

ALTECO Industrial High Performance Adhesive Catalogue

Create & Innovate
High Performance Adhesives

Create & Innovate



人と環境に優しい接着剤づくりへ
挑戦を続けています



High Performance Adhesives

ALTECO "High Performance Adhesives solve bonding problems in various industries, such as electronics, automobile, machinery, and medical devices.

■Anaerobic Adhesives

High performance

These products exhibit high adhesion to metallic substrates.
For thread locking, retaining, and structural bonding.

Highly reliable

Excellent thermal, moisture, environmental, and chemical resistance

Environmental friendly

Solvent free / EU RoHS compliant

■Light Cure Adhesives

Fast cure

The products' fast curing performance enables minimum production cycle time
LED light curing products are also available

Environmental friendly

Solvent free / EU RoHS compliant

■Hybrid Adhesives

Speedy and strong

One component
Instant fixture with light cure acrylics & excellent performance
with thermal curing epoxy

Excellent durability

Excellent thermal, moisture, environmental, and chemical resistance

Environmental friendly

Solvent free / EU RoHS compliant

■One Component Epoxy Adhesives

High workability

One component, No mixing-Increased throughput

Environmental friendly

Solvent free / EU RoHS compliant

Superior strength

Excellent performance on variety of substrates

Highly reliable

Excellent thermal, moisture, environmental, and chemical resistance

■High performance adhesive is made to order, contact us for selection

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■ Anaerobic Adhesives

In the absence of air, the product starts to cure

metal surface + block air = curing

Thread-locking adhesives For thread-locking

Product code	AY-1011	AY-1021	AY-1031	AY-1041
Application	Thread-locking	Thread-locking	Thread-locking	Thread-locking
Features	Low strength	Medium strength	High strength	Penetration later
Specific gravity (d_{4}^{20})	1.1	1.1	1.1	—
Fixture-time*	15min	15min	15min	35/sec With using AY-910
Appearance	Purple (Fluorescent)	Blue (Fluorescent)	Red (Fluorescent)	Green
Viscosity(mPa·s)	350 (Thixotropic)	1000 (Thixotropic)	600	15
Breakaway/Prevail torque(N·m)	6 / 2	14 / 6	38 / 28	17 / 31
Continuous service temperature range(°C)	~150	~150	~150	—
Recommended thread diameter	M12 or less	M20 or less	M20 or less	M12 or less
Package size	50ml	50ml	50ml	250g

Test method : JIS K6833 (1994) compliant

Retaining compound For bonding of cylindrical fitting parts, e.g. motor shafts and bearings. Also for bonding of laminated steel plates. Recommended for use with AY-910.

Product code	AY-2300	AY-2310	AY-2410	AY-2208	AY-2211
Application	Retaining	Retaining /Laminated steel plate	Retaining /Laminated steel plate	Retaining	Retaining
Features	Standard	High strength	High strength /high heat resistance	UV and /or thermal fillet cure	UV and /or heat cure
Specific gravity (d_{4}^{20})	1.1	1.1	1.1	1.1	1.1
Fixture-time*	120sec	10sec	15sec	15sec	15sec
Appearance	Blue (fluorescent)	Blue	Turquoise (fluorescent)	Green	Green
Viscosity(mPa·s)	150	500	2500 (Thixotropic)	2500	650
Compressive shear strength (N/mm ²)	18	30	20	30	25
Applicative maximum clearance	0.15	0.15	0.25	0.25	0.20
Continuous service temperature range(°C)	~150	~150	~200	~150	~120
Package size	250g	250g	250g	250g	250g

*Fixture time / With the activator N/mm²=MPa

Structural adhesives For bonding flat parts, e.g. speaker, magnet motor. Recommended for use with AY-910.

Product code	AY-3601	AY-3602	AY-3603
Application	Motor magnet	Motor magnet	Motor magnet
Features	UV fillet cure	UV fillet cure	UV fillet cure
Specific gravity (d_{4}^{20})	1.1	1.1	1.1
Fixture-time*	20sec	20sec	20sec
Appearance	Blue	Blue	Blue
Viscosity(mPa·s)	12000	5000	2500
Hardness(Shore D)	60	60	60
Tg(°C)	40	40	40
Tensile shear strength(N/mm ²)	20	20	20
Continuous service temperature range(°C)	~120	~120	~120
UV curing characteristics (×100mW)/	25sec	25sec	25sec
Package size	250g	250g	250g

*Fixture time / With using the activator

Activator (For anaerobic adhesive)

Accelerate cure speed of anaerobic products

Product code	AY-910
Appearance	Liquid
Solvent	Ethanol
Chemical type	Copper salt
Packing available	250ml

Direction for use

- ① Remove dirt, moisture, rust, oil on mating surfaces to be bonded.
- ② Remove the cap of the nozzle.
- ③ Ensure joint is completely filled with adhesive.
*Do not contact the nozzle tip with parts.
*Do not return any material to its original container.
- ④ After assembly, apply light pressure to bonding parts until adhesive is fixtures.

■Light Cure Adhesives

Cures in seconds exposing to UV/visible light to form excellent bonding.
Can be used in bonding, encapsulating, coating, and sealing applications.
Select the product depending on the application.

Direction for use

- ①Remove dirt, moisture, rust, oil on mating surfaces.
- ②Remove the cap attached to the tip of nozzle.
- ③Apply the adhesive to the surface to be bonded, fix it immediately.
- ※Do not transfer the remaining adhesive return to it's original container.
- ④Cure by irradiating light. (UV／Visible light)

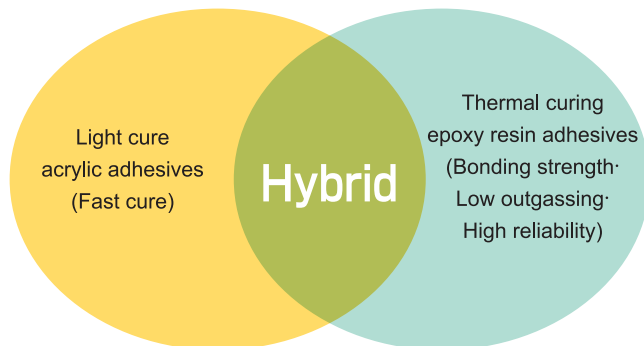
Product code	AY-4364	AY-4720	AY-4339	AY-4031
Application	Plastics /FPC fixing	Plastics /FPC fixing	Coating /Potting	Plastics /Camera module /Sensor
Features	Visible light curing/LED light	Flexibility/Stickiness /LED light	Cures with low intensity LED light	Prevent irregular reflection /LED light
Specific gravity (d ₄ ²⁰)	1.1	1.1	—	1.4
Fixture time (UV intensity 6mW/cm ²)	<1sec	<1sec	<2sec	<1sec
Appearance	Transparent	Light yellow	Transparent	Black
Viscosity(mPa·s)	750	10000	350	6000
Hardness(ShoreD)	60	45(ShoreA)	52	70
Elongation(%)	165.5	230	35.4	—
Tensile shear strength(N/mm ²)	PC×PC ※9.2 PET×PET 8.0	PC×PC 1.3 Glass×Glass 3.2	Glass×Glass 6.5	PC×PC 3.5 Glass×Glass 5.0 Glass×LCP 2.5
Package size	500g	500g	500g	500g

Product code	AY-4856	AY-4857	AY-4858
Application	Glass bonding /Casting	Glass bonding	Glass bonding
Features	Low viscosity/LED light	Medium viscosity/LED light	High viscosity/LED light
Specific gravity (d ₄ ²⁰)	1.1	1.1	1.1
Fixture time (UV intensity 6mW/cm ²)	<1sec	<1sec	<1sec
Appearance	Transparent	Transparent	Transparent
Viscosity(mPa·s)	100	400	1000
Hardness(ShoreD)	82	82	81
Elongation(%)	4.4	10.6	13.1
Tensile shear strength(N/mm ²)	Glass×Glass 5.3	Glass×Glass ※7.7	Glass×Glass ※9.0
Package size	500g	500g	500g

※ Substrate failure
Test method :
JIS K6833 (1994) compliant

■Hybrid Adhesives

Instant fixture with light cure acrylics & excellent performance with thermal curing epoxy
Temporary fixing by UV light.
Complete cure by heat.



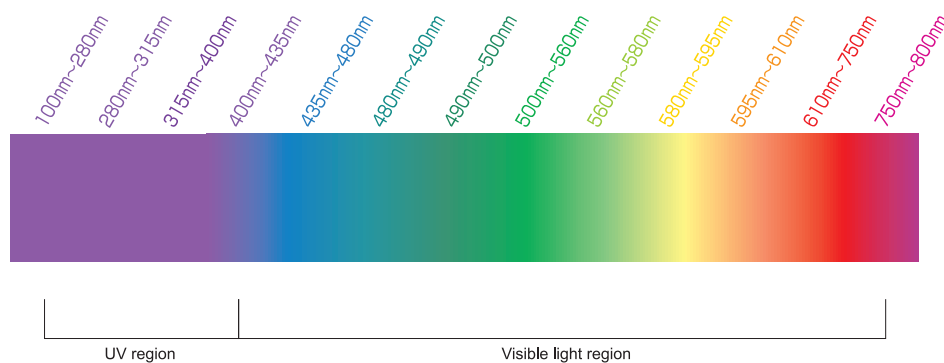
Direction for use / Use after the adhesive is equilibrate to room temperature

- ①Remove dirt, moisture, rust, oil.
- ②Remove the cap of nozzle.
- ③Apply it to the surface to be bonded, fix it immediately.
- ④Temporary fixation by UV irradiation, then final cure by heating.

Product code	AY-4112
Purpose	Potting/Filling adhesive
Features	B stage with UV irradiation and secondary curing by heat
Specific gravity (d_{4}^{20})	1.2
Cure time	100mW/cm ² ×10sec+ 1hour/80℃
Appearance	Light brown
Viscosity(mPa·s)	3000
Hardness(ShoreD)	80
Elastic modulus(GPa)	2.8
Tg(℃)	79 / 149
Coefficient of thermal expansion (α_1)(ppm)	80
Tensile shear strength(N/mm ²)	17
Continuous service temperature range(℃)	~150
Package size	250g
Storage condition	Refrigerated

Test method : JIS K6833 (1994) compliant

◆Light Spectrum



Light cure adhesives basically are cured by UV light.
Visible light curing products are available.

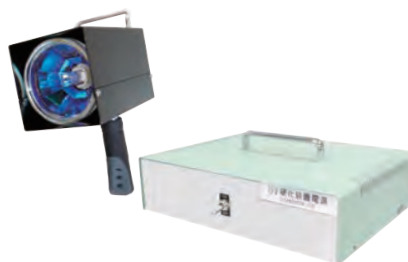
◆Curing Options

ALTECO can recommend various types of light cure equipment depending on your application. Contact ALTECO

UV-LED



UV-handly type



UV-desktop conveyor



■ One Component Epoxy Adhesives

Thermal curing epoxy adhesives.

One component ; Requires no weighing and mixing.

Direction for use/Use after the adhesive is equilibrate to room temperature

- ① Remove dirt, moisture, rust, oil on the surface to be bonded.
- ② Remove the cap attached to the tip of nozzle.
- ③ Apply one component epoxy adhesive to the surface to be bonded, assemble immediately.
- ④ Heat and cure.

Product code	AY-5302	AY-5231	AY-5274	AY-5404	AY-5011
Application	General adhesion	Camera module / Heat sensitive device	Camera module / Heat sensitive device	Camera module / Heat sensitive device / Potting	Motor magnet / Potting
Features	Standard	Low temperature fast curing / Low viscosity	Low temperature fast curing / Medium viscosity	Low temperature fast curing / High viscosity	High strength / Heat resistant / Ultra high viscosity
Specific gravity (d_{4}^{20})	1.2	1.2	1.2	1.5	1.2
Curing schedule	30min / 100℃	20min / 80℃	20min / 80℃	60min / 80℃	60min / 120℃
Appearance	Gray	Black	Black	Black	Gray
Viscosity(mPa·s)	5000	1000	4000	10000	120000
Hardness(ShoreD)	83	75	78	71	87
Elastic modulus(GPa)	3.1	3.7	3.4	7.8	2.4
Tg(℃)	108	45	56	45	155
Coefficient of thermal expansion(α_t) (ppm)	60	55	70	40	65
Tensile shear strength (N/mm ²)	23	25	21	22	29
Continuous service temperature range(℃)	~150	~150	~150	~150	~180
Package size	250g	250g	250g	250g	250g
Pot life(25℃)	1 Month	10 days	10 days	10 days	10 days
Storage condition	Frozen	Frozen	Frozen	Frozen	Frozen

Product code	AY-5158	AY-5455	AY-5259	AY-5013	AY-5218C
Application	IC chip reinforcement	Automotive electrical components	Automotive motor / Epoxy wafer lens adhesive, fill and seal / Potting	Piezo element / FCB	Underfill / Sidefill
Features	High reliability	High hardness	High Tg, Heat resistant / High hardness	Flexibility / Stress relaxation	Low viscosity
Specific gravity (d_{4}^{20})	1.7	1.9	1.5	1.2	1.2
Curing schedule	10min / 100℃	15min / 110℃	60min / 120℃	15min / 80℃	10min / 100℃
Appearance	Black	Black	Black	Translucent	Black
Viscosity(mPa·s)	20000	40000	6000	1250	1250
Hardness(ShoreD)	79	95	91	55 80(ShoreA)	70
Elastic modulus(GPa)	4.3	10	8.4	12MPa	1.3
Tg(℃)	64	126	191	7	36
Coefficient of thermal expansion(α_t) (ppm)	39	50	35	86	80
Tensile shear strength (N/mm ²)	24	17	15	9	20
Continuous service temperature range(℃)	~150	~150	~190	~120	~150
Package size	250g	250g	250g	250g	250g
Pot life(25℃)	1 day	1 month	1 day	10 days	10 days
Storage condition	Frozen	Frozen	Frozen	Frozen	Frozen

Test method : JIS K6833 (1994) compliant

PRECAUTIONS



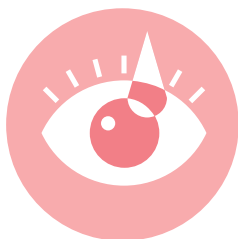
Skin contact

Immediately wash contaminated area with plenty of water with soap. Get medical attention if symptoms occur.



Ingestion

Do not induce vomiting. Get medical attention immediately.



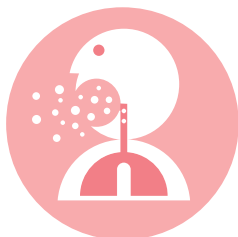
Eyes contact

Immediately raise eyelids and flush with plenty of water. Get medical attention.



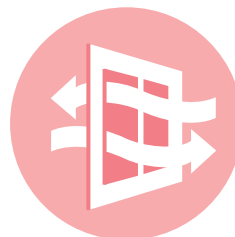
Clean up method

Wipe with paper towels or cloths. Large spill ; Collect and store a closed container until disposal.



Inhalation

Remove to fresh air. If symptoms develop and persist, get medical attention.



Handling

Use local exhaust ventilation.

After use

- Wash hands thoroughly after handling.
- Wipe off the glue on the nozzle and replace cap.
- Store in cool and dark place.
- Avoid direct sunlight and basic materials.
- Keep away from reach children.

Disposal considerations

- Follow all local regulations for disposal.

Glossaries

Breakaway torque
Initial torque to start the rotational motion of bolts and Nuts.

Prevail torque
Torque required to run the nut down a thread.

Applicable maximum clearance
Maximum clearance at which adequate adhesive force appears.

UV intensity
Unit of UV radiation.

Pot life
Length of time in which the adhesive can be used at room temperature.

T_g : Glass transition temperature
The reversible transition temperature of amorphous material from a glassy state into a rubbery state.

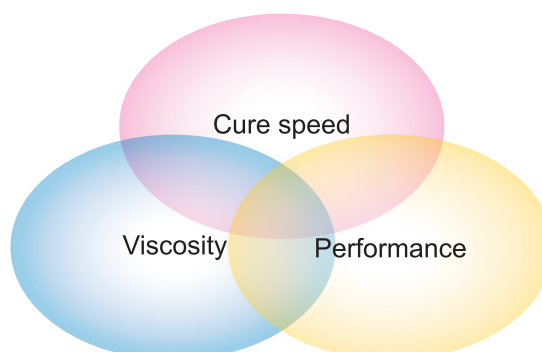
Coefficient of thermal expansion : CTE , α_1
Index of the extent to which a material expand upon heating.

Custom made system

Other selections for high performance adhesives are available on your demand.

The custom made system is the process to develop and create the customized adhesive upon your request.

For details, contact and consult ALTECO.



*Actual adhesive properties may vary according to various conditions upon actual
Please carry out individual tests to make sure product fits your specific needs.
*Product spec, design and appearance may change without prior notice.
*For further information, request Safety Data Sheet (SDS).
*All existing chemicals may have unknown hazards, so please handle with care.

● An agency

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ISO9001:2015 Certified
ISO14001:2015 Certified
Shiga factory