Technical Data Sheet

IP9356 Edition February 2025 Revision 1

Product Name

Ipthin, Thin film High Heat-Resistant Sacrificial Aluminium Coating

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 Ipthin 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. Ipthin 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 Ipseal IP9184 and Smoothseal IP9444). IP9356, when vibro polished achieves a Ra surface finish of ≤ 12 micro inches.

REACH Status

This coating contains Chromium Trioxide: CAS No: 1333-82-0. This is classified as a SVHC, and under annex XIV

UK and EU Authorisation – October 2024

October 2024 – UPDATE - UK

AFA032-01 – Chrome Conversion coating use Aerospace (DOW19)	**UKREACH/24/15/4**
AFA033-01- Formulation of mixtures	**UKREACH/24/16/1**
AFA037-01 – Slurry Coatings Aerospace use	**UKREACH/2024/18/1**
AFA045-01 – Formulation – Industrial	**UKREACH/24/22/0**
AFA045-02 – Industrial gas turbine use	**UKREACH24/22/1**

October 2024 – UPDATE – EU

AFA344 – Slurry Coating	**REACH/24/68/3**
AFA337-02 – Chrome Conversion Coating Aerospace use (DOW19)	**REACH/24/61/1**

Extension Dates from October 2024:

UK – 05/09/2036 (12 Years)

EU – 7 YEARS (Dates to be Confirmed – Still ongoing) EU – DOW 19 a 12 year extension

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Registered in England: 1376995

Approvals and Specifications

MSRR 9356
OMat 7/4167A
Alternative to Sermetal 709, 762 and 962
ITP, SMM-919

Performance Properties

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 – 560ºC cure – Electrically conductive post cure.
- 350ºC cure – Electrically conductive post burnish process.

Adhesion - 1mm Cross hatch. BS EN ISO 2409, class 0
Dry Heat - 1000 Hours at 600ºC (1100ºF)
Cyclic saltwater fog/heat at 450ºC (840ºF) - 240 Hours (480 Hours with Ipseal)
Cyclic saltwater fog/heat humidity/heat at 450ºC (840ºF) - 240 Hours (480 Hours with Ipseal)
Operating Temperature: -40ºC (-40°F) to 700ºC (1290°F)

Components

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

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Application

Refer to IPAS for full detailed instructions.

Surface Preparation	Ensure that surfaces are totally clean and dirt free Typically degrease then grit blast with 120/220 aluminium oxide. Surfaces must be dust free prior to coating.
Paint Preparation	De-ionized water, up to 5% by volume as required
Mixing Ratio	Single Pack Product
Application Method	Spray Conventional or HVLP. Fluid tip sizes between 0.8 and 1.6mm dependent upon 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 and 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, nonconductive - 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.

Liquid Technical Properties**

Supply Viscosity	ISO 2431, Cup Number 3, 25 - 35 seconds
Flash Point	N/A – Aqueous Product
Density	1.600 g/ml
VOC Content	0
Colour	Grey Green solution, Matt Grey after baking
Gloss	Matt
Thinner	De-ionized water
Solvent/Clean Up	De-ionized Water
Theoretical Coverage	7.9 to 10 m^2 per litre
Pack Size	1 and 5 Litre Containers
Pot Life	Single Pack product

** - The values referenced are obtained from Batch testing using controlled Quality techniques.

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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

*** - Indestructible Paint decline any responsibility deriving from improper storage of Product and its Catalyst.

Contact

For Safety Data Sheets or other Information please contact our sales Department:

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