

Print Date 06/03/2015 Revision Date 06/03/2015

· Product Identifier

Trade Name: CA6104

Application of the Substance or Mixture: Cyanoacrylate Adhesive

- Details of the Supplier of the Safety Data Sheet (SDS)
 - · Manufacturer or Supplier:

Resinlab, LLC N109 W13300 Ellsworth Drive, Germantown, WI 53022 1-800-388-8605 www.resinlab.com

- · Information Department: Product Safety Department: msds@resinlab.com
- Emergency Telephone Number:

North America - Chemtrec: 1-800-424-9300 (24 hours) International - Chemtrec: 01-703-527-3887 (24 hours)

2 Hazard(s) identification

· Hazard Classification



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Flam. Liq. 4 H227 Combustible liquid.

· Label Elements

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
 - Pictogram(s)



GHS07

- · Signal Word Warning
- Hazard-determining Component(s)

Ethyl 2-cyanoacrylate

Hazard statements

Combustible liquid.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Avoid breathing dust/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection.

Use only outdoors or in a well-ventilated area. Store in a cool and well ventilated place.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a poison center/doctor if you feel unwell.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: dry sand, dry chemical or alcohol resistan foam.

If on skin: Wash with plenty of soap and water.

Take off contaminated clothing and wash it before reuse.

Dispose of contents/container to an approved waste disposal plant.

(Contd. on page 2)



Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 1)

Hazard Rating System

- NFPA System
 - NFPA Ratings (scale 0 4)



Health = 2Fire = 2Reactivity = 1

NFPA special hazards (water reactivity and oxidizing property): None

· HMIS System

HMIS Ratings (scale 0 - 4)



Health = 2Fire = 2Reactivity = 1

· Other hazards

Results of PBT and vPvB assessment

· **PBT:** Not applicable. · **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical Characterization: Mixtures

Composition/Information on Ingredients

Ethyl 2-cyanoacrylate

CAS: 7085-85-0 EINECS: 230-391-5 Index Number: 607-236-00-9 Flam. Liq. 4, H227 RTECS: UD3330050

🕦 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335

90-100%

Classification System:

The Classifications were based on the Toxicological and Ecological Data of the substances/mixtures in the Section 11 and 12.

4 First-aid measures

Description of First Aid Measures

· General Information

Ensure medical personnel are aware of exposure and take precautions for their personal protection; see Section 8 for the information of personal protection.

· After Inhalation

Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing. In case of unconsciousness place patient stably in side position for transportation. Seek immediate medical advice.

· After Skin Contact

Remove all contaminated clothing and wash before reuse. Wash contaminated skin with water and soap and rinse thoroughly. Seek immediate medical advice.

· After Eye Contact

Immediately bathe eyes for 15 minutes under running water. Immediately remove contact lenses if present. Continue rinsing. Seek immediate medical advice.

After Swallowing

If victim is unconscious; never give anything by mouth.

(Contd. on page 3)



Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 2)

If victim is conscious; rinse out mouth and give victim small amounts of water. Seek medical treatment in case of complaints.

- · After Exposure Seek medical treatment in case of complaints.
- Information for Doctor Have chemical containers, labels and/or (M)SDS ready when calling or visiting a medical center.

Indication of any Immediate Medical Attention and Special Treatment Needed

After frequent or high intense exposure, the following medical tests are recommended: eve tests

skin tests

respiratory system tests

Check section 11 Toxicological Information for further relevant information.

· Additional Information

For additional information, please consult the corresponding first aid measures in the most current version of Emergency Response Guidebook which is produced by the US Department of Transportation.

5 Fire-fighting measures

Extinguishing Media

Suitable Extinguishing Agent(s)

Use fire fighting measures and extinguishing agents that suit the environment.

In case of fire, suitable extinguishing agents are:

Dry sand

Alcohol resistant foam.

Dry chemical or fire-extinguishing powder.

· Unsuitable Extinguishing Agent(s) No relevant information.

Firefighting Procedures

Isolate fire and deny unnecessary entry.

Eliminate all ignition sources if safe to do so.

Do not extinguish fire unless flow can be stopped.

Fight fire remotely due to the risk of explosion.

Burning liquids may be moved by flushing with water; protect personnel and minimize property damage.

Fight fire from protected location or safe distance.

Contain fire water runoff if possible to prevent environmental pollution.

Special Hazards Arising in Fire

In case of fire, following can be released:

Carbon dioxide (CO₂) and Carbon monoxide (CO)

Nitrogen oxides

Advice for Firefighters

If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).

As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

· Additional Information Ensure adequate and functional fire fighting facilities equipped in working area at all times.

6 Accidental release measures

· Personal Precautions

Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use. Ensure personnel take precautions for their personal protection during clean up, see Section 8 for the specific requirements.

· Environmental Precautions No further relevant information.

Cleaning Up Methods

Ensure adequate ventilation.

Eliminate all ignition sources.

Keep unauthorized personnel away.

For large spills:

Shut off source of leak if safe to do so.

(Contd. on page 4)



Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 3)

Dike and contain.

Remove with vacuum trucks or pump to storage/salvage vessels.

Flood area to polymerize material then soak up with an inert absorbant.

Absorb residues with liquid-binding materials.

For small spills:

Ventilate and wash area after clean-up is complete.

Collect spills in suitable and properly labeled containers.

Do not use solvents unless following safe handling practices and within the recommended exposure guidelines.

Dispose contaminated chemicals as waste according to Section 13.

Additional Information No further relevant information.

7 Handling and storage

· Handling

· Precautions for Safe Handling

Obtain special instruction before use; do not handle until all safety precautions have been read and understood.

Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.

Ensure good ventilation and/or exhaustion at workplace.

Keep away from incompatible material(s).

Avoid any release into the environment.

Keep container tightly closed when not in use if product is volatile so as to generate hazardous atmosphere.

Observe all the personal protection requirements in Section 8.

Information about Protection Against Explosions and Fires

Keep away from heat, sparks, open flame and other ignition sources during handling.

· Storage

Requirements to be Met by Storerooms and Receptacles

Store in a well-ventilated place; provide ventilation for receptacles.

Keep stored in accordance with local, regional, national, and international regulations.

Information about Storage in One Common Storage Facility

Store away from incompatible material(s).

Store away from foodstuffs.

Avoid release to the environment.

· Additional Information No further relevant information.

8 Exposure controls/personal protection

Engineering Measures or Controls

Exposure Limit Values that Require Monitoring at the Workplace

7085-85-0 Ethyl 2-cyanoacrylate

TLV Long-term value: 1 mg/m³, 0.2 ppm

Other Engineering Measures or Controls

Ventilation rates should be matched to conditions.

If applicable, use process enclosure(s), local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Personal Protective

General Protective and Hygienic Measures

Avoid any contact with eye.

Do not eat, drink or smoke during work.

Keep food, drink or feed away from working area.

Contaminated work clothing is not allowed out of workplace.

Clean hands and exposed skin thoroughly after work and before breaks.

Personal Protective Equipment (PPE)

Breathing Equipment

Caution! Improper use of respirators is dangerous.

(Contd. on page 5)



Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 4)

In case of brief exposure or low pollution, use a respiratory filter device.

In case of intensive or longer exposure, use a positive-pressure respiratory protective device that is independent of circulating air.

Hand Protection



Protective gloves

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation. Suggested glove type(s):

Nitrile Gloves

Butyl Rubber Gloves

Eye Protection



Tightly sealed goggles

· Body Protection No relevant information.

· Additional Information

All protective clothing (suits, gloves, footwear, headgear) should be clean, available every day, and put on before work. The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

9 Physical and chemical properties

Information on Basic Physical and Chemical Properties

Appearance:

Form: Liquid
Color: Clear
Odor: Irritating
Odor Threshold: Not determined.

· **PH-Value:** Not determined.

· Change in Condition:

 · Melting Point:
 Not determined.

 · Boiling Point:
 > 187 °C (> 369 °F)

 · Flash Point:
 > 79 °C (> 174 °F)

Decomposition Temperature:
 Flammability:
 Explosion:
 Not determined.
 Not determined.

Explosion Limits:

· Lower: Not determined. · Upper: Not determined.

Vapor Pressure: Not determined.Vapor Density: not determined

Density at 20 °C (68 °F): 1.09 g/cm³ (8.929 lbs/gal)

Solubility in or Miscibility with

· Water: Not miscible or difficult to mix.

· Segregation coefficient LogPow (n-octanol/

water): Not determined.

· Viscosity at 20 °C (68 °F): 100 cps

(Contd. on page 6)



Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 5)

Dynamic: Not determined.Kinematic: Not determined.

· Additional Information No further relevant information.

10 Stability and reactivity

· Physical Hazard(s) Not a regulated reactive or physical hazard under GHS.

· Hazardous Reactivity and Chemical Stability

May form explosive vapor-air mixtures when heated above the flash point.

May decompose, condense, or self-react under conditions of high temperature and/or pressure; but there is little or no potential for heat generation or explosion, or readily undergo hazardous polymerization in the absence of inhibitors.

Thermal Decomposition and Conditions to be Avoided

Keep away from incompatible material(s).

Thermally decomposes during fire or high heat; keep away from heat, sparks, open flame and other ignition sources.

- · Possibility of Other Hazardous Reaction(s) May polymerize in contact with water or moisture.
- Incompatible Material(s)

Amines.

Water

Oxidizing agents

Strong bases

· Hazardous Decomposition Product(s)

Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.

- · Hazardous Polymerization Product(s) No relevant information.
- · Additional Information No further relevant information.

11 Toxicological information

· Acute Toxicity

· Oral

7085-85-0 Ethyl 2-cyanoacrylate

Oral LD50 > 5000 mg/kg (rat) (OECD TG 401; males; neat substance)

One out of six rats died on the fourth day at 5000 mg/kg dose level; the substance was not classified as toxic to rats based on the classification criteria.

Reference: ECHA (2012).

Potential Health Effect(s): See acute inhalative effect(s) for further information

· Dermal

7085-85-0 Ethyl 2-cyanoacrylate

Dermal LD50 > 2000 mg/kg (rabbit) (LD0; OECD TG 402; males; neat substance)

No mortality occurred; the substance was therefore considered as non-toxic via dermal application. Reference: ECHA (2012).

Potential Health Effect(s):

No further relevant information available; classification is not possible.

See acute inhalative effect(s) for further information.

· Inhalative

7085-85-0 Ethyl 2-cyanoacrylate

Inhalative LC50/4 h > 21.1 mg/l (rat) (LC50/1 hour; vapor)

Reference: ACToR (2012).

(Contd. on page 7)



Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 6)

· Potential Health Effect(s):

While not possible to classify the acute inhalative hazard due to missing data, the product may cause the following symptom(s):

· Skin Corrosion or Irritation

7085-85-0 Ethyl 2-cyanoacrylate

Corrosion/Irritation irritating (rabbit) (OECD TG 404; 0.5g neat substance; 24hr-exposure)

Primary dermal irritation index (PDII): 0.87 (Max. score unknown; Time point: 24+72 hrs; mean score of all treated male rabbits); the substance was considered as irritating (Category 2) to rabbit skin by ECHA.

Reference: ECHA (2012).

· Potential Health Effect(s):

Causes skin irritation.

In contact with skin, may cause:

redness and pain

· Eye Serious Damage or Irritation

7085-85-0 Ethyl 2-cyanoacrylate

Damage/Irritation | irritating (rabbit) (OECD TG 405; males; 0.1ml neat substance)

Overall irritation score: 29.33, 15.33, and 9.66 (Max. score unknown; Time point: 24hr, 48hr, and 72hr respectively); the substance was classified as irritating (Category 2A) to rabbit eyes by ECHA.

Reference: ECHA (2012).

· Potential Health Effect(s):

Causes serious eye irritation. In contact with eye, may cause: redness and pain

Respiratory or Skin Sensitization

7085-85-0 Ethyl 2-cyanoacrylate

Sensitization | Skin | (No data available)

Respiratory (No data available)

· Potential Health Effect(s): No relevant information for respiratory sensitization; classification is not possible.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

Germ Cell Mutagenicity

7085-85-0 Ethyl 2-cvanoacrylate

Mutagenicity negative (Test species listed below)

In Vitro (Mammalian chromosome aberration test; OECD TG 473; Human lymphoblastoid cells (TK6)) - negative with and without metabolic activation

In Vitro (Mammalian cell gene mutation assay; OECD TG 476; Mouse lymphoma L5178Y cells) - negative with and without metabolic activation Reference: ECHA (2012).

Potential Health Effect(s): No further relevant information; classification is not possible.

· Carcinogenicity

7085-85-0 Ethyl 2-cyanoacrylate

Carcinogenicity negative (Test species: n/a)

Not listed as a carcinogen according to ACGIH, IARC, NTP, or OSHA.

· Potential Health Effect(s): Not a known Carcinogen.

Reproductive Toxicity

7085-85-0 Ethyl 2-cyanoacrylate

Reproductive Toxi. (No data available)

Potential Health Effect(s): No further relevant information; classification is not possible.

Specific Target Organ Toxicity - Single Exposure

7085-85-0 Ethyl 2-cyanoacrylate

STOT-Single (Human)

There were respiratory irritation results reported in human victims that caused by the substance. The substance was classified as a Category 3 respiratory irritant from the view point of safety.

Reference: GHS-J (2006).

(Contd. on page 8)



Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 7)

· Potential Health Effect(s): May cause respiratory irritation.

Specific Target Organ Toxicity - Repeated Exposure

7085-85-0 Ethyl 2-cyanoacrylate

STOT-Repeated (No data available)

· Potential Health Effect(s): No further relevant information; classification is not possible.

· Aspiration Hazard

7085-85-0 Ethyl 2-cyanoacrylate

Aspiration Hazard (No data available)

- · Potential Health Effect(s): No relevant information; classification is not possible.
- · Additional Information No further relevant information.

12 Ecological information

· Aquatic Environmental Toxicity

7085-85-0 Ethyl 2-cyanoacrylate

Algae Toxicity (No data available)
Crustacean Toxicity (No data available)
Fish Toxicity (No data available)

Aquatic Environmental Toxicity Assessment: No further relevant information; classification is not possible.

Degradability and Stability

7085-85-0 Ethyl 2-cyanoacrylate

Biodegradation (No data available)

Based on the persistent properties, the substance is expected to be non-biodegradable.

Persistence (Test species: n/a)

The substance is persistent. Reference: Canada DSL (2007).

Photodegradation (No data available)

Stability in water unstable (Test species: n/a)

The substance readily polymerizes in the presence of moisture.

Reference: ACToR (2012).

Bioaccumulation and Distribution

7085-85-0 Ethyl 2-cyanoacrylate

BCF (No data available)

The substance is not bioaccumulative.

Reference: Canada DSL (2007).

Koc (No data available)

LogPow (Not applicable)

The partition coefficient for the substance can't be determined due to its ready polymerization in the presence of moisture.

Reference: ACToR (2012).

- Degradability and Bioaccumulation Assessment: Non-rapidly degradable, and low bioaccumulative.
- · Additional Information No further relevant information.

13 Disposal considerations

- Hazardous Waste List
 - · Description: It may be necessary to contain and dispose of the substance/mixture as a hazardous waste.
 - · Waste Treatment Recommendation:

(Contd. on page 9)



Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 8)

Generation of waste should be avoided or minimized wherever possible.

Chemical waste, even small quantities, is neither allowed to be poured down drains, sewage system or waterways; nor disposed with household garbage.

Dispose of contents/containers in accordance with local, regional, national, and international regulations.

· Unused and Uncontaminated Packagings

· Recommendation Dispose of according to your local waste regulations.

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14 I	ranst	ort in	itorm	ation

· UN-Number

·IATA

DOT, ADN, ADR, IMDG

Not regulated for transport; not applicable

UN3334

· UN Proper Shipping Name

IATA:

DOT, ADR, ADN, IMDG

Aviation Regulated liquid, n.o.s. (Cyanoacrylate ester)

Not regulated for transport; not applicable

· Transport hazard class(es)

·IATA



· Class · Label 9 Miscellaneous dangerous substances and articles

a

· Packing group

· IATA

III

Environmental Hazards:

Not applicable.

· Special Precautions:

Not applicable.

· Transport in Bulk according to Annex II of

MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional Information:

·IATA

· Remarks:

Primary packs containing less than 500ml are unregulated by this mode of

transport and may be shipped unrestricted.

UN "Model Regulation":

UN3334, AVIATION REGULATED LIQUID, N.O.S. (Ethyl 2-cyanoacrylate), 9, III

15 Regulatory information

· USA Regulation Lists

SARA (Superfund Amendments and Reauthorization Act of 1986)

Section 302 (Extremely Hazardous Substances)

None of the ingredients is listed.

Section 313 (Toxics Release Inventory (TRI) reporting)

None of the ingredients is listed.

(Contd. on page 10)



Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 9)

· Section 311/312 (Hazardous Chemical Inventory Reporting)

None of the ingredients is listed.

· Hazard Abbreviations for SARA 311/312

- A Acute Health Hazard
- C Chronic Health Hazard
- F Fire Hazard
- R Reactive Hazard
- S Sudden Release of Pressure Hazard

TSCA (Toxic Substances Control Act)

All ingredients are listed.

Proposition 65

· Chemicals Known to Cause Cancer

None of the ingredients is listed.

· Chemicals Known to Cause Reproductive Toxicity for Females

None of the ingredients is listed.

· Chemicals Known to Cause Reproductive Toxicity for Males

None of the ingredients is listed.

· Chemicals Known to Cause Developmental Toxicity

None of the ingredients is listed.

· Carcinogenic Categories

EPA (Environmental Protection Agency)

None of the ingredients is listed.

IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

TLV (Threshold Limit Value Established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· International Regulation Lists

Canadian Domestic Substance Listings:

All ingredients are listed.

Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)

None of the ingredients is listed.

Chinese Chemical Inventory of Existing Chemical Substances:

All ingredients are listed.

Japanese Existing and New Chemical Substance List:

All ingredients are listed.

Korean Existing Chemical Inventory:

All ingredients are listed.

European Pre-registered substances:

All ingredients are listed.

(Contd. on page 11)





Print Date 06/03/2015 Revision Date 06/03/2015

Trade Name: CA6104

(Contd. of page 10)

REACh - Substances of Very High Concern (SVHC) List:

None of the ingredients is listed.

Restriction of Hazardous Substances Directive (RoHS) list:

None of the ingredients is listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department Issuing (M)SDS: Product Safety Department
- · Contact: msds@resinlab.com

Abbreviations and acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists

ACToR: US EPA Aggregated Computational Toxicology Resource

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road

BCF: Bioconcentration Factor

CAS: Chemical Abstracts Service (division of the American Chemical Society)

CCRIS: US NLM TOXNET Chemical Carcinogenesis Research Information System

CHRIP: Japan NITE Information on Biodegradation and Bioconcentration of the Existing Chemical Substances in the Chemical Risk

Information Platform

DOT: US Department of Transportation

DSL: Canada Domestic Substance List

ESIS: European Chemical Substances Information System

HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System

HSDB: US NLM TOXNET Hazardous Substances Databank

HSNO CCID: New Zealand Hazardous Substances and New Organisms Chemical Classification Information Database

IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)

IATA-DGR: Dangerous Goods Regulations (DGR) by the International Air Transport Association (IATA)

ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)

ICSC: International Chemical Safety Cards

IMDG: International Maritime Dangerous Goods; the principal international rules for International Carriage of Dangerous Goods by SEA under the Recommendations on the Transport of Dangerous Goods by United Nations (RTDG)

Koc: Partition coefficient, soil Organic Carbon to water

LC50/LD50: Lethal Concentration/Dose, 50 percent

N/a: Not available or Not applicable

NFPA: US National Fire Protection Association

NIOSH: US National Institute of Occupational Safety and Health

NITE: National Institute of Technology and Evaluation, Japan

OECD: Organisation for Economic Co-operation and Development

OSHA: US Occupational Safety and Health Administration

P: Marine Pollutant

RCRA: Resource Conservation and Recovery Act (USA)

REACh: EU Registry, Evaluation and Authorisation of Chemicals

RID: the Regulations Concerning the International Carriage of Dangerous Goods by Rail; published by the Central Office for International Carriage by Rail (OTIF)

RTDG: the Recommendations on the Transport of Dangerous Goods by United Nations (UN)

RTECS: US Registry of Toxic Effects of Chemical Substances

SARA: US Superfund Amendments and Reauthorization Act

SIDS: OECD existing chemicals Screening Information Data Sets

SVHC: EU ECHA Substance of Very High Concern

TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions (SCAPA) of US Department of Energy (DOE)

TOXLINE: US NLM bibliographic database search system

TSCA: US Toxic Substance Control Act

Date of preparation / last revision 06/03/2015 / 1