

SECTION 1: Identification

GHS classification:

Flammable liquids, category 4

Skin irritation, category 2

Eye irritation, category 2A

Specific target organ toxicity - single exposure, category 3, respiratory tract irritation

Label elements**Hazard pictograms:**

Signal word: Warning

Hazard statements:

H227 Combustible liquid

H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary statements:

P102 Keep out of reach of children
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P264 Wash thoroughly after handling
P280 Wear protective gloves/protective clothing/eye protection/face protection
P271 Use only outdoors or in a well-ventilated area
P302+P352 IF ON SKIN: Wash with plenty of soap and water
P321 Specific treatment (see Sections 4 - 8 of this SDS and any supplemental information on the product label)
P332+P313 If skin irritation occurs: Get medical advice/attention
P362 Take off contaminated clothing and wash it before reuse
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If eye irritation persists: Get medical advice/attention
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P312 Call a POISON CENTER/doctor/physician if you feel unwell
P370+P378 In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish
P403+P235 Store in a well-ventilated place. Keep cool
P403+P233 Store in a well-ventilated place. Keep container tightly closed
P405 Store locked up
P501 Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Hazards not otherwise classified:

Avoid contact with skin and eyes. Cyanoacrylates can bond skin and eyes in seconds.

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7085-85-0	Ethyl 2-cyanoacrylate	>70

Additional Information:

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200).

SECTION 4: First aid measures

Description of first aid measures

General notes:

Show this Safety Data Sheet to the doctor in attendance.

After inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

After skin contact:

Wash with soap and water. Allow warm water to penetrate the bond and gently attempt to remove bonded areas without pulling the skin away from bonded area. Remove contaminated clothing and shoes, if possible. Seek medical attention if irritation develops or persists.

After eye contact:

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eyes open. Seek immediate medical attention.

After swallowing:

Seek immediate medical attention. Ensure that breathing passages are not obstructed. The product will polymerize immediately in the mouth making it almost impossible to swallow. Saliva will slowly separate the solidified product from the mouth.

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Product may instantly bond skin upon contact. Skin contact may result in redness, pain, burning and inflammation.

Product may instantly bond eyes upon contact. Eye contact may result in irritation, redness, pain, inflammation, itching, burning and tearing.

Inhalation may have adverse effects on the respiratory tract. Symptoms may include cough, breathing difficulties, sore throat and inflammation of the mucous membrane lining the respiratory tract.

Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time).

Immediate medical attention and special treatment

Specific treatment:

Ingestion requires emergency medical attention. In case of bonding of skin or eyes, seek prompt medical advice/attention.

Notes for the doctor:

Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable extinguishing media:

Do not use water jet.

Specific hazards during fire-fighting:

Combustible liquid. Will be easily ignitable by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Inhalation or contact with material may irritate or burn skin and eyes. Vapors may cause dizziness or suffocation. Fire may produce irritating and/or toxic vapors or gas including carbon oxides and nitrogen oxides.

Special protective equipment for firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. All equipment used when handling the product must be grounded. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up:

Stop leak if you can do it without risk. Do not use cloth for clean-up. Flood with water to complete polymerization and scrape up the polymer. Place recovered material in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage

Precautions for safe handling:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Take action to prevent static discharges. Handle containers with caution. Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid contact with fabric and paper goods. Contact with these may cause polymerization that can generate smoke, strong irritating vapors and can cause thermal burns. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Ethyl 2-cyanoacrylate	7085-85-0	15-Minute STEL: 1 ppm
	Ethyl 2-cyanoacrylate	7085-85-0	8-Hour TWA: 0.2 ppm
United States(California)	Ethyl 2-cyanoacrylate	7085-85-0	8-Hour TWA-PEL: 1.02 mg/m ³ (0.2 ppm)

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Use explosion-proof local exhaust, mechanical ventilation or additional engineering controls to maintain airborne concentrations below any occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection equipment

Eye and face protection:

Do not wear contact lenses when using or handling this product.

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and body protection:

Glove material recommendations: Synthetic rubber gloves

Unsuitable glove material: PVC, rubber, cotton or nylon

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Wear a properly fitted, air-purifying or air-fed respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Liquid, Colorless to Straw Colored
Odor	Pungent
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	- 22 °C
Initial boiling point/range	>200 °C
Flash point (closed cup)	80 - 93.4 °C (Tag Closed Cup)
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	<0.2 mmHg @ 25 °C
Vapor density	Approx. 3 (Air = 1)

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Density	1.1 g/cm ³
Relative density	1.10 @ 25 °C
Solubilities	Polymerizes in the presence of water.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	485 °C
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	500-1000 cps
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

VOC content	Less than 2%; 20g/l (California SCAQMD Method 361B)
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SECTION 10: Stability and reactivity

Reactivity:

Rapid exothermic polymerization will occur in the presence of water, amines, alkalis, oxidizing agents, alcohols.

Chemical stability:

Stable under recommended handling and storage conditions.

Possibility of hazardous reactions:

Danger of polymerization. Polymerization with evolution of heat.

Conditions to avoid:

Extreme heat, open flames, hot surfaces, sparks, ignition sources, static electricity and incompatible materials. Vapor accumulation in low or confined areas.

Incompatible materials:

Water, amines, alkalis, oxidizing agents and alcohols

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
Ethyl 2-cyanoacrylate	oral	LD50 Rat: > 5,000 mg/kg
	dermal	LD50 Rabbit: > 2,000 mg/kg

Skin corrosion/irritation

Assessment:

Causes skin irritation.

Product data:

No data available.

Substance data:

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Name	Result
Ethyl 2-cyanoacrylate	Causes skin irritation.

Serious eye damage/irritation

Assessment:

Causes serious eye irritation.

Product data:

No data available.

Substance data:

Name	Result
Ethyl 2-cyanoacrylate	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

OSHA Carcinogens: Not applicable

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment:

May cause respiratory irritation.

Product data:

No data available.

Substance data:

Name	Result
Ethyl 2-cyanoacrylate	May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

Inhalation; Ingestion; Skin contact; Eye contact

Symptoms related to the physical, chemical and toxicological characteristics:

Refer to Section 4 of this SDS.

Other information:

No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Chronic (long-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data:

Name	Result
Ethyl 2-cyanoacrylate	This substance is readily biodegradable in water (98% degradation after 28 days).

Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Ethyl 2-cyanoacrylate	Bioconcentration in aquatic organisms is not a relevant environmental process for this substance because it rapidly polymerizes on contact with moisture.

Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Ethyl 2-cyanoacrylate	Adsorption to solid soil phase is not expected (estimated Koc = 21.5 L/kg).

Results of PBT and vPvB assessment

Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Ethyl 2-cyanoacrylate	The substance is not PBT.
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vPvB assessment:

Ethyl 2-cyanoacrylate	The substance is not vPvB.
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Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory agencies. Dispose of in accordance with all applicable local, regional, state and federal regulations.

Contaminated packages:

Do not reuse container.

SECTION 14: Transport information


United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not Applicable for non-bulk containers (\leq 119 gallons)
UN proper shipping name	.
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

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

UN number	3334
UN proper shipping name	Aviation Regulated Liquid, N.O.S. Cyanoacrylate Ester
UN transport hazard class(es)	9 
Packing group	None
Environmental hazards	None
Special precautions for user	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

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Export notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 extremely hazardous substances: None of the ingredients are listed.

SARA Section 313 toxic chemicals: None of the ingredients are listed.

CERCLA: None of the ingredients are listed.

RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

Massachusetts Right to Know: None of the ingredients are listed.

New Jersey Right to Know:

7085-85-0	Ethyl 2-cyanoacrylate	Listed
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New York Right to Know: None of the ingredients are listed.

Pennsylvania Right to Know: None of the ingredients are listed.

California Proposition 65: None of the ingredients are listed.

SECTION 16: Other information
