SCK5

Low outgassing white silicone antistatic paint

cnes
Licence n°92/CNES/6320

Coating characteristics 1/2

Polymer matrix	Silicone
Pigment	"doped" metallic oxides
Solvent	Aromatic
Density	1.60 ± 0.05
Solids content	57 % ± 2 %
V.O.C.	720g / L
Solar absorptance	$\alpha_{2\pi S}$ = 0.29 ± 0.02 (40 µm to 50 µm applied on Kapton)
IR emittance	$\varepsilon_{N,IR}$ = 0.89 ± 0.04
Outgassing	in compliance with ESA standard: ECSS-Q-70-02A
Electrical surface resistance	R_S = 1 to 1000 MΩ/□ (under vacuum)
Surface potential	0 volt @ 18°C
RF Transparency	< 0.1 dB (20 GHz)
Standard thickness	25 µm to 50 µm dry 1 to 2 crossed coats
Theoretical consumption	230 g/m² of product @ 40µm i.e. 3.7 g dry / m² per dry µm
Surface preparation	On kapton, Epoxy, golden or natural polyimide quartz, AU4G: cleaning with FORANE 141b or equivalent and then with acetone. (for further information, please contact us). **Any sticking on the paint being absolutely prohibited, the sticking areas must be masked before any paint application.**

CAUTION:
SCK5 paint must be used within 24h after manufacturing

Definition

Antistatic paint allowing the evacuation of charges while respecting RF transparency. Also, SCK5 paint provides high thermo-optical properties.

Aspect: mat white
AFNOR NFT 36005 classification: Family I Class 10c.

Purpose: Developed by CNES, SCK5 paint may find applications in the following fields: Space Industry, Vacuum Technologies....

References: satellites SKYNET 5, INMARSAT 4, STENTOR...

Properties

Test carried out	CNES qualification report
. Thermo-optical properties	DT-95-245/CT/AE/MTE/TH
. Electrical properties	
. Outgassing	RA/TE/AE/MT/TH/93-317
. Resistance to space environment	DCT/TV/TH/04-626 DCT/TV/TH/04-1252

Application parameters

The Application of PS + PSX primers is prerequisite
(please contact us).

Because of its short shelf life (24h) SCK5 paint can be applied within MAP premises only.

Thoroughly mix SCK5 two components before use: mix the base first, under mechanical mixing, at medium speed and then add the hardener. Mix again and add SCK5 thinner to get the right viscosity.

For information only:

	Small surfaces	Large surfaces
Spray gun :	KREMLIN J4, Nozzle 12, AM head gravity alimentation	KREMLIN SKM18 Nozzle 14, AM head gravity alimentation
Output:	2 turns, oval jet	3 turns, oval jet
Pressure:	2.2 bars	2.2 bars
Vector gas:	Compressed air	Compressed air

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Société Anonyme à Directoire et Conseil de Surveillance au capital de 1 500 000 €
RCS Foix B 334 860 525 - SIRET 334 860 525 00032 - NAF 243Z - TVA N° FR20 334 860 525

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Coating characteristics 2/2

Base/hardener weight ratio	91 / 9
Thinner	5 % to 10 % of SCK5 thinner
Filtration	80 µm nylon filter
Viscosity	40s ± 3s AFNOR cup 2.5 @ 20°C
Applying conditions	18°C ≤ T° ≤ 25°C The surface T° must be at least 3°C > the dew point to avoid any condensation. 40 % ≤ RH ≤ 60 %
Covering time	Let dry between coats until you get a satin mat finish
Drying conditions	T° about 20°C RH about 50 % **8 days drying before any control test (adhesion, thickness, etc.)** **4 weeks drying before any ageing test.**

Packaging

1 Kg (0.91 Kg Base + 0.09 Kg Hardener)

Storage

N/A

Safety data

Precautions: General precautions in use for the application of paints containing solvents. Flammable product. Never handle near a flame. Store in a fresh and ventilated area.

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

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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ISO 9001 BUREAU VERITAS Certification