

Preliminary

**LOXEAL 4680****Description**

Loxéal 4680 is a single part epoxy resin that subject to heat becomes fluid. It hardens at a temperature between 135 ° and 200 ° C, with excellent adhesion to a variety of materials such as ferrites, metals, ceramics and composites. It can be cured by magnetic induction on ferrous metals in minutes.

The high adhesive strength of the product allows its use for the replacement of mechanical fasteners and welds. Provides high impact, peel and tensile strength.

**Physical properties**

Composition:	epoxy resin
Colour and appearance:	ivory
Viscosity (+25°C – Pa s)	30 – 80
Specific weight (+25°C - g/ml):	1,15
Gap filling:	0,5 mm
Shelf life:	12 months at +2°C/+7°C

**Curing properties (typical)**

Curing time:		
Temperature:	+135°	10 – 15 min
Induction:		< 2 min

Actual cure times will depend on the time it takes for the adhesive to reach this temperature - for example, large assemblies or a crowded oven will require longer to reach full cure. Alternative, quicker methods of curing include induction, hotplates, infrared lamps and hot-air guns.

**Performances of a cured product (typical)**

Shear strength (ISO 4587):	20 - 25 N/mm <sup>2</sup>
Tensile strength (ASTM D2095):	30 - 36 N/mm <sup>2</sup>
Impact Test (ASTM D950):	20 - 30 J/inch <sup>2</sup>
Hardness (Shore D):	84
Temperature range:	-40°/ +180°C

**Surface preparation**

For best performance clean and degrease surfaces before applying the adhesive.

Loxéal Cleaner 10 is recommended for the degreasing of most surfaces.

Some metals such as aluminium, copper and its alloys will benefit from light abrasion with emery cloth (or similar), to remove the oxide layer.

**Directions for use**

The adhesive should be dispensed from the cartridge via the nozzle supplied (this can be cut to give the appropriate sized bead to cover the bond area).

Apply the adhesive to one surface and avoid entrapping air. Assemble parts applying sufficient pressure to ensure the adhesive spreads to cover the entire bond area. Use a jig / clamp to prevent parts moving during cure.

**Storage**

Store refrigerated at temperature of +2°C/+7°C. To avoid contaminations do not refill containers with used product. For further information on applications, storage and handling contact Loxéal Technical Service.

**Safety and handling**

Consult Material Safety Data Sheet before use.

**Note**

The data contained herein, obtained in Loxéal laboratories, are given for information only. Loxéal cannot assume responsibility for the results obtained by others which methods are not under Loxéal control. It is the user's responsibility to determine suitability for the user's purpose of any product mentioned herein. Loxéal disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loxéal products. Loxéal specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.