



HexBond™ 100 series

Surface pretreatment protection solutions



Product Data Sheet

Description

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

Pretreatment Protection	Colour	Corresponding Adhesive
HexBond™ 112	Yellow	HexBond™ 312, 609
HexBond™ 119	Blue	HexBond™ 319, 641
HexBond™ 122	Pink	HexBond™ 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 HexBond™ 100 series solution is applied. For more information refer to the HexBond™ Bonding Technology Brochure.

Application

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

When the surfaces have dried, apply the HexBond™ 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.



Coverage

When sprayed, 1 kg of HexBond™ surface pretreatment protection solution should cover at least 20 m² (HexBond™ 112) or 30 m² (HexBond™ 119, 122) of pretreated light alloy surface. The weight of this coating when dried is approximately 5 g/m² - limits: 2 to 12 g/m².

Spray application tests are carried out using a DeVilbiss Pri Pro spray gun with a Pri Pro 210-18 nozzle (1.8mm).

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
HexBond™ 112	20	70
HexBond™ 119	30	70
HexBond™ 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 HexBond™ 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 HexBond™ 100 series may be cleaned as follows:

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



Storage

HexBond™ 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)
HexBond™ 112	5-27	12	-
HexBond™ 119	0-5	24	60
HexBond™ 122	0-5	24	60

Handling and Safety Precautions

The HexBond™ 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 HexBond™ 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 Safety Data Sheet for each product in the HexBond™ 100 Series is available on request.



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 HexBond™ 100 series on request.

For more information

Hexcel is a leading worldwide supplier of composite materials to aerospace and industrial markets. Our comprehensive range includes:

- HexTow® carbon fibers
- HexForce® reinforcements
- HiMax™ multiaxial reinforcements
- HexPly® prepregs
- HexMC®-i molding compounds
- HexFlow® RTM resins
- HexBond™ adhesives
- HexTool® tooling materials
- HexWeb® honeycombs
- Acousti-Cap® sound attenuating honeycomb
- Engineered core
- Engineered products
- Polyspeed® laminates & pultruded profiles
- HexAM™ additive manufacturing

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/contact>

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