



**Description**

---

The Redux 100 series is a range of resin solutions used for protecting light alloy surfaces that have been pretreated for bonding and are to be stored temporarily before bonding is completed.

A thin coating of solution applied to freshly pretreated and dried surfaces loses solvent rapidly at room temperature, sealing the surfaces from the atmosphere and protecting them from loss of pretreatment quality for storage periods of up to 3 months.

The Redux 100 series is intended for use with associated Redux film adhesives, as listed below. When used with the corresponding Redux adhesive, the surface pretreatment protection does not need to be removed or cured prior to bonding.

Pretreatment Protection	Colour	Corresponding Adhesive
Redux 112	Yellow	Redux 312, 609
Redux 119	Blue	Redux 319, 641
Redux 122	Pink	Redux 308, 322, 340SP

**Instructions for Use**

---

**Pretreatment**

Joint surfaces should be prepared for bonding in accordance with the adhesive to be used. Pretreatment must be completed and the surfaces totally dry before the Redux 100 series solution is applied. For more information refer to the Redux Bonding Technology Brochure.

**Application**

A well ventilated spraying booth should be used when applying primers.

When the surfaces have dried, apply the Redux 100 series solution. The most efficient and economical method of applying the solution is by spraying. Apply a light continuous coating, ensuring total coverage of the area to be protected, without producing a pronounced colour. **Do not apply too much solution.**

A thick coating may cause a reduction in the strength of the bond by preventing proper evaporation of solvents in the solution nearest to the metal surface layer. If the solution is applied by brush or roller, extra care is needed to avoid this.



## Redux® 100 series

### Coverage

When sprayed, 1 kg of Redux surface pretreatment protection solution should cover at least 20 m<sup>2</sup> (Redux 112) or 30 m<sup>2</sup> (Redux 119, 122) of pretreated light alloy surface. The weight of this coating when dried is approximately 5 g/m<sup>2</sup> - limits: 2 to 12 g/m<sup>2</sup>.

Spray application tests carried out with a De Villbiss suction feed cup spray gun type JGA show that the best results are obtained by using:

spray gun	GFG -HVLP
fluid tip	G
air cap	Model No. 35L
spraying pressure	200 kN/m <sup>2</sup>

### Drying

Coated parts should be allowed to dry thoroughly in a well ventilated area before being handled. At room temperature (20-25°C) this should take approximately 1 hour. Alternatively, they may be dried in a well-ventilated flame-proof oven or drying tunnel, as follows:

Pretreatment Protection	Drying Time (minutes)	Temperature °C
Redux 112	20	70
Redux 119	30	70
Redux 122	30	70

When the parts are dry they can be set aside to await bonding, in which case they should be covered with clean paper or polythene to prevent dust or moisture accumulating on the bonding areas.

If the parts are to be bonded on the same day as the solution is applied, they should be dried at the elevated temperature indicated above. Parts that have been coated with a Redux 100 series solution at the end of a working day may safely be bonded the next morning after standing overnight at room temperature.

### Cleaning

Equipment used with the Redux 100 series may be cleaned as follows:

Pretreatment Protection	Cleaning Solution
Redux 112	Acetone or Methyl ethyl ketone (MEK)
Redux 119, Redux 122	Methyl ethyl ketone (MEK)

## Surface pretreatment protection solutions

### Storage

Redux 100 series solutions should be stored in their original unopened containers at the temperatures indicated in the table below. This table also indicates storage life, and additional out-life per product:

Pretreatment Protection	Storage Temperature °C	Shelf-Life at storage temp. (months)	Additional out life at room temperature (days)
Redux 112	5-27	12	-
Redux 119	0-5	24	60
Redux 122	0-5	24	60

### Handling and Safety Precautions

The Redux 100 series is formulated from well-established industrial products and may be handled with confidence provided normal precautions for handling chemical materials are followed.

#### Flammability

The Redux 100 series is highly flammable. Precautions must be taken against all possible means of ignition, and containers must be firmly sealed when not in use. If the product catches fire use either a carbon dioxide, dry powder, foam or water spray mist extinguisher. Do not use water jets as these may spread the fire base. In a serious fire, wear self-contained breathing apparatus.

#### Ventilation

Use a well ventilated spraying booth when applying and drying the solution. An approved respirator should be worn if inhalation of volatiles from the product is possible.

#### Handling

Avoid skin contact by use of impermeable gloves when handling the product (nitrile gloves are suitable). Remove contaminated clothing immediately and launder before re-use. To protect eyes wear approved safety spectacles, goggles or facemask.

A Material Safety Data Sheet for each product in the Redux 100 Series is available on request.



## Redux 100 series

### Release Certification

The Quality System at Hexcel Duxford has been certified to ISO 9001 by Lloyd's Register Quality Assurance, and is approved by the UK Civil Aviation Authority and Ministry of Defence. Certificates of Conformity and Test Reports can be issued for batches of Redux 100 series on request.

### Important

All information is believed to be accurate but is given without acceptance of liability. Users should make their own assessment of the suitability of any product for the purposes required. All sales are made subject to our standard terms of sale which include limitations on liability and other important terms.

©Copyright Hexcel Composites  
Publication RTA032f (Aug 2014)

### For More Information

Hexcel is a leading worldwide supplier of composite materials to aerospace and other demanding industries. Our comprehensive product range includes:

- Carbon Fibre
- Reinforcement Fabrics
- Carbon, glass, aramid and hybrid prepregs
- RTM Materials
- HexTOOL® composite tooling material
- Structural Film Adhesives
- Honeycomb Cores
- Engineered Core

For US quotes, orders and product information call toll-free 1-800-688-7734

For other worldwide sales office telephone numbers and a full address list please go to:

<http://www.hexcel.com/OurCompany/sales-offices>