

Product data

504

General purpose bonder

Cyanoacrylate



General description

A single component cyanoacrylate formulated for the rapid bonding of rigid or flexible substrates, including elastomeric materials, metals, rubbers, wood and plastics.

AJETT 504, which will bond most substrates in under five seconds, has good humidity resistance and offers a low unit cost on each bond. It has high shear strength properties.

Benefits

- Very fast curing, single component cyanoacrylate.
- It is particularly good for bonding elastomeric materials – but also suitable for other materials (see right).
- Low viscosity – easy flow.
- Cures at room temperature.
- Colourless.
- Economical to use – only a few drops are required for an effective bond.
- Good temperature range in service.
- Easy to apply manually or automatically.
- Handling strength in under 5 seconds, depending on substrate

- Good tensile shear strength performance – see over.
- Classified under US Military specification MIL-A-46050C, Type II, Class I

Typical uses – bonding

Flexible materials

- Neoprene.
- Nitrile.
- EPDM.
- PVC.
- Polycarbonate.

Rigid materials

- Steel.
- Aluminium.
- Wood.

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	Clear, colourless
Odour	Sharp, characteristic
Viscosity at 25°C	25 to 35 mPa.s
Flash point, closed cup	>81°C
Temperature range	-30 to +70°C
Fixture time	See below
Full cure	24 hours at 25°C
Tensile shear strength	See below, fully cured performance
Gap filling	0.15 mm
Solubility	DMF, acetonitrile, acetone
Conforms to US Military specification	MIL-A-46050C, Type II, Class I

Fixture time, seconds

Balsa wood to balsa wood	<5.0
Nitrile to nitrile	<5.0
Neoprene to neoprene	<5.0
EPDM to EPDM	<5.0
PVC to PVC	3 to 10
Steel to steel	10 to 20
Polycarbonate to polycarbonate	10 to 40

Packaging

20g plastic bottles. Catalogue numbers **504/20**.
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 504* 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 –

Shear strengths, N/mm²

Grit blasted steel	>15.0
Polycarbonate	>12.0
Etched aluminium	>11.0
Nitrile rubber	>10.0

Tensile strengths, N/mm²

Grit blasted steel	>18.0
Nitrile rubber	>5.0
Neoprene rubber	>5.0
EPDM rubber	>2.5

Application method

AJETT 504 works best on clean parts – clean surfaces and use sparingly. **AJett 504** can be applied direct from its bottle or via appropriate application equipment. Do not return unused product to containers. Fixture time depends on the surface (see above, left). Ensure adequate ventilation.

Solvent resistance

AJETT 504 shows excellent resistance to a variety of oils and chemicals, including motor oil, leaded petrol, ethanol, isopropanol and freons.

Replacement

AJett 504 can be used instead of the following low viscosity cyanoacrylate products:
Loctite 495

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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