

# Technical Data Sheet



IP9184-Range

Edition February 2025 Revision 2

## Product Name

Ipsal High Temperature Inorganic Seal. MSRR9140

## Product Description

Ipsal is an inorganic protective coating used as a barrier on Ipcote IP9183-R1, Ipthin IP9356.

All the Ipcote coatings are conductive, sacrificial coatings and inherently porous. Ipsal seals this porosity without detracting from their sacrificial properties. It also creates an electrically non-conductive barrier coat. The use of Ipsal on top of these products results in a smoother, harder coating which provides a barrier against carbon deposits etc extending the useful life of the base coat and a smoother finish which enhances airflow characteristics and therefore engine efficiency.

IP9184 is for use at temperatures up to 800°C (1400°F). This material also has capabilities as a coating, being water based with no VOC's, this coating has high temperature resistance up to 800°C on such metals as nickel. It has shown a 70% reduction in Alpha Case corrosion on titanium at 650°C at 3-5 microns. Ipsal is available in Green, Khaki, and Blue.

## 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)	<b>UKREACH/24/15/4</b>
AFA033-01- Formulation of mixtures	<b>UKREACH/24/16/1</b>
AFA037-01 – Slurry Coatings Aerospace use	<b>UKREACH/2024/18/1</b>
AFA045-01 – Formulation – Industrial	<b>UKREACH/24/22/0</b>
AFA045-02 – Industrial gas turbine use	<b>UKREACH24/22/1</b>

### October 2024 – UPDATE – EU

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

### 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

## Approvals and Specifications

MSRR 9140 (Previously MSRR9355)  
IP9184-KH-R1 Green; Rolls Royce Code: 139265  
Omat 7/168B – Green  
NSN: 8030-99-434-2295  
Turbomeca LB714  
Alternative to Sermaseal 570 Khaki Ipseal  
Siemens Lincoln (Khaki Ipseal) 552208

## Performance Properties

Tested to specification MSRR 9140 (under test to CPW 404)  
Smooth eggshell finish  
Typical film thickness 4-6 microns per coat (0.2 thou)  
Operating temperature -40°C to 800°C (1420°F)  
Less than 0.6% hexavalent chrome

## Components

Single Pack Product. May be thinned with water for spray application. Where low humidity is present within a spray facility the addition of 5-10% by volume of water may be required.

## Application

Refer to IPAS-666 for full detailed instructions.

<b>Surface Preparation</b>	Ensure that surfaces are clean and dirt free
<b>Paint Preparation</b>	Stir well before use. All separated materials must be re-incorporated into the bulk product. N time limits are specified for the mixing operation. The operator must be satisfied that the product including any thinning solvent is thoroughly mixed before use. Where mechanical mixing is employed, care must be taken to not heat the product to above the maximum storage temperature. Mixing in open containers should be limited to <10 minute periods to ensure that solvent evaporation does not compromise the product. Shaking or rolling in the closed containers is an acceptable mixing method for small volume products supplied ready for use.
<b>Mixing Ratio</b>	Single Pack Product
<b>Application Method</b>	Spray applied coating
<b>Drying and Curing</b>	Air Dry: 10 minutes - Heat Cure: Pre-bake for 30 minutes @ 80-100°C, 30-60 minutes @ 350°C

## Liquid Technical Properties\*\*

Supply Viscosity - Green	ISO2431, Cup Number 3, 39-49 seconds
Non-Volatile Content – Green	43 to 53%
Density – Green	1.47 – 1.51 g/cm <sup>3</sup>
Supply Viscosity - Khaki	ISO2431, Cup Number 3, 25 – 35 seconds
Non-Volatile Content - Khaki	38 – 42%
Density - Khaki	1.32 – 1.36 g/cm <sup>3</sup>
Flash Point	N/A
VOC Content	0 g/l
Colour	Green, Khaki, or Blue
Gloss	Semi-Matt visual finish
Thinner	Water
Solvent/Clean Up	Water
Theoretical Coverage	29m <sup>2</sup> per litre at 10 microns
Pack Size	1 and 5 Litre Containers
Pot Life	Single Pack Product

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

## Storage

Water based corrosive and environmentally hazardous material.

Ensure product is stored in a warm, dry environment with a minimum temperature above 5oC (40oF). 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:

Tel: +44(0)121 702 2485

Email: [sales@indestructible.co.uk](mailto:sales@indestructible.co.uk)

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