

Description..... ADERIS[®] 8141[™] is fast-setting methacrylate adhesive system curing at room temperature for a wide variety of substrates.

ADERIS[®] 8141[™] develops high peel and high impact strengths over a wide range of temperature.

ADERIS[®] 8141[™] provides outstanding long-term adhesion under rigorous climate conditions and an excellent chemical resistance.

Applications..... Bonding applications on various substrates including aluminium, stainless steel, ABS, PVC, Polycarbonate, glass and composites.

Handling and Application

Temperature of use: ADERIS[®] 8141[™] should be use between 18°C to 23°C for optimal mixing quality and bonding performances. Temperature below 15°C will slow the cure and increase the viscosity of resin and hardener; above 25°C will accelerate the cure rate and decrease the viscosity of the resin and the hardener.

Mixing: To reach highest bonding performances, it is recommended that either meter mix equipment or hand-held cartridge with static mixing nozzles at 24 mixing elements be used to properly ratio and dispense the adhesive.

Applying: Bonding surfaces should be clean, dry, and free of contamination: such as paint, grease, dust, oxide films, plasticizers, removal agents and all other surface contaminants.

1. Load the cartridge into the applicator gun and remove the end caps.
2. Level the plungers by expelling a small amount of adhesive to ensure both sides are level.
3. Attach mixing nozzle and expel a mixer's length of adhesive.
4. Apply adhesive to substrate and mate the parts within the working time of the adhesive. Use enough material to completely fill the joint when parts are clamped. Clamp in position until adhesive reaches handling strength. Once parts are mated, do not re-expose adhesive to air. To achieve proper alignment, mated parts should be repositioned by sliding.

Curing: Cure begins immediately once adhesive and accelerator are mixed. Higher temperature at maximum 65°C will speed up curing. Complete cure will take 8-24 hours depending on temperature and bondline thickness. Mating surfaces must be held in contact during the entire cure period. Parts should remain undisturbed during the interval of time between the material's open time and fixture time. After the fixture time is achieved the material has reached handling strength. Adhesive will cure to a tack-free surface.

Cleanup: It is important to clean up excess adhesive from the work area and application equipment before it cures. Prior to the adhesive cure, solvents such as isopropyl alcohol, acetone or methyl ethyl ketone (MEK) are suitable for cleaning equipments and tools.

TYPICAL PROPERTIES

Typical Properties of each part before mixing *

Part A (Adhesive)

Specific Gravity @ 21°C.....	0.96 to 0.98
Appearance.....	Cream, beige
Viscosity @21°C, cP (Brookfield, spindle T-C, speed 10rpm).....	150,000 to 250,000 (ISO 2555)

Part B (Accelerator)

Specific Gravity @ 21°C.....	1.21 to 1.25
Appearance.....	white
Viscosity @21°C, cP (Brookfield, spindle T-B, speed 10rpm).....	70,000 to 130,000 (ISO 2555)

Typical Mixed Properties & Typical Curing Performances *

Mix ratio by volume (Part A : Part B).....	10 : 1
Immediate Mixed Appearance (1 mm thickness).....	Off white
Working Time @21°C on 20 gram mass (ISO 2535), min.....	6 – 8
Time to handle @ °C in seconds (1 MPa):	
25°C.....	600
40°C	450
60°C	360
80 °C	90
100°C	50

DMA E Module, MPa *.....	820 – 980
DMA Tg, °C *.....	145
Linear Shrinkage, ISO 1675 %	2.5
Elongation at break * @ 21°C (ISO 527-2), %	15 – 30
Tensile Strength at break, ISO 527-2 MPa	15
Tensile Modulus ISO 527-2 MPa	200 -400

Typical Cured Properties & Bond Performance

Block shear strength, ISO 13445 @ 150 µm :

ABS	15 MPa
PVC	15 MPa
Polycarbonate	15 MPa
PA 66 50% glass fiber	18 MPa
Tempered Glass	14 MPa

Lap Shear Strength @ 21°C (ISO 4587) @ 150 µm:

Steel	26.5 MPa
Anodized aluminium	29 MPa
CFRP	14.5 MPa
Stainless Steel	24 MPa

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

Packaging	Hand-held Cartridge dispensing system, 50 ml, 250 ml and 490 ml, 10:1 by volume, 20 kg and 180 kg (Resin), 20 kg (hardener).
Cautionary Information	<p>Before using this or any ADERIS[®] product, refer to the Material Safety Data Sheet for safe use and handling instructions.</p> <p>ADERIS[®] 8141™ is flammable. Keep containers tightly closed after use in a ventilated area and away from ultraviolet light. Do not store or use near heat, sparks or open flame.</p> <p><i>For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.</i></p>
Shelf Life - Storage and handling conditions	<p>Shelf life is six months when stored in original unopened container in a dry location from +4°C to +8°C. Storage greater than +8°C can adversely reduce the shelf life of the product. Storage below +2°C or greater than 25°C can adversely affect product properties.</p> <p>Allow product to return to room temperature before using. This product must be kept closed away from ultraviolet light. Product removed from hand-held cartridge may be contaminated during use. Do not return product to original hand-held cartridge. SA JACRET cannot assume responsibility for product which has been stored or contaminated under conditions other than those previously indicated.</p>
Note	<p>The information given and the recommendations made herein are based on our experience and are believed to be accurate at the date of publication. No warranty being granted in the event that the specifications laid down in this document are not complied with. Products should be used only according to the recommendations of use.</p> <p>Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For special specification requirements on this product, contact our customer support.</p> <p>The behavior of the products mentioned in this publication in manufacturing processes and their suitability for use in any environment are dependent upon various conditions such as chemical compatibility, temperature and other variables, which are not known by SA JACRET. In as much as SA JACRET has no control over the manner in which others may use this information, it does not guarantee the results to be obtained. It is the responsibility of the user to evaluate the conditions of manufacture and the final product under actual end use and to advise and adequately warn purchasers and users.</p> <p>NOTHING HEREIN IS TO BE INTERPRETED AS A WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT WITHOUT LIMITATION, AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE UNDER ITS OWN OPERATING CONDITIONS.</p> <p>Some products may be toxic and require special precautions in handling. The user should obtain Safety Data Sheets from SA JACRET containing detailed information on toxicity, and proper procedures for shipping, handling and storage, and comply with all applicable standards regarding environment and safety. Hazards, toxicity and behavior may differ when they are used with other materials and depend on circumstances or other processes. The known risks, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.</p> <p>The manufacture of materials is the subject of granted patents and patent applications, and the freedom to operate patented processes is not implied by this publication.</p> <p>ADERIS[®] is a trademark of SA JACRET or one of its subsidiaries.</p>