

1. Identification of the preparation and of the manufacture.

- 1.1 Identification of the substance: Metroglue Cyanoacrylate Adhesive and Metrolok Cyanoacrylate Adhesive.
- 1.2 Purpose of use: Adhesive bonding.
- 1.3 Distributors information: Metrodent Limited,
Lowergate Works, Lowergate, Paddock, Huddersfield, HD3 4EP.
Tel: 01484 461616, Fax: 01484 462700
e-mail: sales@metrodent.com

2. composition / information on ingredients. *

This section shows the identification of hazardous constituents that contribute to the classification of the preparation plus other contents where relevant. This product contains the following components in percentages less than those shown.

Component	CAS No.	% by weight
Ethyl cyanoacrylate	7085-85-0	<90
Polyalkylmethacrylate homopolymer	9011-14-7	<20
Fillers / Stabilisers	-	<10

3. hazards identification. *

- 3.1 Hazards identification: Xi: Irritant R36/37/38 Irritating to eyes, respiratory system and skin.
- 3.2 Further information: Bonds skin and eyes in seconds. Instant bonding adhesive which polymerises rapidly on exposure to air, humidity or to alkaline - reacting substances at room temperatures. Prolonged or repeated over-exposure to high vapours may lead to chronic sensitising effects in concentrations of sensitive individuals.

4. First aid measures. *

- 4.1 Inhalation: Remove subject to fresh air. If breathing is difficult, give oxygen.
- 4.2 Eye contact: with
Cyanoacrylates bond eyelids in seconds. In such a case irrigate thoroughly with water for 15 minutes. If the eyelid is bonded closed, release eyelashes with warm water by covering with wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein causing lachrymatory effect which will help to de-bond the adhesive. Keep eye covered with wet pad until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of cured cyanoacrylate trapped behind the eye cause any abrasive damage.
- 4.3 Skin contact: Wash the skin thoroughly with soap and water. Do not pull bonded skin apart. It may be gently peeled apart using a blunt object such as a spoon preferably after soaking in warm soapy water. Seek medical advice.
- 4.4 Ingestion: Ensure that breathing passages are not obstructed. The product will polymerise immediately in the mouth making it impossible to swallow. Saliva will slowly separate the solidified product from the mouth over several hours.
- 4.5 Other information: On contact with the body, a noticeable local temperature rise will be experienced. This is perfectly normal and is due to the exothermic polymerisation reaction.

5. Fire fighting measures. *

- 5.1 Suitable extinguishing media: Dry Powder, foam, carbon dioxide.
- 5.2 Particular danger from combustion products: Trace amounts of toxic fumes, CO, CO₂ and oxides of nitrogen may be released on incineration and the use of breathing apparatus is recommended.
- 5.3 Special protective equipment: clothing: For large quantities, self-contained breathing apparatus and protective clothing.

6. Accidental release measures. *

- 6.1 Personal precautionary measures: Refer to section 8 - personal protection. For large spills, evacuate the area and ensure good ventilation if possible - wear self-contained breathing apparatus if necessary. Wear suitable protective clothing.
- 6.2 Environmental protection measures: Polymerise slowly before disposal - see section 13.
- 6.3 Procedure for cleaning / absorption: For large spills wear self-contained breathing apparatus. Do not use cloths for mopping up. Polymerise slowly with water and scrape up.

7. Handling and storage. *

- 7.1 Handling: Ensure good ventilation - Local Exhaust Ventilation may be required. Relative humidity should be >50% to minimise discomfort. Wear safety goggles and chemically resistant gloves. If handling large quantities, wear suitable protective clothing.
- 7.2 Storage: Store in cool, dry, ventilated place out of direct sunlight. Store upright in original containers at 3-25°C and do not return used product to containers as impurities will reduce the shelf life of the product. Keep container tightly closed.

8. Exposure controls / personal protection. *

- 8.1 Occupational Exposure Limits: OES for ethyl cyanoacrylate is 0.3ppm = 1.5mg/m³ (STEL 15min., TWA). (EH40/2000)
- Personal protection measures:
- A. Respiratory protection: Ensure good ventilation - Local Exhaust Ventilation may be required to maintain vapour concentration below TLV. If handling large quantities, self-contained breathing apparatus may be required.
- B. Skin protection: Wear chemically resistant gloves (polypropylene, polyethylene, nitrile, viton, etc.). If handling large quantities, wear suitable protective clothing.
- C. Eye protection: Wear safety glasses/goggles, especially where there is a risk of splashing. A full face mask should be worn when pouring large quantities.
- 8.3 Other information: If the product splashes on to clothing, remove and wash clothing.

9. Physical and chemical properties. *

Appearance	:	Virtually clear and colourless liquid.
Odour	:	Characteristic, pungent.
Specific gravity @20°C	:	~1.1gm/ml.
Melting point	:	> -10°C.
Boiling point / Range	:	>100°C
Flash point (C.O.C.)	:	>87°C
Explosive limits @25°C (%vol in air)	:	Lower: N.A. Upper: N.A.
Autoignition temperature,°C	:	N.A.
pH	:	N.A.
Relative vapour density (air = 1)	:	3
Vapour pressure (mmHg at 20°C)	:	0.2-0.5mm Hg
Viscosity @25°C (Brookfield)	:	Mobile liquid
Solubility in water	:	None - product is polymerised by water.
Additional information	:	Soluble in acetone.

10. Stability and reactivity. *

- 10.1 Conditions to be avoided: Adhesive will polymerise rapidly in contact with water.
- 10.2 Substances to be avoided: Water, alkalis, alcohols and amines.
- 10.3 Hazardous products of combustion or decomposition: Trace amounts of toxic fumes, CO, CO₂ and oxides of nitrogen.

11. Toxicological information. *

- 11.1 Toxicity:
- A. Oral: LD₅₀ orl-rat: >5000mg/kg. Considered to have relatively low toxicity. Product is almost impossible to swallow, as it polymerises in the mouth first.
- B. Inhalation: -
- C. Skin: LD₅₀ skn-rbt: >2000mg/Kg
- D. Other: -
- 11.2 Acute effects: Irritating to eyes, respiratory system and skin. Lachrymatory effect. Prolonged or repeated over-exposure to high concentrations of vapours may lead to chronic sensitising effects in sensitive individuals.
- 11.3 Other information: Bonds skin and eyes in seconds.

12. Ecological information.

- 12.1 Data on elimination (persistence and degradability): Product is biodegradable.
- 12.2 Bio-accumulation potential:
- Ecotoxicity: Low.

13. Disposal considerations.

- Product: Polymerise adhesive by adding slowly to water (10:1, Adhesive:Water). Dispose of solid residue according to national and local regulations.
- Contaminated packaging: As above.

14. Transport information. *

- UN no. N.A.
- IATA N.A.
- IMDG N.A.
- ADR/RID N.A.
- Further information Not classified as hazardous for transportation.

15. Regulatory Information. *

Symbol(s) for Supply and Indication(s) of Danger:



IRRITANT

- Risk Phrases: R36/37/38 Irritating to eyes, respiratory system and skin.
- Safety Phrases: S2 Keep out of the reach of children.
S25 Avoid contact with eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Other phrases: Danger: Cyanoacrylate. Bonds skin and eyes in seconds.

Relevant regulations:

This Safety Data Sheet complies with The Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (CHIP 2), which implement the Council Directives 67/548/EEC (The Dangerous Substances Directive) and 88/379/EEC (The Dangerous Preparations Directive), and subsequent amending regulations, up to and including The Chemicals (Hazard Information and Packaging for Supply) (Amendment) (No.2) Regulations 1999 (CHIP 99(2)), which implements the 25th ATP of 67/548/EEC, and The Chemicals (Hazard Information and Packaging for Supply) Regulations 1999 (Amendment) (No.3) (CHIP 99(3)), which implements the 16th amendment to the Council Directive 76/769/EEC.

16. Other information.

Sections marked * have been amended from the last version.

The data presented in this sheet corresponds to the present level of our knowledge and experience and is intended to describe our product with respect to possible safety demands. We imply with this however no guarantee of properties or description of qualities, it remains the customers responsibility to ensure safe working practices. Attention is drawn to the possible hazards from improper use of the product.

Neither Metrodent nor their distributors accept any liability for loss or damage arising directly or indirectly from the use of this product. Customers should satisfy themselves by appropriate trials that each product is suitable for its intended use.

Product Reference: Metroglue Cyanoacrylate Adhesive and Metrolok Cyanoacrylate Adhesive.

Valid From 01/08/00

Reference Cyanoacrylate Adhesive

N.A. = not applicable; N.D. = not defined; * = changed