

Adhesive especially adapted to bond long surfaces. 1H30 working time.

Description

SAF30-LOT is a two components methacrylate adhesive with a large open time. It suits to long surface bondings.

*Long Open Time.

Technology	Modified methacrylate
Aspect	Liquid paste
Component	Two component-1/10 volume ratio.
Polymerization	At room temperature
Application	Adhesive



Main benefits:

- **1H30 working time** @ 24°C
- **Handling time 2h** @ 24°C
- Do not need any **post curing** and it is **primerless**
- **Exceptional resistance** to aggressive environments
- **Safe** for the users and the environment

Characteristics

SAF30-LOT is ideal to bond a wide sort of metals and technical plastics, prepared or not. The mechanical properties are obtained in few hours at 18°C without any post curing.

SAF30-LOT offers a high resistance to impacts and vibrations.

SAF30-LOT has the characteristics below:

- Room temperature polymerization.
- Little or no surface preparation for metal assemblies.
- Perfectly adapted to plastics, composites, laminated glass and carbon fibre based of polyester resin, DCPD, gel coat, vinyl ester resin, epoxy...
- Thixotropic ideal for up right bondings
- Highly resistant to low temperatures. Recover its mechanical properties even after having been subjected to temperatures from -40°C to 150°C.

- **SAF30-LOT** resists to aggressive environments as the alkalines, the diluted acids, the solvents, the oils, and the humidity.
- **SAF30-LOT** resists to UV and to bad weather.

Uncured properties

Aspect Resin **SAF30 LOT** = white

Hardener **SAF30 LOT** = white

Specific gravity (g/cm³ 20°C)

Resin **SAF30-LOT** = 1.11

Hardener **SAF30-LOT** = 1.10 -1.15

Viscosity Brookfield (mPa.s @23°C with spindle T-D)

Resin **SAF30-LOT** = 130 000-140 000

Hardener **SAF30-LOT** =50 000-60 000

Thixotropic*

* remains non-sag when applied on vertical surfaces.

1MPa = 145,0 psi

Physical properties

Hardness (Shore D):	70-80
% elongation at break *:	35
Strain at break ASTM D648 (%):	200
Tensile strength at break (MPa) *:	14 -15

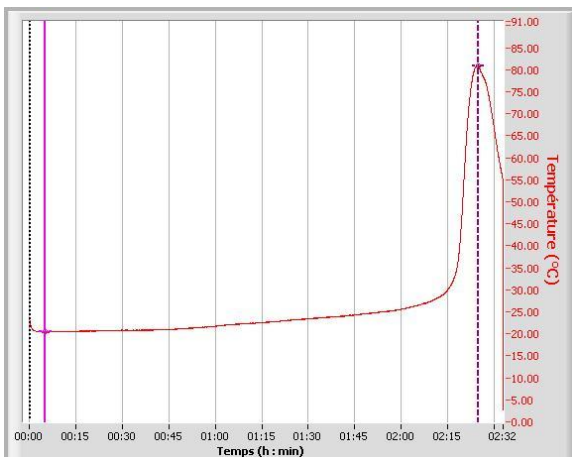
*: with ISO 527-1A norm.

Glass transition:

DMA@1Hz(°C)	86
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Kinetics of reaction

Handling time @24°C (min)	2 hours
Working time@24°C* (min)	Until 1H30



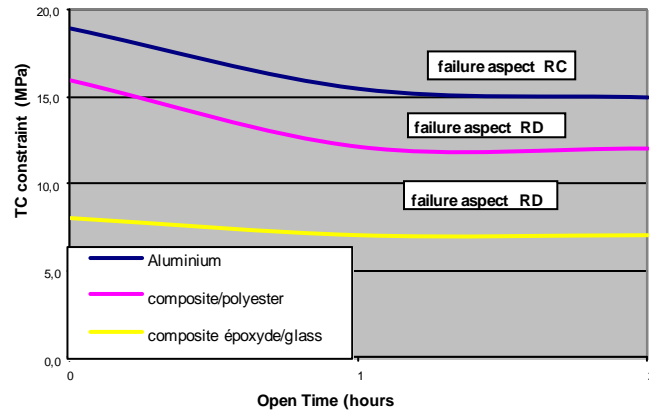
Full cure (hours)	48
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Mechanical properties

▪ Lap shear strength* (MPa) with NF1465 on:

Aluminium 6060**	19.0
Stainless steel**	20.0
Steel**	21.0
Pmma	substrate failure
ABS	substrate failure
FRP	16,0 delamination failure

Lap shear strength according to the assembly time



▪ Impact Strength ISO 113-43 : 15-20 N/mm

On galvanized steel specimen (0.5 mm joint).

▪ 180° peel test on aluminium (@100mm/min and 25mm wide) :

Max Strength (N)	110.5
Average strength (N)	90.1
Wrenching strength (N/mm)	4.0

*Data is typical and not to be used for specification purposes.

** Cohesive failure.

Surface preparation

Use AEC **T700** to remove grease, loose contamination or poorly adhering oxides from metal surfaces. Most plastics require a simple cleaning before bonding. Some may require sanding for best performance.

Weathering & ageing tests

Lap shear strengths and weathering and ageing tests

Lap shear strength (MPa) regarding the accreditation NF1465 after cycle D3.

Cycle D3 NF EN ISO 9142 3 ageing cycles (72hours).

Cataplasma test inspired by NF EN 29142 (70°C during 7 days 100% humidity and 2h00 to -20°C)

Storage and packaging

SAF30 LOT is available in 50mL, 490 and 825mL cartridges and 20L or 200L drums
For maximum shelf life, keep in a cool and dry area; avoid direct contact with heat and sunlight.

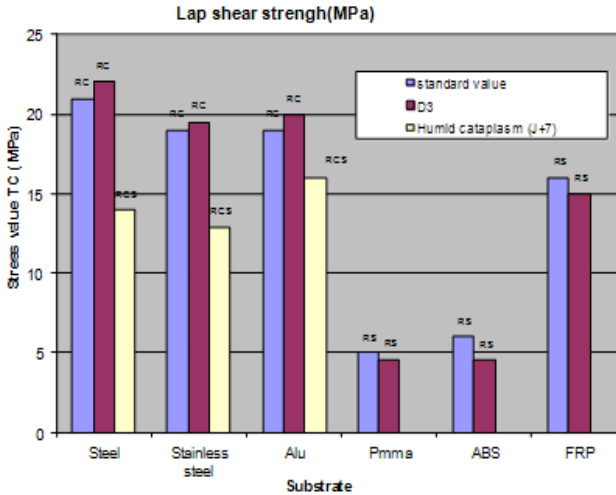
Storage temperature: 15 - 25°C

Shelf life is 9 months in unopened original packaging at delivery date.

Handling

Adhesive sensible to the air inhibition.
Clean the adhesive excess.
Do not use as filled joint.
Work in a well ventilated area
Do not swallow!
Do not put directly in touch with solvent.
Do not use to bond honeycombed foam.

Flammable. May causes sensitization by skin contact. Irritating to eyes, and skin.



RC : cohesive failure
RCS : superficial cohesive failure
RS : Substrate failure
RD : Delamination failure

Before using this or any AEC POLYMERS product, refer to the Material Safety Data Sheet (MSDS) and label for safe use and handling instructions.

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Product use form Two component adhesives



Hygiene and safety

Before use, be sure that:

- The room is ventilated or equipped with extractor hood.
- You wear gloves (in nitrile for the acrylic bonds and in latex for the epoxies).
- You wear goggles.
- You learn about the Material safety datasheet.



The Bonding

Before bond (metal and thermoplastics):

- Dust and remove grease marks with the AEC T700 and a non-fluffy duster.
- Pulverize the T700 at the place where you want to bond and clean with the duster
- If the substrate is in aluminum just dust with the duster.



Use/preparation of a bi-component cartridge

- Remove the lid (photo1)
- Put the cartridge in the gun (photo2)
- Put the pistons at the right level by starting up the gun until the two components go out at the same time (photo3).
- Fit together the mixer and the cartridge thanks to the lid (photo4).
- Drain 5 to 6 cm of bond in order to obtain a good mixing, you have to do it at each mixer change (photo5).



Photo1



Photo 2



Photo 3



Photo 4



Photo 5