SAFETY DATA SHEET
Emergency 24 hour phone number: Chem-Tel (800) 255-3924
CA PLUS  Super Glue Adhesive, Super Glue Gel

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY UNDERTAKING

1.1. Product identifier
   Product name              Cyanoacrylate Adhesive
   Product Grade             5, 30, 45, 100, 120, 150, 300, 500, 700, 1000, 1100, 1500, 2500, Gel
   CAS number                7085-85-0
   EC number                 230-391-5
   Index number              607-236-00-9

1.2. Relevant identified uses of the substance and uses advised against
   Applications              Industrial adhesives application
                              Consumer use of adhesives

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance

2.1.1. Classification of the product according to DSD (67/548/EC)
   Xi IRRITANT               R 36/37/38 Irritating to eyes, respiratory system and skin

2.1.2. Classification of the product according to CLP (1272/2008/EC)
   Eye irrit. 2              H319 Causes serious eye irritation
                              H335 May cause respiratory irritation
   STOT SE 3                 H315 Causes skin irritation
   Skin irrit. 2             

2.2. Label elements according to CLP (1272/2008/EC)
   Hazard pictograms
   !
   Signal word               Warning
   Hazard statements         H319 Causes serious eye irritation
                              H335 May cause respiratory irritation
                              H315 Causes skin irritation

Precautionary statements - Prevention
   P280 Wear protective gloves/protective clothing/eye protection/face protection
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Concentration</th>
<th>Classification (DSD/CLP)</th>
<th>Specific concentration limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl-2-cyanoacrylate</td>
<td>7085-85-0</td>
<td>230-391-5</td>
<td>607-236-00-9</td>
<td>80 – 99 %</td>
<td>Xi; R36/37/38</td>
<td>C ≥ 10% : Xi; R36/37/38</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1. Description of first aid measures

General
Call a POISON CENTER or doctor/physician if you feel unwell

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If still feeling unwell seek medical attention.

Skin
IF ON SKIN: Wash with plenty of 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. Cyanoacrylates give off heat on solidification. In rare cases a large drop will generate enough heat to cause a burn. Burns should be treated normally after the adhesive has been removed from the skin.
If lips are accidentally stuck together apply warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips apart with direct opposing action. If skin irritation occurs: Get medical advice/attention.

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If the eye is bonded closed, release eyelashes with warm water by covering with wet pad. Cyanoacrylate will bond to eye protein and will cause periods of weeping which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical advice should be sought in case solid particles of cyanoacrylate trapped behind the eyelid cause an abrasive damage.

Ingestion
Ensure that breathing passages are not obstructed. The product will polymerise immediately in the mouth making it almost impossible to swallow. Saliva will slowly separate the solidified product from the mouth (several hours).

4.2. Most important symptoms and effects, both acute and delayed
Gross contamination with the adhesive may generate enough heat to cause a burn.

4.3. Indication of any immediate medical attention and special treatment needed
Not determined

5. FIREFIGHTING MEASURES

5.1. Extinguishing media
Suitable extinguishing agents: Dry powder, foam, carbon dioxide, fine water spray

Unsuitable extinguishing agents: Water jet
5.2. Special hazards arising from the substance or mixture

Trace amounts of toxic fumes may be released on incineration. Hazardous combustion products: oxides of carbon, oxides of nitrogen, irritating organic vapours.

5.3. Advice for fire-fighters

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and suitable protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Wear protective gloves/protective clothing/eye protection/face protection. Avoid skin and eye contact. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

Do not use clothes for mopping up. Flood with water to complete polymerisation and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

6.4. Reference to other sections

Safe handling: see section 7
Disposal: see section 13
Personal protective equipment: see section 8

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Ventilation (low level) is recommended when using large volumes. Use of dispensing equipment is recommended to minimise the risk of skin or eye contact. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

For optimum shelf life store in original containers under refrigerated conditions at 2°C to 8°C. Store locked up.

7.3. Specific end use(s)

Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values

<table>
<thead>
<tr>
<th>Country</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>STEL</td>
<td>0.3 ppm; 1.5 mg.m⁻³ (15 min)</td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL / TWA</td>
<td>0.2 ppm</td>
</tr>
<tr>
<td>Germany</td>
<td>MAK</td>
<td>No MAK value established</td>
</tr>
<tr>
<td>France</td>
<td>VME/VLE</td>
<td>No VME/VLE established</td>
</tr>
</tbody>
</table>

Derived DNEL(s) / DMEL(s)

<table>
<thead>
<tr>
<th>Type</th>
<th>Details</th>
<th>Value</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker – inhalation route</td>
<td>Systemic effect – Long term exposure</td>
<td>9.25 mg/m³</td>
<td>irritation (respiratory tract)</td>
</tr>
<tr>
<td>Worker – inhalation route</td>
<td>Local effect – Long term exposure</td>
<td>9.25 mg/m³</td>
<td>irritation (respiratory tract)</td>
</tr>
<tr>
<td>General population – inhalation route</td>
<td>Systemic effect – Long term exposure</td>
<td>9.25 mg/m³</td>
<td>irritation (respiratory tract)</td>
</tr>
<tr>
<td>General population – inhalation route</td>
<td>Local effect – Long term exposure</td>
<td>9.25 mg/m³</td>
<td>irritation (respiratory tract)</td>
</tr>
</tbody>
</table>
Derived PNEC(s)

Tests in aqueous media with ethyl-2-cyanoacrylate with the intent to determine effective concentrations or no effect concentrations cannot be performed due to technical reasons based on the chemical properties of the monomer.

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation in area of use. Do NOT use this product in an enclosed or poorly ventilated area. Local exhaust ventilation is normally required when handling or using this product to keep airborne powder below the nationally authorized limits. If ventilation alone cannot control exposure, respiratory protection must be used.

Personal protection

Respiratory protection: Ensure adequate ventilation.

Hand protection: In circumstances where there is a potential for prolonged or repeated skin contact, the use of polyvinyl chloride or nitrile rubber gauntlets or equivalent solvent resistant gloves is recommended. The use of chemical resistant gloves such as Nitrile is recommended. Polyethylene or polypropylene gloves are recommended when using large volumes. Do not use PVC, rubber, nylon or cotton gloves.

Eye protection: Wear protective glasses.

Body protection: Not applicable

Hygiene measures: Good industrial hygiene practices should be observed. Take off contaminated clothing and wash it before reuse. Wash hands thoroughly after handling.

Environmental exposure controls

Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information of basic physical and chemical properties

- Physical state       Liquid
- Colour              Transparent, colourless
- Odour               Pungent
- Odour threshold     Not determined
- pH                  Not determined
- Melting point       -31°C
- Boiling point       214 °C (at 1003 mbar)
- Flash point         82.5 °C (at 1003 mbar)
- Evaporation rate    Not determined
- Flammability        Not flammable
- Auto flammability   480°C
- Upper/lower flammability or explosive limits Not applicable
- Explosive properties No explosive properties
- Oxidising properties No oxidising properties
- Vapour pressure     ≤ 21 Pa
- % volatile by volume Not determined
- Vapour density      Not determined
- Specific gravity    1.043 g/cm³ at 20°C
- Solubility in water ≤ 0.024 mg/l
- Other Solvents      Recovery in acetone: 91.8%
                      Recovery in acetonitrile: 96.5%
9.2. Other information

None

10. Stability and reactivity

10.1. Reactivity
Not determined

10.2. Chemical stability
Stable under normal conditions of storage and use

10.3. Possibility of hazardous reactions
Polymerisation will occur in the presence of moisture and other basic materials

10.4. Conditions to avoid
Moisture, humidity, basic material

10.5. Incompatible materials
Water, soil, amines, alkalis and alcohols

10.6. Hazardous decomposition materials
Oxides of carbon, oxides of nitrogen

11. Toxicological information

11.1. Information on toxicological effects

- Acute toxicity
Oral: LD₅₀ (oral, rat) > 5000 mg/kg bw (OECD 401)
Dermal: LD₅₀ (dermal, rabbit) > 2000 mg/kg bw (OECD 402)
Inhalation: In dry atmosphere with < 50% humidity, vapours may irritate the eyes and respiratory system. Prolonged exposure to high concentrations of vapours may lead to chronic effects in sensitive individuals.

- Skin corrosion/irritation
Causes skin irritation

- Serious eye damage/irritation
Irritating to eyes. In a dry atmosphere (RH<50%) vapours may cause irritation and lachrymatory effect.

- Respiratory or skin sensitisation
Due to polymerisation at the skin surface allergic reaction is not considered possible. The polymerized material is not able to penetrate into the epidermis.

- Germ cell mutagenicity
Because of the reduced exposure to monomer and the reported negative test result in various mutagenicity tests, ethyl-2-cyanoacrylate cannot be classified as mutagen.

- Carcinogenicity
Not carcinogenic

- Reproductive toxicity
Not toxic by reproduction

- STOT-single exposure
May cause irritation for skin, eyes and respiratory system

- STOT-repeated exposure
Ethyl-2-cyanoacrylate is not toxic by repeated absorption

- Aspiration hazard
Not determined

11.2. Other information
None

12. Ecological information

12.1. Toxicity
Low ecotoxicity
12.2. Persistence and degradability
Not applicable (the test compound would polymerize with contact of water or the moisture of the soil immediately)

12.3. Bioaccumulative potential
Not applicable (in presence of moisture ethyl-2-cyanoacrylate polymerises within seconds)

12.4. Mobility in soil
Not applicable (the test compound would polymerize with contact of water or the moisture of the soil immediately)

12.5. Results of PBT and vPvB assessment
The PBT and vPvB criteria do not apply to ethyl-2-cyanoacrylate

12.6. Other adverse effects
Not determined

13. Disposal considerations

13.1. Waste treatment methods
Product disposal:
Cured adhesive: Dispose of as water insoluble non-toxic solid chemical in authorised landfill or incinerate under controlled conditions. Dispose of in accordance with local and national regulations. Polymerise by adding slowly to water (10:1). Contribution of this product to waste is very insignificant in comparison to article in which it is used.

Disposal of uncleaned packages:
After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated. Disposal must be made according to official regulations.

13.2. Waste code numbers / Waste identification
08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances.

14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>Overland transport (ADR/RID)</th>
<th>River transport (ADN)</th>
<th>Sea transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN Number</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not Regulated</td>
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<tr>
<td>14.2. UN proper shipping name</td>
<td>Not regulated</td>
<td>liquid, (Cyanoacrylate ester)</td>
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<tr>
<td>14.3. Transport hazard classes</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>9</td>
<td></td>
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<tr>
<td>14.4. Packing group</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Packaging instructions (passenger): 906 Packaging instructions (cargo): 906</td>
<td></td>
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<tr>
<td>14.5. Environmental hazards</td>
<td>-</td>
<td>no</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>14.6. Classification</td>
<td>Not regulated</td>
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<td>(Cyanoacrylate ester), 9</td>
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<tr>
<td>14.9. Limited amount (LQ)</td>
<td>Not regulated</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>14.10. Additional information</td>
<td>Not determined</td>
<td></td>
<td>Unrestricted.</td>
<td></td>
</tr>
</tbody>
</table>

14.11. Special precautions for user
14.12. Transport in bulk
    Not determined

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
    Not determined

15.2. Chemical safety assessment
    A chemical safety assessment has been performed.

16. Other information

16.1. Indication on the revision
    - SDS revised on the 07th October 2014: inclusion of CLP and DSD classification according to CLP regulation (1272/2008/EC) and addition of all fields as required by regulations 1907/2006/EC and 453/2010/EC.

16.2. Abbreviations and acronyms
    ADN/ADNR: Regulations concerning the transport of dangerous substances in barges on inland waterways.
    ADR/RID: European Agreement, concerning the International Carriage of Dangerous Goods by Road/ Regulations concerning the international carriage of dangerous goods by rail.
    ACGIH: American Conference of Governmental Industrial Hygienists
    CAS Number: Chemical Abstract Service Number
    CLP: Classification, Labelling and Packaging
    DNEL: Derived No Effect Level
    DPD: Dangerous Preparation Directive
    DSD: Dangerous Substance Directive
    EC Number: European Commission Number
    GHS: Globally Harmonized System of Classification and Labelling of Chemicals
    IATA: International Air Transport Associations
    IMDG: International Maritime Dangerous Goods code
    NIOSH: National Institute of Occupational Safety and Health
    OSHA: Occupational Safety and Health Administration
    PNEC: Predicted No Effect Concentration
    PBT: Persistent, Bio accumulative, Toxic
    UN Number: United Nations Number
    UVCB: Substances of Unknown or Variable composition, Complex reaction products or Biological materials
    TWA: Time-Weighted Average
    VOC: Volatile organic compounds
VPvB: very Persistent and very Bio accumulative

WEL: Workplace Exposure Limit (UK HSE EH40)

16.3. Key literature references and sources for data
The present data in this SDS are based on the data present in the registration dossier of Ethyl Cyanoacrylate.

16.4. Classification of mixtures and applied evaluation method
Not applicable

16.5. Wording of the R- and H- phrases (which are not written in full under section 2 to 15)
Risk phrases: -

H statements: -

S phrases:
S23 Do not breathe vapour
S24/25 Avoid contact with skin and eyes
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

16.6. Training advice
Unavailable

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.