

LOXEAL AC5481 A+B

Description

Loxéal AC5481 is a two-component, low-odor and thixotropic acrylic adhesive with an open time of 15 minutes. It is ideal to be used for structural bonding of metals even with a minimum surface preparation, composites materials and plastics such as nylon/polyamide, PC, PMMA and PBT.

It provides a tough bonding, high resistance to vibration, impact and good chemical resistance.

Typical physical properties

Part:	A	B
Composition:	Acrylate	Acrylate
Colour:	Yellowish	Bordeaux
Mixing ratio by vol.:	2 : 1	
Viscosity rheometer (+25°C - mPa s):		
Shear rate 0.3 s ⁻¹	130.000	200.000
Shear rate 40 s ⁻¹	3.000	12.000
Specific weight (g/ml):	1.0	1.0
Maximum gap fill:	5 mm	
Shelf life: 9 months in unopened packaging at +12°C/+25°C		

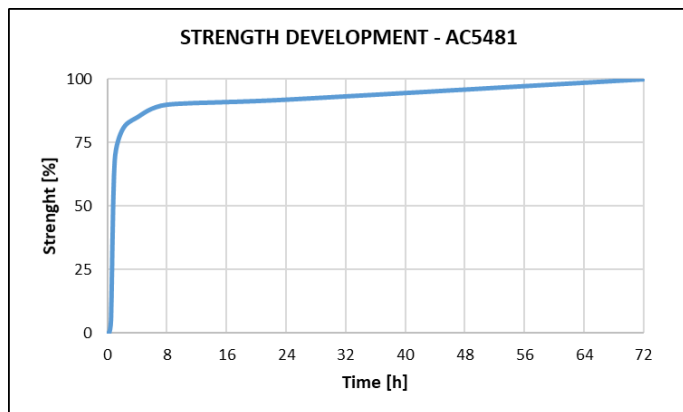
Typical curing properties at +25°C

Colour after mixing:	Dark Green
Pot life:	13 minutes*
Fixture time	15 minutes
Functional cure time:	2 hours
Full cure:	72 hours

*= time detected on a 10g total mass mixture A+B

The graph below shows the development over time of the product's mechanical strength (expressed in %) on aluminium specimens.

Test according to ISO 4587 at temperature +25°C.



Typical properties of the cured adhesive after 72h at +25°C

Shear strength, (ISO 4587), (N/mm²):

Mild steel (gritblasted)	28 CF
Stainless steel 304 (abraded)	27 CF
Aluminium T3 (grit-blasted)	26 CF
Aluminium (untreated)	23 MF
Mild steel (untreated)	25 MF
Galvanized steel (untreated)	15 MF
FRP	14 SF
CFRP	19 CF
PC	4 CF
PMMA	3 CF
PVC	5 SF
PBT	3 SF
PA6	3 MF
PA6.6	4 CF
PA6 GF30	4 AF

Peel strength- Roll peel (ISO 4578), (N/25mm):

Aluminium T3:	>250 CF
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Peel strength- T-peel (ISO11339), (N/25mm)

Aluminium T3:	200 CF
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CF=Cohesive failure

SF=Substrate failure

AF=Adhesive failure

Impact strength (ASTM D950):

66 kJ/m²

Tensile strength (ASTM D638):

14 MPa

Elongation at break (ASTM D638):

100 %

Young modulus (ASTM D638):

350 MPa

Hardness (ASTM D 2240):

65 Shore D

Water absorption (24h at +25°C):

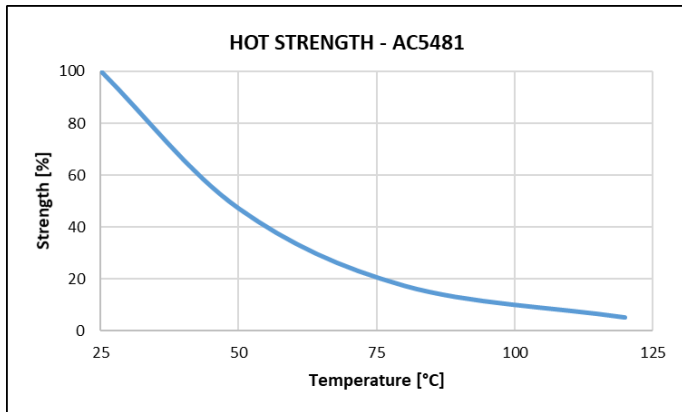
0.7%

Tg (DMA):

65C

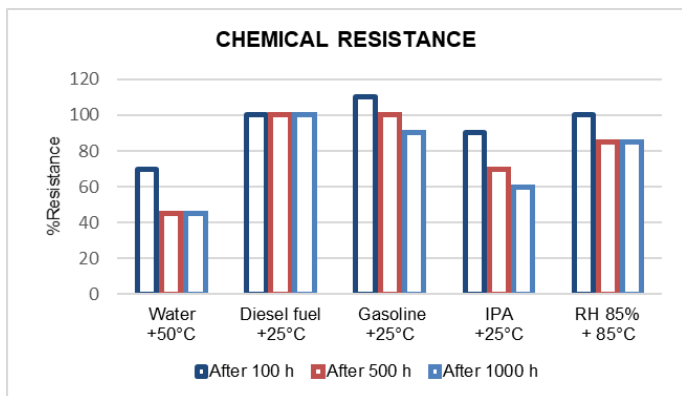
Hot strength

The graph below shows the mechanical strength of the product (%) vs. temperature.
Specimen aluminium - ISO 4587



Chemical resistance

The graph below shows the strength resistance retained after immersion in different substances.
Specimen aluminium, cured 72h @+25°C, aged at the given temperature and tested at +25°C.



Storage

Keep product in a cool and dry room at no more than +25°C. To avoid contaminations do not refill containers with used product. For further information on applications, storage and handling contact Loxeal Technical Service.

Safety, handling and disposal

Consult Material Safety Data Sheet before use.

Directions for use

• **Surfaces preparation**

For best results we recommend to scratch the surfaces with a tool and then to degrease and clean with Loxeal Cleaner 10 or Acetone and let dry for a few seconds.

• **Mixing**

The resin and the hardener need to be mechanically mixed before use in the ratio of weight and/or volume in compliance with technical specifications until a homogeneous colour is reached. Products are available in dual cartridges with static mixers (separately provided) allowing a direct and correct product application on the substrates to bond, completely discarding the first 3/5 cm of the extruded product. Avoid excess of product blend because heating produced by chemical reaction may cause risk and loss of product.

• **Pot life**

Pot life of the mixed product may vary from few minutes to some hours at room temperature according to the resin and the hardener used. Higher temperature reduces the pot life. Apply product at temperature higher than +15°C.

• **Assembly**

Parts to be bonded shall be assembled immediately after product application and kept close until full polymerization without providing any mechanical stress.

• **Cleaning**

Excess of product can be removed with Acetone or any other solvent based cleaner compatible with the substrates to bond. Application tools and dosing systems shall be cleaned before the product is hardened. Cured product can be removed only mechanically.

Note

The data contained herein, obtained in Loxeal laboratories, are given for information only; if specifics are required, please contact Loxeal Technical Department. Loxeal ensures abiding quality of supplied products according to its own specifics. Loxeal cannot assume responsibility for the results obtained by others which methods are not under Loxeal control. It is user's responsibility to determine suitability for user's purpose of any product mentioned herein. Loxeal disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loxeal products. Loxeal specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.

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