ADERIS® 8180
Hardener 1101

DATA SHEET
April 2025

Product description:

ADERIS® 8180-1101 is a two-component methacrylate structural adhesive that cures at room temperature and has excellent shear and peel strength over a wide temperature range.
ADERIS® 8180-1101 is a slow-setting adhesive.
ADERIS® 8180-1101 has excellent resistance to extreme weather conditions and to chemicals.
ADERIS® 8180-1101 is suitable for bonding a large number of materials, including aluminium, stainless steel, some painted (epoxy and polyester) steels, composites (FRP, GRP, gelcoats) and thermoplastics.

Properties of the components:

Component A (resin 8180)

Density* @21°C	0.92 - 0.96
Appearance	White
Viscosity @21°C, Brookfield RVT, T-E @10 rpm, mPa s	600,000 - 900,000
Viscosity* @21°C cone and plate CP50-1 @ $10s^{-1}$, mPa s	170,000 - 240,000

Component B (hardener 1101)

Density* @21°C	1.78 - 1.81
Appearance	White
Viscosity @21°C, Brookfield RVT, T-D @10 rpm, mPa s	100,000 - 200,000
Viscosity* @21°C cone and plate CP50-1 @ $10s^{-1}$, mPa s	20,000 - 40,000

Properties of the mixture:

Mixing ratio by volume (component A: component B)	10: 1
Mixing ratio by weight (component A: component B)	Approx. 5.3 : 1
Colour of the mixture	White
Open time @21°C, min.	90 - 110
Bonding handling time* (ISO 4587) (25% of maximum performance) @21°C, min.	150 - 180
Application temperature, °C	+5 à +30
Minimum/maximum clearance*, mm	0.3 / 40

Properties of the cured adhesive:

Colour* (1 mm thick)	White
Tensile shear strength (ISO 4587) 2024-T3 abraded aluminium @21°C (@300 microns), MPa:	> 8
Tensile strength* @21°C (ISO 527), MPa	15 - 18
Elongation at break* @21°C (ISO 527), %	50 - 80
E-modulus* DMA @1 Hz, @21°C, MPa	n/a**
Tg DMA*, °C	n/a**
Usage temperature, °C	-30 à +80

** The data represents typical values and should not be considered as a specification*
*** n/a: not available currently*

Surface preparation:

To obtain optimal bonding performance, the surfaces to be bonded must be clean, dry and free from all contamination such as paint, grease, dust, oxide films, plasticisers, strippers, release agents or other surface contaminants. The importance of surface preparation is directly linked to the level of performance and environmental resistance required by the user.
The following surface preparation methods are suggested for conventional materials.
For metals and plastics:
1 - Abrade or sand using fine-grain products (grain size 120 for example).
2 - Wipe with a clean cloth dampened with isopropyl alcohol.
For glass:
1 - Wipe with a clean cloth dampened with isopropyl alcohol.

Conditions of use:

ADERIS® 8180-1101 should ideally be used between 18 and 23°C (product and working environment) to guarantee optimal mixing quality and bonding performance. Polymerisation begins immediately after correct mixing of the resin (component A) and the hardener (component B). An application temperature below 15°C slows down curing and increases the viscosity of the adhesive. Above 25°C, curing is accelerated and the viscosity of the adhesive is lower, the maximum acceptable usage temperature being 30°C. Maximum performance is achieved after 12 to 24 hours depending on the temperature and the thickness of the bond line. The surfaces to be bonded must be kept in contact throughout the curing period. The bond line must not be subject to stress at any time during the curing phase.
For optimal bonding performance, we recommend using the 490-ml cartridge system with a 24-element static mixer and a pneumatic applicator gun to dose and dispense the adhesive correctly:
1 - Load the cartridge into the applicator gun and remove the caps.
2 - Level the pistons by discharging a small amount of adhesive to ensure that both sides are even.
3 - Connect the mixer and test it by dispensing a 10-cm bead of adhesive.
4 - Apply the adhesive to the substrate and join the surfaces to be bonded as soon as possible. Use enough adhesive to completely fill the join when the parts are clamped together. Hold firmly in place until handling strength is achieved.
Once the parts are assembled, do not expose the adhesive to air again. To achieve proper alignment, assembled components must be repositioned by sliding.
ADERIS® 8180-1101 can be applied using an automatic two-component pumping system optionally coupled to a temperature-control device. Any metal parts in contact with the adhesive and hardener must be made of stainless steel.
It is important to clean excess adhesive from the work area and application equipment before it hardens. Solvents such as isopropyl alcohol or methyl ethyl ketone (MEK) are suitable for cleaning equipment and tools.

Packaging:

Dispensing system with 50, 250 and 490ml cartridges, 20 kg buckets (resin or hardener) and 180 kg drums (resin).

Storage and handling conditions:

ADERIS® products must be stored in their original containers, kept closed in a clean, dry room away from ultraviolet light, at a temperature between +5°C and +25°C. For optimal shelf life, storage temperatures of +4°C to +10°C are recommended. Storage below +2°C or above +25°C may have a detrimental effect on the product's properties. Allow the product to return to room temperature before use.
To avoid contaminating the product, it should never be removed from and then returned to its original container.
JACRET SA cannot be held responsible for a product that has been stored under conditions other than those previously indicated or that has been contaminated by improper use.

Expiry date at shipping date for resin 8180 (component A): 6 to 12 months
Expiry date at shipping date for hardener 1101 (component B), including cartridges containing the hardener: 6 to 9 months

Caution:

Before using this or any other ADERIS® product, consult the safety data sheet for instructions on use and handling. ADERIS® 8180-1101 is flammable. Keep containers tightly closed after use, in a ventilated area and away from light.

For industrial/commercial use only. This product should only be applied by trained personnel. Not to be used for domestic applications.

Important notes:

The information and recommendations for use contained in this data sheet are based on our experience and are believed to be accurate as of the date of publication. **We disclaim any warranty on our part in the event that the recommendations contained in this document are not followed. The products should be used only in accordance with the recommendations for use.**
Most of the values in this data sheet are typical values as not all tests are conducted on each product batch. If you have any particular questions regarding the specifications for this product, please contact our customer service department.
This product is likely to be used - in very varied bonding applications - according to very different methods of application - and in specific environments that are beyond our control.
Consequently, being unable to control the end use of the product, our warranty is limited to normal use of the product under conditions corresponding to its technical properties and our recommendations for storage and use as indicated in this document, which the user acknowledges having read. It is the responsibility of the user to inspect the product and ensure that it is appropriate for their intended use.

NOTHING HEREIN IS TO BE INTERPRETED AS A WARRANTY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR APPLICATION. IN ALL CIRCUMSTANCES, THE USER IS RESPONSIBLE FOR DETERMINING THE APPLICABILITY OF THIS INFORMATION AND THESE RECOMMENDATIONS AND THE SUITABILITY OF A PRODUCT FOR THEIR PARTICULAR APPLICATION UNDER THEIR OWN CONDITIONS OF USE.

Some products can be toxic and should be handled with special care. The user must obtain safety data sheets from JACRET SA containing detailed information on toxicity and the appropriate procedures for transport, handling and storage, and must comply with all applicable environmental and safety standards.

Hazards, toxicity and behaviour may differ when the product is used with other materials and depend on circumstances or other factors. The known risks, toxicity and behaviour must be determined by the user, who must inform the persons handling and processing the product, as well as the end users.