

Product data

500

Plastics bonder

Cyanoacrylate



General description

A low viscosity, fast curing instant adhesive for consistent bonds and excellent humidity resistance on engineering plastics and rubbers.

Used with AJETT PRIMER 900, **AJETT 500** gives good results on difficult-to-bond polyolefin plastics such as HDPE, LDPE and polypropylene.

Benefits

- Fast curing, single component cyanoacrylate.
- Specifically formulated to bond plastics and elastomers, but also suitable for other materials (see right).
- Low viscosity – flows easily.
- Use of AJETT 900 primer extends range of plastics that can be bonded to include all types of 'greasy', polyolefin plastics.
- Cures at room temperature.
- Economical to use – only a few drops are required for an effective bond.
- Good temperature range in service.
- Handling strength in under 5 seconds, depending on substrate
- Colourless.
- Easy to apply manually or automatically.

- Good tensile shear strength, even on difficult-to-bond plastics – see over.
- Classified under US Military specification MIL-A-46050C, Type II, Class I

Typical uses – bonding

- A wide variety of plastics and rubbers.

Materials bonded

Without primer

- ABS.
- Neoprene.
- Aluminium.
- EPDM.
- Steel.
- Nitrile rubber.
- PVC.
- Polycarbonate.
- Balsa wood.

With primer

- Polypropylene (PP).
- High density polyethylene (HDPE).
- Low density polyethylene (LDPE).

Application

- From the bottle by hand or automated.
- Single component – no mixing.
- Invisible bonds.

Cost saving

- Labour savings – no fixtures, jigs, clamps normally needed.
- Use direct from the bottle.

Cyanoacrylate adhesives cure as a result of a chemical reaction to substrate surface moisture. Although functional strength is developed rapidly, full cure takes 24 hours.

Technical data

Composition	Ethyl-2-cyanoacrylate
Physical appearance	Liquid
Colour	Colourless
Odour	Sharp, characteristic
Viscosity at 25°C	20 to 30 mPa.s
Flash point, closed cup	>80°C
Temperature range	-30 to +70°C
Fixture time	See below
Full cure	24 hours at room temperature
Tensile shear strength	See below, fully cured performance
Gap filling	0.10 mm
Solubility	Acetone, acetonitrile, methylene chloride
Conforms to US Military specification	MIL-A-46050C, Type II, Class I

Fixture time, seconds

	Without primer
EPDM/EPDM	<5
Nitrile/nitrile	<5
Neoprene/neoprene	<5
ABS	2 to 10
PVC	2 to 10
Steel (degreased)	10 to 20
	With 900 primer
PP	<10
HDPE	<10
LDPE	<10

Tensile shear strength, N/mm²

	Without primer
EPDM	2.5
Nitrile	5.0
Neoprene	4.0
ABS	4 to 6*
PVC	4 to 6*
Steel (degreased)	12 to 25
	With 900 primer
PP	3 to 10*
HDPE	5 to 15*
LDPE	5 to 15*

* Substrate failure can be achieved.

Packaging

20 and 50 ml plastic bottles. Catalogue numbers **500/20** and **500/50**. Other sizes available to order.

Shelf life

12 months if stored at temperatures between 5 and 25°C in closed original packaging and away from sunlight. To avoid contamination, do not return unused product to containers. Refrigeration at 5 to 8°C extends shelf life.

Precautions for use

Cyanoacrylate – DANGER! Bonds skin and eyes in seconds. Keep out of reach of children. In case of contact with eyes, consult a doctor. Please refer to the **AJETT** material safety data sheet *MSDS 500* for other information. Do not mix adhesive directly with a primer/activator.

NOTE: Data provided shows mean averages arrived after laboratory testing. Manufactured batches may vary slightly.

This publication is intended to serve as a guide only. Customers should satisfy themselves by appropriate trials that the product is suitable for its intended use.

The information is given in good faith and based on the state of our knowledge about the product –

Application method

AJETT 500 works best on clean parts – clean surfaces and use sparingly. Fixture time 10 to 30 seconds, depending on the surface. Ensure adequate ventilation.

Solvent resistance

AJETT 500 shows high resistance to a variety of oils and chemicals, including motor oil, leaded petrol, water/glycol mixture, ethanol, isopropanol and freons.

Replacement

AJETT 500 can be used instead of the following low viscosity cyanoacrylate products:

Holdtite SureSet 60
Loctite 406
Permabond C1, CPP762
Sicomet 8300

but cannot be used as a sales specification.

The attention of users should be brought to eventual hazards arising from the use of the product if they differ from what it was originally formulated for.

The customer will agree and accept our general sales and supply condition, in particular the cause of limitation and relief of responsibility.

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