

# Technical Data Sheet

## LOXEAL 4680

### Description

Structural thixotropic single-part epoxy becoming fluid once subjected to heat.

Typical cure profile is in the range of +120°C/+150°C, providing excellent adhesion to metal surfaces, aluminium, ferrites, ceramics as well as composite materials. Curing can be obtained alternatively by induction in few minutes on steel parts too.

Loxeal 4680 is suitable also for metal fastenings replacing and for welding thanks to its elevated performances.

High impact, peeling and tensile adhesive properties.

### Physical properties

Composition :	epoxy resin
Colour :	ivory
Viscosity (+25°C - mPa s)	60.000 - 100.000
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 :	+120°C	≥ 50 min
	+130°C	≥ 25 min
	+150°C	≥ 15 min
Induction :		< 3 min

Curing time is affected by type of substrate (heat transmission), and by gap to be filled. It will also depend on time needed by the adhesive to reach this temperature - for example, large assemblies or crowded oven will require longer to reach full cure.

Alternative methods for fast curing include induction, infrared lamps and hot air guns.

### Performances of cured product (typical)

Shear strength (ISO 4587) :	20 - 25 N/mm <sup>2</sup>
Tensile strength (ISO 4587) :	30 - 36 N/mm <sup>2</sup>
Impact strength (ASTM D 950) :	32 - 48 kJ/m <sup>2</sup>
Temperature range :	-40°/ +180°C

### Surface preparation

Clean and degrease surfaces with Loxeal Cleaner 10 before applying the adhesive.

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.
- Apply the adhesive to one surface avoiding to entrap air.
- Assemble parts applying enough pressure to ensure the adhesive spreads to cover the complete area to be bonded.
- Use a jig / clamp to prevent parts moving during polymerisation.

### 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 Loxeal Technical Service.

### Safety and handling

Consult Material Safety Data Sheet before use.

### Note

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