

Optidur 9100 Series Clear Coat

Technical Data Sheet

Product Group

Cabin Coatings

Characteristics



Product
Information

Optidur 9100 Series Clear Coat is a 2-component high quality acrylic polyurethane topcoat in four reduced sheen options, from 10% to 50% sheen.

Optidur 9100 Series Clear Coat is specifically formulated to obtain premium performance with respect to hardness, durability, abrasion, scratch and chemical resistance.

Product is part of the Optidur Series which utilizes the latest resin technology and sets the standard for minimum process times, reduced process cycle costs and environmental care.

Components



Base

Optidur 910-010A - 10% Gloss

Optidur 910-020A - 20% Gloss

Optidur 910-035A - 35% Gloss

Optidur 910-050A - 50% Gloss

Curing Solution

Optidur 910-001B

Thinners

Reducer 910-001C – Fast Reducer

Reducer 910-002C – Medium Reducer

Reducer 910-003C – Slow Reducer

Retarder 910-004C

Additive

FR-1100

Specifications



Qualified Product
List

Flammability

F.A.R. / J.A.R 25.853(a) App.F Pt. I(a)(1)(i) 60s*

*Compliance is dependent on flame retardant and amount added. Please contact your local AkzoNobel Aerospace Coatings representative for more detailed information.

Product specifications are constantly changing, to ensure the most accurate information regarding specifications, please check our online qualified product list (QPL) at aerospace.akzonobel.com/products.

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Surface Conditions



Cleaning

- Product is compatible with other products out of the Optidur Series.
- Optidur 9100 Series Clear Coat is designed to be applied over properly cured and sanded Optidur 7001 Tie Coat and/or Optidur 800X UV Sealer.
- Remove oil, grease and other contaminations carefully using an appropriate mild cleaning solvent like isopropyl alcohol.
- Remove dust with clean tack rags or equivalent prior to application of Optidur 9100 Series.

Instruction for Use



Mixing Ratio
(volume)

	Volume (v/v)
Optidur 910-0XXA	100 parts
Optidur 910-001B	20 parts
Reducer 910-00XC	5-10% optional as needed.
Retarder 910-004C	1-3% to extend dry time.
FR-1100	* FR quantities may vary based on requirements. See AkzoNobel representative.

- FR-1100 is an optional flame retardant that may be added depending on the type of substrate and flammability requirements.
- Allow products to acclimatize to room temperature before use.
- Stir the Optidur 9100 base thoroughly to obtain a homogenized product.
- Add the Curing Solution and stir the catalyzed mixture thoroughly.
- Add the optional Thinner and stir the catalyzed mixture again thoroughly.
- Add FR-1100 and stir the mixture thoroughly for at least 2 minutes.



Induction Time

Not applicable.



Initial Spray
Viscosity
(25°C/77°F)

18-22 seconds with #2 Signature Zahn



Pot life
(25°C/77°F) –
55% RH)

Pot life is 4 hrs.

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Dry Film
Thickness
(DFT)

50 – 100 μm
2 – 4 mils

Application Recommendations



Conditions

Temperature: 15 - 35°C
59 - 95°F
Relative Humidity: 25 - 75%



Note

Optidur 9100 Series Clear Coat may be applied in conditions outside the limits shown above. Care must be exercised to ensure a satisfactory result. Please contact your local AkzoNobel Aerospace Coatings representative to determine the appropriate application techniques when environmental conditions fall outside of the recommended range.



Equipment
Recommendation

HVLP / Next Generation, 1.4 – 1.6 mm tip size, air pressure* - 2-2.5 bar / 29-36 psi**

*Measured with an open trigger

**General advice to meet the HVLP / next-generation spray gun requirements.
Please validate with your local authorities.



Number of Coats

Apply two or three closed wet coats of 75 – 125 μm (3 – 5 mils) wet film per coat to achieve the recommended dry film thickness, allowing a 10-15 minutes flash-off time at ambient conditions between each coat. Allow a flash-off time of 20-30 minutes at ambient conditions before force curing.

Flash-off time refers to the elapsed time between the start of the first coat application and the start of the second coat application. Flash-off time must be respected in order to avoid solvent entrapment (solvent pop).

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Cleaning of
Equipment

Clean equipment with Acetone directly after use.



Note

The quality of the application of all coatings will be influenced by the spray equipment chosen and the temperature, humidity, and air flow of the paint application area.

When applying the product for the first time, it is recommended that test panels be prepared to identify the best equipment settings to be used in optimizing the performance and appearance of the coating.

Physical Properties



Drying Times
(25 +/- 2°C / 77
+/- 2°F, 55 +/-
5% RH)

21 °C / 70 °F, 55% RH

49 °C / 120 °F

Tack Free
Dry-to-Sand
Dry-to-Stack

30 min
4 hours
24 hours

15 min
15 min
15 min

Flash-off times and dry times will vary depending on combinations of temperature, humidity, and airflow. Temperature, wet film thickness, and flash-off time can greatly impact the final quality, so it is recommended to adhere to the application guidelines above.



Theoretical
Coverage

8.3 m² per liter ready to apply at 25 µm dry film thickness.
340 ft² per US gallon ready to apply at 1 mil dry film thickness.



Dry Film Weight

29.8 g/m²/25 µm
0.006 lbs/ft²/mil



Volatile Organic
Compounds

Maximum 708 g/l
Maximum 5.8 lbs/gal

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Gloss (60°)

10%, 20%, 35%, 50% Gloss

Gloss percentage closely aligns to Gloss Units (GU) within +/- 5 GU.



Color

Clear



Flash-point

Optidur 910-010A	4°C / 39.2°F
Optidur 910-020A	4°C / 39.2°F
Optidur 910-035A	4°C / 39.2°F
Optidur 910-050A	4°C / 39.2°F
Optidur 910-001B	27°C / 80.6°F
Reducer 910-001C	20°C / 68°F
Reducer 910-002C	16°C / 60.8°F
Reducer 910-003C	20°C / 68°F
Retarder 910-004C	58°C / 136.4°F
FR-1100	-9°C / 15.8°F



Storage

Store the product dry and at a temperature between 5 and 21°C / 41 and 70°F per AkzoNobel Aerospace Coatings specification. Store in the original unopened containers. Storage temperature and shelf life may vary per OEM specification requirements. Refer to container label for specific storage life information.

Always Rotate Stock.

Shelf life 5 - 21°C (41 - 70°F) / 55% RH	Optidur 910-010A	12 Months
	Optidur 910-020A	12 Months
	Optidur 910-035A	12 Months
	Optidur 910-050A	12 Months
	Optidur 910-001B	6 Months
	Reducer 910-001C	24 Months
	Reducer 910-002C	24 Months
	Reducer 910-003C	24 Months
	Retarder 910-004C	24 Months
	FR-1100	12 Months

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Safety Precautions

Comply with all local safety, disposal and transportation regulations. Check the Material Safety Data Sheet (MSDS) and label of the individual products carefully before using the products. The MSDS's are available on request.

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IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given is subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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