

PSBN

White silicate paint

Technical data sheet: RS 115
Creation: May 2007
Revision: 3
Date: 03/04/2008
Page 1/2



Coating characteristics (1/2)

Polymer matrix	Potassium silicate
Pigment	Metallic oxide
Solvent	Water
Density	1.40 ± 0.05
Solids content	39 % ± 2 %
V.O.C.	90 g / L
Solar absorptance	$\alpha_{2\pi S} = 0.15 \pm 0.02$
IR Emittance	$\epsilon_{N,IR} = 0.92 \pm 0.03$
Outgassing	in compliance with ESA standard: ECSS-Q-70-02A
Electrical surface resistance	$10^9 \leq R_s \leq 10^{12} \Omega/\square$ (Under primary vacuum)
Standard thickness	100 to 140 μm dry, 5 to 8 crossed coats
Theoretical Consumption	1180 g / m ² of product @ 120 μm i.e. 3.84 g dry / m ² and per dry μm
Surface preparation	On raw AU4G: Crossed sandpapering, dust removal with compressed air, cleaning by immersion or rubbing with Forane 141b or equivalent, 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.

Definition

This white silicate paint presents excellent thermo-optical properties and a very good stability in space environment.

Aspect: **mat white**

AFNOR NFT 36005 classification: Family I Class 10b1.

Purpose: Developed by CNES, PSBN paint may find applications in the following fields: space Industries, vacuum technologies, optics...

Registered CNES know-how

Properties

Test carried out	CNES qualification report
. Thermal cycling under vacuum . Outgassing . Resistance to space environment . Electrical properties	DCT/TV/TH/NT06-25934 DTS/AE/MTE/TH/03-094

Application parameters

Ready for use, PSBN paint must be mixed thoroughly before use.

For information only:

Small surfaces:

Spray gun:	KREMLIN J4, Nozzle 12, AM head, gravity alimentation
Output:	oval jet, 2 mist coats: 1 ¼ turn 1 thin crossed coat: 1 ¾ turn 4 to 8 crossed coats: 2 to 2 ½ turns
Pressure:	2 bars
Vector gas:	Compressed air

Large surfaces:

Spray gun:	KREMLIN SKM 18, Nozzle 14, N2 head, gravity alimentation
Output:	oval jet, 2 mist coats: 2 turns 1 thin crossed coat: 2 ½ turns 4 to 8 crossed coats: 3 turns
Pressure:	2.4 bars
Vector gas:	Compressed air

PSBN

White silicate paint



Licence n° 70230

Coating characteristics (2/2)

Filtration	80 µm nylon filter
Viscosity	35s to 40s AFNOR cup 2.5 @ 20°C
Applying conditions	18°C ≤ T° ≤ 25°C 40 % < RH < 70 %
Covering time	Let dry between coats until you get a mat finish
Drying conditions	T° about 20°C RH about 50 % 5 days drying before any control test (adhesion, thickness, etc.) 4 weeks drying before any ageing test.

Packaging

1Kg

Storage

Up to 2 months in original unopened packaging at 20°C +/- 2°C.

Safety data

Precautions ➤ This product is not flammable. This preparation is not classified as a health hazard according to 1999/45/CE directive.

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

Transport ➤ Please refer to our latest safety datasheet.