
Product Name:**IPCOTE High Heat Resistant Sacrificial Aluminium Coating**

Product Number:IP9183-R1

Product Description:

Sacrificial Aluminium Coating that is part of a range of corrosion resistant coatings designed for use in challenging environments such as aero engines and components, power generation and marine situations.

Spray applied Ipcote is used on turbine blades, rotors, shafts and landing gear to protect components from salt laden atmospheres, high temperature oxidation, chemicals and abrasives.

The coating provides corrosion and oxidation protection to iron, steel, heat treated stainless steel alloys, titanium and other metallic substrates at temperature of up to 700°C. Ipcote can also be super or vibro polished (RPS 619) to enhance flow of air in aircraft engines where smooth surfaces are essential to enhance energy efficiency (See also Ipcote IP9184 and Smoothseal IP9444).

IP9183-R1, when vibro polished achieves a R_a surface finish of ≤ 12 micro inches.

EU REACH Status

This coating contains Chromium Trioxide (Chromic Acid): CAS No: 1333-82-0. This is classified as a SVHC, and under annex XIV has a sunset date of September 2017. Continued use of this coating after this date will be restricted to authorised uses (uses 1, 4 & 5 as defined in authorisation) under the REACH chemical restriction process, for a defined time period: 4 years for industrial uses and 7 years for aerospace use.

Approvals/Specifications:

- MSRR 9140
 - OMat 7/46B
 - RR Code 137616
 - ITP SMM-903/1
 - Safran Landing Systems (Messier-Bugatti-Dowty) PCS 2550
 - Messier Dowty PS637 and PS639
 - Safran Aero Engines (Snecma) DMR 74-052 (Application to DMP16-049)
 - GE – A50TF1, Class E
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- Airbus CML 16-532
- NSN: 8030-99-406-7055
- Siemens: 552208
- Under Review to CPW 88,
- Alternative to Sermetal W and WFX

Performance:

Salt Spray corrosion resistance - ASTM.B117 - Minimum 1000 hours at 40-50 micron film thickness. Externally tested to achieve >3000 hours ASTM B117 exposure.

Surface Conductivity - positive over complete film.

540 – 560°C cure – Electrically conductive post cure.

350°C cure – Electrically conductive post burnish process.

Adhesion - 1mm Cross hatch. BS EN ISO 2409, class 0

Dry Heat - 1000 Hours at 600°C (1100°F)

Cyclic salt water fog/heat at 450°C (840°F) - 240 Hours (480 Hours with Ipseal)

Cyclic salt water fog/heat humidity/heat at 450°C (840°F) - 240 Hours (480 Hours with Ipseal)

Operating Temperature: -40°C (-40°F) to 700°C (1290°F)

Components:

Single Pack Product. May be thinned for application using demineralised / de-ionised water

Application:

Surface Preparation:

Ensure that surfaces are totally clean and dirt free

Pre-Treatment: Typically de-grease then grit blast with 120/220 aluminium oxide. Surfaces must be dust free prior to coating.

Paint Preparation:

De-ionised Water; up to 5% by volume as required

Application Method:

Spray Conventional or HVLP. Fluid tip sizes between 0.8 and 1.6mm dependent upon component size and geometry. Gravity, syphon or pressure feed equipment may be used. Apply 1 thin wet mist coat, then 2-3 further thin wet coats, allowing the applied coating to flash off to a matt grey appearance.

Drying Curing:

Type A: 540°C (2 hours) – 560°C (1 hour) (1000 – 1040°F) - dull matt grey conductive finish - surface finish approximately 70 micro inches.

Type B: 350°C (1 hour) (660°F) – dull matt grey finish, non-conductive - bead peened - shiny bright conductive aluminium similar to metal. Surface finish approximately 70 micro inches.

Refer to process sheet IPAS666 for complete Ipcote range application instructions.

Technical Properties:

Supply Viscosity:	45 +/- 5 seconds; ISO3 cup @ 23 +/- 2°C
Standard dry film thickness:	0.04 – 0.07mm recommended. May be applied down to 0.025mm
Flash Point:	N/A – Aqueous product
VOC Content:	0
Colour:	Grey/Green solution. Dull Grey after baking.
Pack Size:	1 and 5 litre
Density:	1.62 ± 0.02kg/l
Thinner:	Demineralised/De-ionised Water
Solvent/Clean Up:	Water
Theoretical Coverage:	7.9 – 10 m ² per litre

Storage:

Water based corrosive and environmentally hazardous material.
Ensure product is stored in a warm, dry environment, with a minimum temperature above 5°C (40°F). Do not allow to freeze.
Ensure storage complies with local environmental controls.

Shelf Life: 12 months temperate; 6 months tropical

Before use, refer to Product Safety Data Sheet

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Safety Data Sheets:

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