

LOXEAL AC5465 A+B (Polyolefins bonding)

Description

Two-components fast curing acrylic adhesive. It is specifically designed for bonding Polyolefins and substrates with low surface energy (PP, PE, PTFE, PEEK, Nylon, PBT, Acetal, etc), in combination with other plastics, metals and glass as well. Loxeal AC5465 does not require any surface treatment, thanks to its physical features, it allows to design 0-gap joints and to bond substrates with extremely small gaps. Its application provides a resistant and transparent bonding when used at 0-gap on transparent substrates. It provides high shear and peeling strength. Solvent free, mixing ratio 1:1.

Typical physical properties

	Part A	Part B
Chemical composition:	methacrylate ester	methacrylate ester
Appearance:	translucent	transparent
Viscosity, Rheometer cone-plate (+25°C - mPa s):		
Shear rate 0.3 1/s	400000	20000
Shear rate 40 1/s	15000	
Mixing ratio by weight (A+B):	1:1	
Specific weight (+25°C - g/ml):	1,0	1,0
Shelf life:	12 months at +25°C in unopened packaging	

Typical Curing properties at +25°C

Pot life:	6 minutes*
Fixture time:	12 minutes
* Time detected using 6 g of mixed product	

Typical properties of the cured product

Shear strength (N/mm²):
 (after 72 hours at +25°C ISO 4587)
 Single-Lap Shear (ISO 4587)

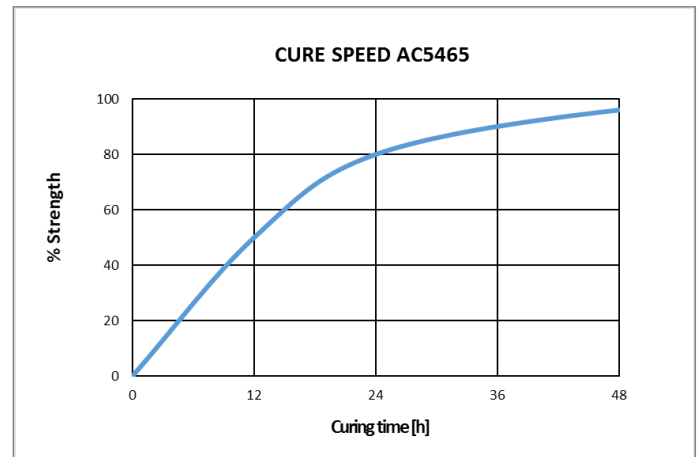
PP:	5 CF
HDPE:	8 CF
PE:	4 CF
Acetal (POM):	3.5 CF
Nylon:	5 CF
Epossidica FRP:	11 CF
PTFE:	1.5 CF
PMMA:	6 SF
PEEK	9 CF
PETG:	6 CF
PP/Stainless steel	6 CF
PE/Stainless steel	4 CF
PP/Aluminum	6 CF
PE/Aluminum	4.5 CF
Stainless steel/Stainless steel (gritblasted)	10 CF
Aluminum/Aluminum (gritblasted)	10 CF
Block Shear (ASTM D4501):	
Glass	10 SF
Glass/PC	6 CF
Glass /PBT	10 CF

CF= Cohesive failure SF= Substrate failure

Peeling strength (after 72h at +25°C ISO 4578):
 Aluminum 120 N/25mm

Cure speed graph

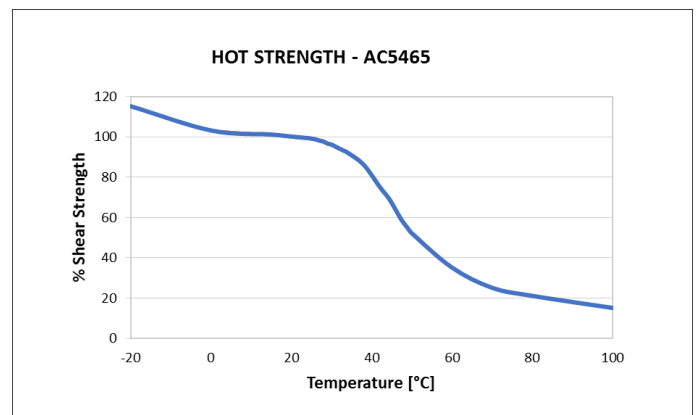
The graph hereunder shows the strength development of the product (with time) on PMMA specimens. Tested in accordance with ISO 4587 at + 25°C.



Environmental resistance

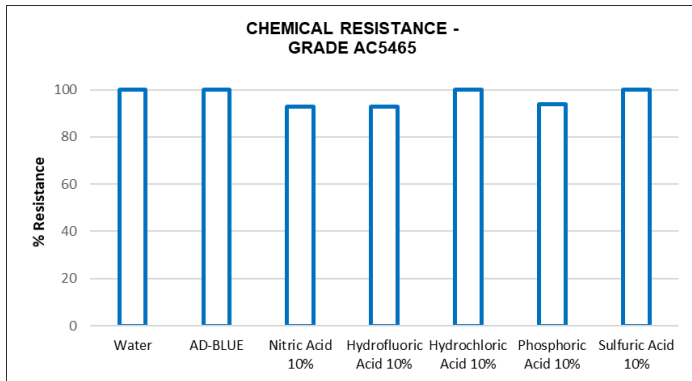
Hot strength graph

The graph below shows the mechanical strength (in %) vs. temperature. Specimen in PP - ISO 4587



Chemical Resistance

The graph below shows the change in resistance following exposure for 14 days, at a temperature of 25°C, to the indicated chemicals (concentration by volume). In the case of AD-BLUE the samples were exposed for 5000h. PP specimens tested according to ISO 4587 at + 25°C.



Directions for use

• **Surfaces preparation**

For better results we recommend to degrease and clean the substrates.

Lightly scratch the surfaces on metal and plastic substrates (not indicated on polyolefins) and then degrease and clean with a cleaner suitable for the substrate (i.e. Loxeal Cleaner 10 or Acetone or Isopropyl Alcohol)

• **Adhesive application**

Products are available in dual cartridges packaging

1. Check that the 2 parts of the adhesive come out homogeneously, pushing lightly on the regulator.
2. Mix Part A and Part B using the static mixer (separately provided) after setting it on the cartridge. If mixing the 2 parts by hand, we recommend to pay attention to the mixing ratio given on the Technical Data Sheet.
3. Apply the product; when using the static mixer, completely discard the first 3/4 cm of the extruded product.

Avoid to mix big quantities of product because heating produced by chemical reaction may be dangerous and cause loss of product.

• **Pot life**

Pot life of the mixed product varies according to the temperature. Higher temperature reduces the pot life and viceversa.

• **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.

Storage

Keep the product in a cool and dry room, at no more than +25°C for 12 months. For a better preservation keep it stored refrigerated at temperature between +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.

Warnings

This adhesive is not approved for usage neither with pure nor gaseous oxygen.

Safety, handling and disposal

Consult Material Safety Data Sheet before use.

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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