ADERIS®

STRUCTURAL METHACRYLATES ADHESIVES

EXCLUSIVE

Worldwilde Patented Technology

ADERIS®: ADHESIVES EXPERTISE

With more than 30 years of experience in adhesives and sealing technology, and facilities located near Paris (France), ADERIS® develops and produces innovative structural adhesives for the electronics, aerospace, automotive, railway & transportation, building & construction and general industries sectors.

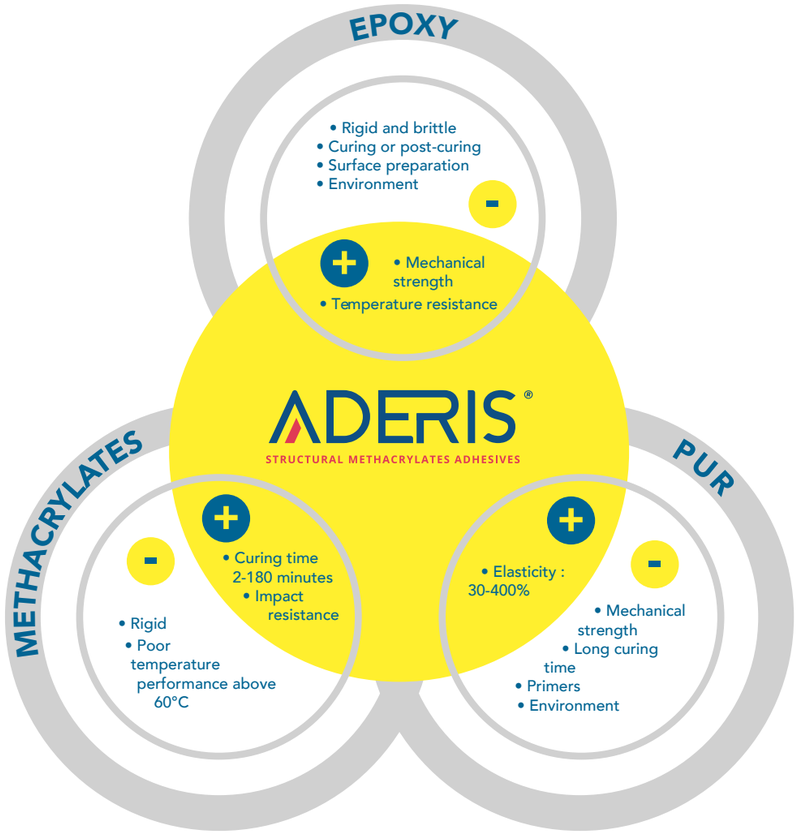
ADERIS® is responding to new industrial challenges with a dedicated range of products for the new requirements such as:
- lighter weight
- fast processing
- Design improvment
- reliable bonding
- bonding to various substrates such as anodized aluminum, titanium, polyamides, inks, glass, treated metal and thermoplastics.

ADERIS®: R&D AND CUSTOM FORMULATION

ADERIS® owns five worldwide patents going back to 2009 and works with the most advanced university team in France.

In order to stay at the forefront of current industrial needs, ADERIS® is member of numerous French industrial development and research clusters, such as MOVE'O (Automotive), ASTECH (Aerospace) and EMC2 (Multi-material design). ADERIS® is a founding member of MACS (Mastery of structural adhesive assembly, with Eurocopter, Airbus Group, Faurecia, etc.)

ADERIS® is pushing back the boundaries of 2-part structural methacrylate adhesives, with major innovations and improvements in the MMA technology.



ADERIS®: INNOVATIVE & EXCLUSIVE PERFORMANCE CHARACTERISTICS IN MMA ADHESIVES:

- Unequalled tear strength on many materials of up to 25 N/mm combined with a high shear strength of up to 29 MPa
- Very low shrinkage; flexibility and elasticity over the entire range
- High strength at high and low temperatures and in extreme environmental conditions
- High resistance to vibration, wear, impact and chemicals
- Technology free from CMR substances and recyclable

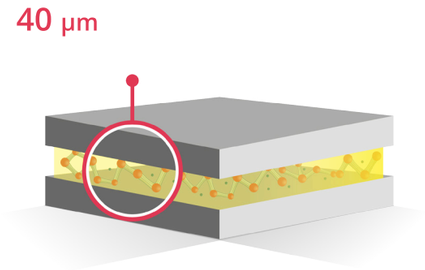
ADERIS® TECHNOLOGY

BENEFITS

DESIGN IMPROVEMENT

Very low linear shrinkage and high performance, allowing maximum quality of visible bonding; new design with high peel, tensile, shear and impact strengths.
Exclusive and patented technology

High reactivity from 40 µm

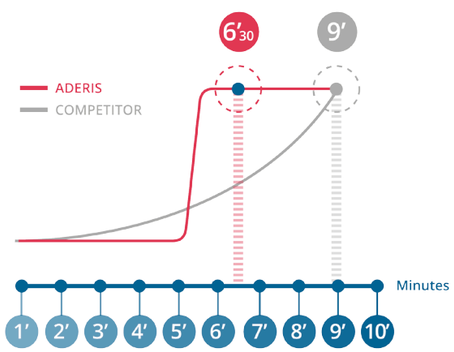


BENEFITS

ADHESION, RELIABILITY, PRODUCTIVITY

Stable viscosity during the open time, providing better wettability and adhesion. Easy and fast processing with very low deviation in mass production. Very low outgassing. The system withstands thermal variation with high Tg of ADERIS® MMA up to 145°C.
Exclusive and patented technology

ADERIS L Cure System®

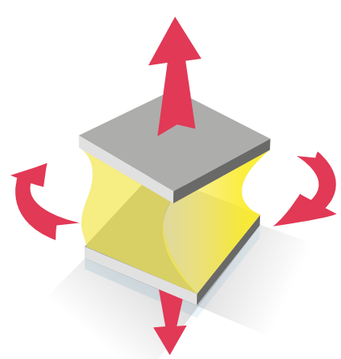


BENEFITS

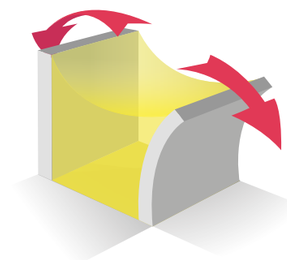
ADHESION, RELIABILITY, PRODUCTIVITY

High mechanical bonding strengths in all directions of loading, with exceptional peeling resistance.
Combination of high stiffness, damping effect and long term durability.
Exclusive and patented technology

ADERIS®, Isotropic Structural Adhesives



ADERIS® High Peel Strength

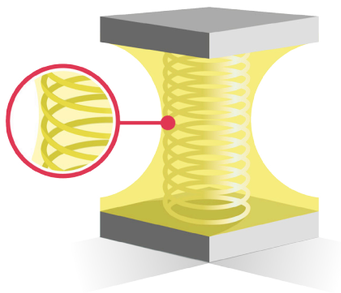


BENEFITS

HIGH BONDING PERFORMANCE

ADERIS® structural bonding technology offers full cohesive failure from 40 microns in peeling tests; to ensure optimum adhesion on numerous substrates such as technical composites andthermoplastics (polyamides).
Exclusive and patented technology

ADERIS® High Damping Effect

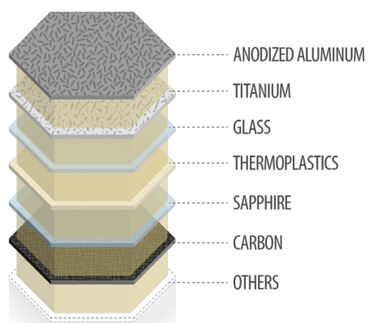


BENEFITS

HIGH IMPACT, FATIGUE, VIBRATION AND FLEXURAL STRENGTH

ADERIS® methacrylate structural adhesives offer outstanding damping performance on dynamic parts over a wide range of temperatures and even after extremely demanding ageing tests used in the automotive industry. ADERIS® offers high energy absorption during impact, with multiplication of bonding strength by 4 in all loading directions, protecting the body structure.
Exclusive and patented technology

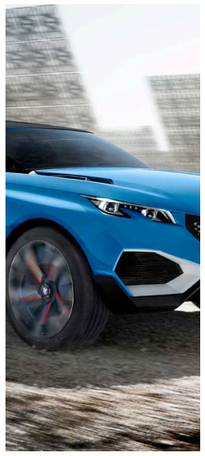
ADERIS®, Exclusive polymer performances

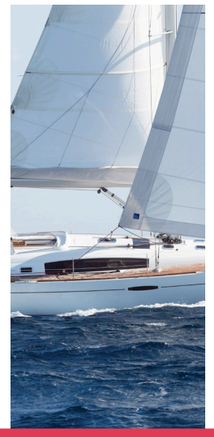


BENEFITS

BONDING RELIABILITY IN MULTI-MATERIAL ASSEMBLIES

High elongation and low modulus of exclusive ADERIS® polymers allow minimum bonding stress between dissimilar substrates with different linear expansion coefficient, such as anodized aluminium, titanium, polyamides, inks, glass, treated metal, thermoplastics and polyurethanes.
Exclusive and patented technology





MULTI-PURPOSE STRUCTURAL BONDING

Suitable for bonding small areas and for applying fine bond lines. This range meets the requirements for elevated shear stress. These products have a high modulus.

They adhere to standard thermoplastic materials (with the exception of polyolefi ns), glass, composites and bare metals. For bonding to painted or treated metals, we recommend using the ADERIS™ 8164.

Aderis Reference	8140	8141	8041S
Open Time (at 21°C)	3-5 min	6-8 min	1-3 min
Fixture times (at 21°C)	6-10 min	9-12 min	4-6 min
Viscosity cps (at 21°C)	150,000-250,000	150,000-250,000	200,000-350,000
Shear strength	21-27 Mpa	20-27 Mpa	18-24 Mpa
T-Peel	10-14 N/mm	10-16 Nmm	8-14 N/mm
Tensile elongation	10-25%	10-25%	10-25%
Max bond gap	10 mm	10 mm	3 mm

BONDING OF TREATED METALS WITHOUT PRIMER

ADERIS™ 8164 methacrylate adhesives combine several innovative technologies patented worldwide.

They offer high peel and shear strengths on a number of treated metals such as galvanized or electrogalvanized steel, anodized aluminium etc. They can also be used for thick joint bonding on other materials such as metals, composites, glass and thermoplastics.

These three grades have very low shrinkage with an elongation at break which is suffi cient to avoid placing the bond interfaces under a high level of stress. These multiple properties also allow for differential expansion strains in the bonded materials over long sections.
ADERIS™ products 8164 have high impact and vibration resistance, even in extreme weather conditions.

Aderis Reference	8164
Open Time (at 21°C)	14-20 min
Fixture times (at 21°C)	30-40 min
Viscosity cps (at 21°C)	150,000-250,000
Shear strength	15-21 Mpa
T-Peel	12-18 N/mm
Tensile elongation	80-120%
Max bond gap	5 mm

FLEXIBLE PEEL-RESISTANT BONDING

This range combine several innovative patented technologies providing high peel and shear strength on metals. They can be used to produce extremely reliable structural bonds, particularly for the assembly of different materials with very simple preparation for bonding: metals, composites, thermoplastics and glass.
These three grades have very low shrinkage with an elongation at break which is suffi cient to avoid a high level of stress in the bond interfaces. These multiple properties also allow for differential expansion strains in bonded materials over lengths of more than several metres.
ADERIS™ products offer high impact and vibration resistance, even in extreme weather conditions.

Aderis Reference	8061	8062	8162	8161HV
Open Time (at 21°C)	4-6 min	15-20 min	15-20 min	6-9 min
Fixture times (at 21°C)	10-12 min	25-35 min	35-45 min	10-14 min
Viscosity cps (at 21°C)	200,000-300,000	200,000-300,000	100,000-180,000	200,000-300,000
Shear strength	17-22 MPa	17-25 MPa	18-24 Mpa	17-25 Mpa
T-Peel	14-20 N/mm	14-20 N/mm	12-22 N/mm	14-20 N/mm
Tensile elongation	80-110%	80-110%	80-120%	80-110%
Max bond gap	20 mm	20 mm	5 mm	20 mm

THICK JOINTS AND VERTICAL APPLICATIONS

This range combine several patented innovative technologies that offer high peel and shear strength on a number of materials with large joint thicknesses. These adhesives can be applied as a thick line to the vertical of up to 50 mm over large service temperature ranges. They can be used to produce extremely reliable structural bonds,
particularly for the assembly of different materials such as metals, composites, thermoplastics and glass.

These three grades have very low shrinkage with a suffi cient elongation at break to avoid placing the bond interfaces under a high level of stress. These multiple properties also allow for differential expansion strains in the bonded materials over lengths of several metres.

Theses products have high impact and vibration resistance, even in extreme weather conditions.

Aderis Reference	8067	8068	8069	8120	8171
Open Time (at 21°C)	4-6 min	15-20 min	45-65 min	90-110 min	45-65 min
Fixture times (at 21°C)	10-12 min	25-35 min	120-180 min	150-180 min	120-150 min
Viscosity cps (at 21°C)	400,000-600,000	300,000-450,000	300,000-500,000	300,000-450,000	300,000-450,000
Shear strength	14-20 Mpa	14-22 MPa	14-18 Mpa	7-11 Mpa	7-11 Mpa
T-Peel	12-18 N/mm	12-18 N/mm	10-16 N/mm	-	-
Tensile elongation	120-160%	120-160%	120-160%	40-80%	40-80%
Max bond gap	55 mm	50 mm	50 mm	40 mm	40 mm

Data provided as a guide only. For further information and details of our products, refer to the product data sheets which are available on request.

ADVANCED STRUCTURAL METHACRYLATE ADHESIVES

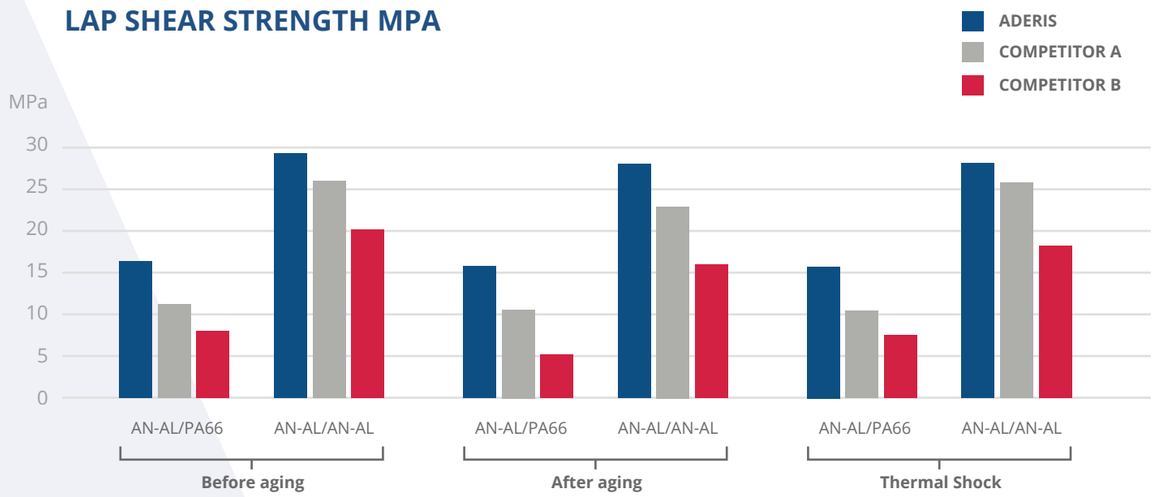
Ref.	Description	Color (cured adhesive)	Viscosity (cps at 21)°C	Open Time (at 21°C)	Fixture times (at 21°C)	Tensile elongation	Shear strength	T-Peel **	Max bond gap	Metals	Thermo-plastics	Composites	other
8041S	Versatile, low to medium games, very fast	White Cream	200,000-350,000	1-3 min	4-6 min	10-25%	18-24 Mpa	8-14 N/mm	3 mm	✓	✓	✓	Consult us
8061	Versatile with low shrinkage, high-performance flexible bonding, quick plugs	White Cream	200,000-300,000	4-6 min	10-12 min	80-110%	17-22 MPa	14-20 N/mm	20 mm	✓	✓	✓	Consult us
8062	Versatile with low shrinkage, flexible bonding with high performance slow grip	White Cream	200,000-300,000	15-20 min	25-35 min	80-110%	17-25 MPa	14-20 N/mm	20 mm	✓	✓	✓	Consult us
8067	Versatile, medium play; Very low shrinkage, very high peel strength	White Cream	400,000-600,000	4-6 min	10-12 min	120-160%	14-20 Mpa	12-18 N/mm	55 mm	✓	✓	✓	Consult us
8068	«Versatile with low shrinkage, high-performance flexible bonding, high gaps, standard socket»	White Cream	300,000-450,000	15-20 min	25-35 min	120-160%	14-22 MPa	12-18 N/mm	50 mm	✓	✓	✓	Consult us
8069	Versatile with low shrinkage, flexible bonding at high performance, high play, slow grip	White Cream	300,000-500,000	45-65 min	120-180 min	120-160%	14-18 Mpa	10-16 N/mm	50 mm	✓	✓	✓	Consult us
8120	Flexible structural bonding of composites and plastics, low shrinkage, high gaps, excellent UV resistance, very slow grip	White	300,000-450,000	100-120 min	150-180 min	40-80%	7-11 Mpa	-	40 mm	✗	✓	✓	Consult us
8140	Multipurpose; Important games, high coat resistance, fast setting	White Cream	150,000-250,000	3-5 min	6-10 min	10-25%	21-27 Mpa	10-14 N/mm	10 mm	✓	✓	✓	Consult us
8141	Multipurpose; Important games, high coat resistance	White Cream	150,000-250,000	6-8 min	9-12 min	10-25%	20-27 Mpa	10-16 Nmm	10 mm	✓	✓	✓	Consult us
8161HV	Versatile with low shrinkage, flexible bonding with high performance slow grip	White Cream	200,000-300,000	6-9 min	10-14 min	80-110%	17-25 Mpa	14-20 N/mm	20 mm	✓	✓	✓	Consult us
8162	Versatile, medium play; Very low shrinkage, very high peel strength	White Cream	100,000-180,000	15-20 min	35-45 min	80-120%	18-24 Mpa	12-22 N/mm	5 mm	✓	✓	✓	Consult us
8164	high peel and shear strengths on a number of treated metals such as galvanized or electrogalvanized steel	Green / Blue	150,000-250,000	14-20 min	30-40 min	80-120%	15-21 Mpa	12-18 N/mm	5 mm	✓	✓	✓	Consult us
8171	Flexible composite bonding of composites and plastics, low shrinkage, high gaps, excellent UV resistance, very slow grip	White	300,000-450,000	45-65 min	120-150 min	40-80%	7-11 Mpa	-	40 mm	✗	✓	✓	Consult us

Metals : aluminium, cast iron, painted metals, plated metals, stainless steel, galvanised steel, cold rolled steel brass, copper
Thermoplastics : PMMA, ABS, PVC, polyamides, polyesters, polycarbonate, polyurethanes
Composites : gelcoat, SMC, resines phenolics, RTM, laminates
Others : glass, ceramic, concrete

ADERIS PRODUCTS	Mix Ratio by volume	Appearance color	Viscosity cP PART A	Viscosity cP PART B	Linear Shrinkage %	Open Time (@21°C)	Fixture times @21°C (150 um tickness on AN/AL)
A1-5	1/10	Light Blue	40.000 - 60.000	10.000 - 30.000	4	5-7	10-12
A1-10	1/10	Light Blue	40.000 - 60.000	10.000 - 30.000	4	10-12	17-22
A1-20	1/10	Light Blue	40.000 - 60.000	10.000 - 30.000	4	20-25	32-45
A2-3	1/10	Light Blue	150.000 -250.000	20.000 - 50.000	2,5	3-5	7-9
A3-10	1/10	Light Blue	70.000 -130.000	20.000 - 50.000	3	6-9	10-12
A4-10	1/10	Light Blue	150.000 - 250.000	20.000 - 50.000	2,5	6-9	10-12

Tensile elongation %	E-Module (DMA) @21°C	Tg (DMA)	Shear strength Mpa (AN/AL)	T-Peel N/mm (AN/AL)	Max temp °C	Min bond gap
15-25	950 MPa	145°C	27	12	120 -210	40 um
15-25	950 MPa	145°C	27	12	120 -210	40 um
15-25	950 MPa	145°C	29	12	120 -210	40 um
15-25	950 MPa	140°C	27	11	120-204	40 um
100	800 MPa	125°C	24	22	110-204	80 um
100	750 MPa	125°C	22	24	110-204	80 um

LAP SHEAR STRENGTH MPA



QUALITY & ENVIRONMENT

The quality of our products contributes to sustainable development and the protection of man and the environment. the quality assurance system is an integral part of the company in line with the following objectives :

- risk management
- reliability of production tools
- optimization of the quality of the products throughout their life cycle
- reduction of our carbon footprint
- conservation of natural resources

ALL ADERIS® FORMULATION ARE DEVELOPED UNDER ROHS SPECIFICATION AND COMPLY WITH REACH REGULATIONS

ADERIS® supports the REACH project (Registration, Evaluation and Authorization od Chemicals) which is designed to provide better protection for health and the environment both for its employees and for users of its products.
The company is committed to this philosophy on a daily basis through its research and development work for developing and expanding its range of products.
This philosophy is part of the innovation process and has already allowed for the development of new sustainable and more succesful technologies which have been **patented worlwide.**

ADERIS® AND PARTNERS

ADERIS® and its distributors offers full engineering services and expertise at the production site to develop and support customer projects.

ADERIS®
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