"> Encapsulating: 24h @ 25°C or 12h @ 65°C Thin coats: 24h @ 25°C or 4h @ 25°C then 4h curing @ 80°C ± 20°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

Developed from MAPSIL 213, MAPSIL 213-B holds a new type of catalyst allowing optical transparency while protecting components such as KOVAR from corrosion.

Test carried out	Qualification report
. Outgassing	CNES 89/CT/DRT/TVE/TH n° 074
. Electrical properties	CNES DT-96-090/DGA/T/AE/MTE/TH
. Damp heat	ESA SP 1173
. Thermal cycling	ESA MR 2523
. Physical properties	

Application parameters

Delivered in two components, including activator, which must be mixed thoroughly before use, MAPSIL 213-B can be applied by pouring (encapsulating), with a spatula (adhesive) or with a brush (varnish).

Good adhesion to glass. The application of PSX primer is prerequisite on other substrates (composites, metal alloys).

Packaging: 125g (110g Base + 15g Hardener)
 250g (220g Base + 30g Hardener)
 550g (500g Base + 50g Hardener)

Storage: Up to 6 months in original unopened packaging between 5°C and 25°C and 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.*

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