

# Material Safety Data Sheet

Issue Date: 09/05/2008

Document Number: 01-005-405

Material/Trade Name: Cyanoacrylate Adhesive

RS REACH MSDS Date 01/05/08

## 1 – Identification of the Preparation and Company

**Material/Trade Name** : Cyanoacrylate Adhesive  
**Material Type** : Ethyl Cyanoacrylate adhesives  
**Company** : RS Components Ltd,  
**Address** : Birchington Road,  
Corby,  
Northants  
NN17 9RS  
**Telephone** : +44 (0)1536 402888  
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## 2 - Hazards Identification

**Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.**

Contains anhydride derivative. May produce an allergic reaction.

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN

Do not breathe fumes/vapour.

Avoid contact with skin and eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable gloves.

## 3 – Composition/Information on Ingredients

Substance		% Wt.	CAS No.	EC No.
Ethyl-2-cyanoacrylate	Xi: R36/37/38	88.0 - 99.5	7085-85-0	230-391-5
Anhydride derivative	Xn: R42/43 Xi: R41 R52/53	0.10 – 0.99	proprietary	proprietary

## 4 - First-aid Measures

**Inhalation:** Remove to fresh air and rest. If recovery is not rapid call for prompt medical attention

**Eyes:** Cyanoacrylates bond eyelids in seconds. Irrigate thoroughly with water for at least 15 minutes. Take care not to wash chemical from one eye to another. If the eyelid is bonded closed, do not force open. Cover with wet pad soaked in warm water.  
**Get** prompt medical attention, in case solid particles of cured cyanoacrylate trapped behind the eye cause any abrasive damage. Keep eye covered with wet pad until debonding is complete, usually 1-3 days. (Cyanoacrylate will bond to eye protein, causing a lachrymatory effect that aids debonding).

**Skin:** Do not pull bonded skin apart. Remove contaminated clothing. Wash with soap/ cleanser and rinse with plenty of water. Any bonded skin should be gently peeled apart with the aid of a blunt object, preferably after soaking in warm, soapy water. If irritation persists, obtain medical attention. In the case of large spills on skin, superficial burns may occur – treat accordingly.

**Ingestion:** Ensure that breathing passages are not obstructed. The product will polymerise immediately in the mouth, making it almost impossible to swallow, but beware of possible choking hazard. Saliva will separate the solidified product from the mouth over a period of hours. Seek medical attention.

# Material Safety Data Sheet

**Issue Date:** 09/05/2008

**Document Number:** 01-005-405

**Material/Trade Name:** Cyanoacrylate Adhesive

## 5 - Fire-fighting Measures

<b>Suitable Extinguishers:</b>	Alcohol resistant foam. Dry powder. Carbon dioxide. Water spray/fog.
<b>Unsuitable Extinguishers:</b>	Direct water jets
<b>Hazardous Decomposition:</b>	Polymerisation is highly exothermic and may produce sufficient heat to cause thermal decomposition and/or rupture of the container. Toxic and irritant fumes are produced in fire (CO, CO <sub>2</sub> , nitrogen oxides).
<b>Special Procedures:</b>	Keep container cool by spraying with water if exposed to fire. Do not breathe decomposition products and fumes Use approved self-contained breathing apparatus Wear fire retardant clothing. Wear eye protection Prevent runoff from fire control from entering waterways Large fires should only be dealt with by trained personnel

## 6 - Accidental Release Measures

<b>Exposure Controls:</b>	Refer to Section 8 – Personal Protection. Ventilate area. Evacuate personnel. Use approved self-contained breathing apparatus. Use barriers to prevent unauthorised entry into contaminated areas. Do not allow spill to enter drains and watercourses
<b>Personal Protection:</b>	Wear suitable respiratory protection for large spillages and in confined spaces, e.g. EN405 FFA2 or EN140 A2. Wear polythene, polypropylene or viton gloves. Use eye protection such as glasses to BS EN 166 Chemical Grade. Wear suitable protective clothing.
<b>Disposal Considerations:</b>	Absorb in inert material such as sand or absorbent granules (do not use cloths) or polymerise slowly with water (~10:1, adhesive : water) and then scrape up. Dispose in accordance with local regulations.

## 7 - Handling and Storage

<b>Handling:</b>	Avoid skin and eye contact. Avoid inhalation of vapour - ensure adequate ventilation and/or use local extraction. Wear polythene, polypropylene or viton gloves. Latex (natural rubber), nylon or PVC gloves only provide protection for a few seconds. Wear safety glasses. If handling large quantities, wear suitable protective clothing. Ambient Relative Humidity should be >35% to minimise discomfort.
<b>Storage:</b>	Store in tightly closed, labelled containers. Store in a cool, dry, well-ventilated area out of direct sunlight. Refrigerated storage (2 – 8°C) is recommended for optimum shelf-life. Keep away from high temperatures and sources of ignition. Keep away from oxidising agents and from strong acids/alkalis. Can be stored in opaque polyethylene.

# Material Safety Data Sheet

**Issue Date:** 09/05/2008

**Document Number:** 01-005-405

**Material/Trade Name:** Cyanoacrylate Adhesive

## 8 - Exposure Controls/Personal Protection

**Occupational Exposure Limit:** WEL for ethyl cyanoacrylate is 0.3ppm = 1.5mg/m<sup>3</sup> (STEL 15min. (EH40/2005).

Wear polythene, polypropylene or viton gloves. Latex (natural rubber), nylon or PVC gloves only provide protection for a few seconds.

Wear suitable eye protection, such as glasses rated to BS EN 166.

If handling large quantities, wear suitable protective clothing. Remove contaminated clothing and shoes immediately. Do not wear contaminated clothing.

Use in well ventilated areas. Use local exhaust ventilation if exposed for long periods. If excessive inhalation in a poorly ventilated area is likely then use a respirator with filter type A.

Ambient Relative Humidity should be >35% to minimise discomfort.

## 9 - Physical and Chemical Properties

<b>Appearance</b>	: Clear, almost colourless liquid
<b>Odour</b>	: Sharp, pungent
<b>pH</b>	: ~6-7
<b>Boiling point/range</b>	: >150°C (~55°C at 0.045mmHg)
<b>Melting point/range</b>	: ~ -30°C
<b>Flash point</b>	: >85°C (C.C.)
<b>Flammability</b>	: Non-Flammable
<b>Explosive properties</b>	: None
<b>Oxidising properties</b>	: None
<b>Vapour pressure</b>	: ~0.04mmHg at 25°C
<b>Relative density</b>	: Various – from 1.06–1.10 depending on grade
<b>Solubility in water</b>	: Insoluble. Polymerises rapidly with water
<b>Solubility in solvents</b>	: Miscible in some organic solvents, e.g. acetone, MEK
<b>Vapour density</b>	: Not established
<b>Partition coefficient, log Pow</b>	: Not established
<b>Viscosity</b>	: Various – from 40cPs to 3,000cPs
<b>Evaporation rate (Bu Ac = 1)</b>	: Not established

## 10 - Stability and Reactivity

	Stable at normal temperatures.
<b>Conditions to avoid:</b>	High temperatures, moisture and direct sunlight. Hazardous exothermic polymerisation can occur if exposed to moisture.
<b>Materials to avoid:</b>	Strong oxidising agents, water, alkalis, amines, alcohols, free-radical initiators. Will polymerise rapidly in contact with these agents.
<b>Hazardous decomposition products:</b>	Combustion/exothermic polymerisation will generate oxides of carbon, acrid smoke and irritating fumes.

# Material Safety Data Sheet

**Issue Date:** 09/05/2008

**Document Number:** 01-005-405

**Material/Trade Name:** Cyanoacrylate Adhesive

## 11 - Toxicological Information

<b>Acute toxicity:</b>	<u>Oral</u> – Expected to be very low - LD50(rat) likely to be >3,000mg/kg. Product is almost impossible to swallow, due to polymerisation in the mouth <u>Inhalation</u> – Expected to be low – see section 8 for OES info. <u>Skin</u> – Expected to be low due to rapid polymerisation in contact with skin – LD50 (rabbit) estimated to be >3,000mg/kg.
<b>Corrosivity/irritation:</b>	<u>Eyes</u> – Causes severe irritation. Conjunctival irritation and temporary corneal injury possible. Profuse eye watering and redness. <u>Skin</u> – Irritation and redness at site of contact. Prolonged or repeated contact may lead to itching, soreness, blistering, dermatitis, etc. <u>Respiratory Tract</u> – Causes irritation – also of mucous membranes, nose and throat. Very high concentrations can cause nose bleeds.
<b>Sensitisation:</b>	Not classified as sensitising, but sensitisation may be possible. Contains anhydride derivative. May produce an allergic reaction. Prolonged or repeated over-exposure to high concentrations of vapours may lead to sensitising effects in sensitive individuals.
<b>Repeated-dose toxicity:</b>	Not expected at recommended OES levels (an NOAEL of 1-2ppm is likely).
<b>Mutagenicity:</b>	No adverse results reported.
<b>Carcinogenicity:</b>	No adverse results reported.
<b>Reproductive Toxicity:</b>	No adverse results reported.

## 12 - Ecological Information

Not classified as Dangerous for the Environment by the Conventional Method as detailed in Schedule 3, Parts I and III of CHIP3 Regulations.

**Ecotoxicity:** Considered to be very low due to rapid polymerisation with water.

**Bioaccumulative potential:** Expected to be very low.

**Persistence:** Not considered to be inherently biodegradable.

**Mobility:** Considered to be virtually zero due to rapid polymerisation with water.

## 13 - Disposal Considerations

Do not discharge into drains or watercourses.

Polymerise adhesive by adding slowly to water (~10:1, adhesive : water). Hardened product can be disposed of in land-fill sites by licensed contractors.

Add water to contaminated packaging and then dispose of.

Dispose of product through properly licensed contractors under national and local legislation.

## 14 -Transport Information

<b>UN No:</b>	3334	<b>Packing Group:</b>	-
<b>IMDG:</b>	-	<b>Packing Group:</b>	-
<b>IATA/ICAO:</b>	Class 9	<b>Item:</b>	-
<b>ADR/RID:</b>	-	<b>Flash Point:</b>	-
<b>Transport Name:</b>	Aviation Regulated Liquid, n.o.s. (cyanoacrylate ester)		

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## 15 - Regulatory Information

### Symbol(s) & Indication(s) of Danger



IRRITANT

**Label Phrases**      Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.  
Contains anhydride derivative. May produce an allergic reaction.

### Risk & Safety Phrases

R36/37/38      Irritating to eyes, respiratory system and skin

S23              Do not breathe fumes/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.  
S37              Wear suitable gloves.

### Other Relevant Regulations and Publications

Health & Safety at Work etc. Act 1974	Control of Substances Hazardous to Health Regulations 1994
COSHH Essentials	EH40/ series – Occupational Exposure Limits
Environmental Protection Act 1990	Special Waste Regulations 1996
EH72/13 Cyanoacrylate Risk Assessment Document	

## 16 - Other Information

The \* symbol in a section denotes that there has been a change in information from the previous version of this safety data sheet.

Risk phrases referred to in section 2:-

R36/37/38      Irritating to eyes, respiratory system and skin

This Safety Data Sheet is compiled with reference to The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3), which implement the Council Directives 67/548/EC (The Dangerous Substances Directive) and 99/45/EC (The Dangerous Preparations Directive), and subsequent amending regulations to both, and also the Safety Data Sheet Directive 91/155/EC and subsequent amending regulations.

This Safety Data Sheet is also compiled with reference to regulation 1907/2006/EC and amendments.

The information contained in this safety data sheet was obtained from a variety of sources and is believed to be accurate and current at the stated issue date. RS Components Ltd. and/or its agents cannot accept any liability for the use of information contained in this data sheet or for the use, application or processing of the product described in this data sheet. Users should note the possibility of hazards occurring due to improper use of the product.

# SAFETY DATA SHEET

Page 1

Issued: 15/05/2008

Revision No: 1

RS REACH MSDS Date 01/05/08

## 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

**Product name:** RS Superglue Gel - Activator

**Index number:** 01-005-700

**Product code:** 473-398

**Use of substance / preparation:** Solvent-based activator for cyanoacrylate adhesives

## 2. HAZARDS IDENTIFICATION

**Main hazards:** Highly flammable. Irritating to skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed. Vapours may cause drowsiness and dizziness.

**Other hazards:** In use, may form flammable / explosive vapour-air mixture.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Hazardous ingredients:** NAPHTHA (PETROLEUM), HYDROTREATED LIGHT >90%

EINECS: 265-151-9 CAS: 64742-49-0

[F] R11; [Xi] R38; [N] R51/53; [Xn] R65; [-] R67

- N,N-DIMETHYL-P-TOLUIDINE <1%

EINECS: 202-805-4 CAS: 99-97-8

[T] R23/24/25; [Xn] R33; [-] R52/53

## 4. FIRST AID MEASURES (SYMPTOMS)

**Skin contact:** There may be irritation and redness at the site of contact. Absorption through the skin may occur causing symptoms similar to those of inhalation. Absorption through the skin may occur causing symptoms similar to those of ingestion. Prolonged or repeated contact may cause defatting of the skin, which can lead to dermatitis.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. Inhalation of fumes from the stomach may cause symptoms similar to direct inhalation. Aspiration into the lungs may cause chemical pneumonitis, which can be fatal.

[cont...]

**Inhalation:** Drowsiness or mental confusion may occur.

#### 4. FIRST AID MEASURES (ACTION)

**Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin.

**Eye contact:** Bathe the eye with running water for 15 minutes.

**Ingestion:** Do not induce vomiting. If unconscious, check for breathing and apply artificial respiration if necessary. Consult a doctor. Transfer to hospital as soon as possible.

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious, check for breathing and apply artificial respiration if necessary. Consult a doctor.

#### 5. FIRE-FIGHTING MEASURES

**Extinguishing media:** Alcohol or polymer foam. Carbon dioxide. Dry chemical powder. Do not use water. Use water spray to cool containers.

**Exposure hazards:** Highly flammable. Forms explosive air-vapour mixture. Vapour may travel considerable distance to source of ignition and flash back. In combustion emits toxic fumes of carbon dioxide / carbon monoxide. In combustion emits toxic fumes of nitrogen oxides.

**Protection of fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Eliminate all sources of ignition. Refer to section 8 of SDS for personal protection details. Evacuate the area immediately. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

**Environmental precautions:** Do not discharge into drains or rivers. Contain the spillage using bunding.

**Clean-up procedures:** Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Do not use equipment in clean-up procedure which may produce sparks.

#### 7. HANDLING AND STORAGE

**Handling requirements:** Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air. Smoking is forbidden. Earth any equipment used in handling. Use non-sparking tools.

**Storage conditions:** Store in cool, well ventilated area. Keep container tightly closed. Keep away from sources of ignition. Keep away from direct sunlight. Prevent the build up of electrostatic charge in the immediate area. Ensure lighting and electrical equipment are not a source of ignition.

**Suitable packaging:** Stainless steel. Glass. Aluminium containers.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

- Hazardous ingredients:** NAPHTHA (PETROLEUM), HYDROTREATED LIGHT  
WEL (8 hr TWA): 250ppm
- Engineering measures:** Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.
- Respiratory protection:** Self-contained breathing apparatus must be available in case of emergency. Gas/vapour filter, type A: organic vapours (EN141).
- Hand protection:** Butyl gloves. Impermeable gloves.
- Eye protection:** Safety glasses.
- Skin protection:** Protective clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

- State:** Liquid
- Colour:** Colourless
- Odour:** Light, paraffinic
- Evaporation rate:** Fast
- Oxidising:** Non-oxidising (by EC criteria)
- Solubility in water:** Insoluble
- Also soluble in:** Petroleum ether.
- Viscosity:** Non-viscous
- Viscosity value:** 0.42
- Viscosity test method:** Kinematic viscosity in 10<sup>-6</sup> m<sup>2</sup>/s at 40°C (ISO 3104/3105)
- Boiling point/range°C:** 94-99
- Flammability limits %: lower:** 1  
**upper:** 7
- Flash point°C:** -5
- Part.coeff. n-octanol/water:** ~4.7
- Autoflammability°C:** 215
- Vapour pressure:** 5kPa @20C; 21kPa@50C
- Relative density:** 0.71
- pH:** n/e

**10. STABILITY AND REACTIVITY**

- Stability:** Stable under normal conditions. Stable at room temperature.
- Conditions to avoid:** Sources of ignition. Flames. Heat. Hot surfaces. Direct sunlight.
- Materials to avoid:** Strong oxidising agents. Strong acids.
- Haz. decomp. products:** In combustion emits toxic fumes of carbon dioxide / carbon monoxide. In combustion emits toxic fumes of nitrogen oxides.



**11. TOXICOLOGICAL INFORMATION**

**Hazardous ingredients:** NAPHTHA (PETROLEUM), HYDROTREATED LIGHT

IHL LC50 >5 mg/l

ORL LD50 >2000 mg/kg

SKN LD50 >2000 mg/kg

- N,N-DIMETHYL-P-TOLUIDINE

IPR MUS LD50 212 mg/kg

**Routes of exposure:** Refer to section 4 of SDS for routes of exposure and corresponding symptoms.

**12. ECOLOGICAL INFORMATION**

**Hazardous ingredients:** NAPHTHA (PETROLEUM), HYDROTREATED LIGHT

ALGAE 96H LC50 >1, <10 mg/l

BACTERIA 96H LC50 >1, <10 mg/l

DAPHNIA 96H LC50 >1, <10 mg/l

FISH 96H LC50 >1, <10 mg/l

**Mobility:** Floats on water. Volatile. Readily absorbed into soil.

**Persistence and degradability:** Biodegradable.

**Bioaccumulative potential:** Bioaccumulation potential.

**Other adverse effects:** Toxic to aquatic organisms.

**13. DISPOSAL CONSIDERATIONS**

**Disposal operations:** D10 Incineration on land.

R1 Solvent reclamation/regeneration.

**Disposal of packaging:** After draining, leave to vent in a safe place away from sources of ignition and heat. Beware of vapours remaining in empty drums that may ignite. Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

**14. TRANSPORT INFORMATION****ADR / RID**

**UN no:** 3295

**ADR Class:** 3

**Packing group:** II

**Classification code:** F1

**Shipping name:** HYDROCARBONS, LIQUID, N.O.S. (NAPHTHA (PETROLEUM), HYDROTREATED LIGHT)

**Labelling:** 3

**Hazard ID no:** 33



**IMDG / IMO**

**UN no:** 3295 **Class:** 3  
**Packing group:** II **EmS:** F-E,S-D  
**Marine pollutant:** .  
**Labelling:** 3

**IATA / ICAO**

**UN no:** 3295 **Class:** 3  
**Packing group:** II  
**Packing instructions:** 305(P&CA); 307(CAO)  
**Labelling:** 3

**15. REGULATORY INFORMATION**

**Hazard symbols:** Highly flammable.  
Dangerous for the environment.  
Harmful.



**Risk phrases:** R11: Highly flammable.  
R38: Irritating to skin.  
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R65: Harmful: may cause lung damage if swallowed.  
R67: Vapours may cause drowsiness and dizziness.

**Safety phrases:** S9: Keep container in a well-ventilated place.  
S16: Keep away from sources of ignition - No smoking.  
S23: Do not breathe vapour.  
S33: Take precautionary measures against static discharges.  
S37: Wear suitable gloves.  
S61: Avoid release to the environment. Refer to special instructions / safety data sheets.  
S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

**Note:** The naphtha (petroleum) hydrotreated, light, component of this product contains <0.1% benzene by weight, hence the classification as a carcinogen (R45) does not apply - see Note P in the Approved Supply List, which forms part of the CHIP3 Regulations. The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible

existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

## 16. OTHER INFORMATION

**Other information:** This Safety Data Sheet is compiled with reference to The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3) which implement the Council Directives 67/548/EC (The Dangerous Substances Directive) and 99/45/EC (The Dangerous Preparations Directive) and subsequent amending regulations to both, and also the Safety Data Sheet Directive 91/155/EC and subsequent amending regulations.

This safety data sheet is prepared in accordance with Regulation (EC) No 1907/2006.

**Risk phrases used in s.3:** R11: Highly flammable.

R38: Irritating to skin.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65: Harmful: may cause lung damage if swallowed.

R67: Vapours may cause drowsiness and dizziness.

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.

R33: Danger of cumulative effects.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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