

Safety Data Sheet (SDS)

1. Identification of the substance or mixture and of the supplier

Product Name	Botanical
Synonym(s)	None
Product Code	None
General Use	Adhesives
Product Description	Powerful instant on cyanoacrylate
Company Name	Belle CO., LTD
Address	Osakaekimaedai3Bld 29F, 1-1-3, Umeda, Osaka-shi, kita-ku, Osaka 530-0001 Japan
Telephone No	+81-70-3108-4470

2. Hazard Identification

GHS Classification (Based on NITE)

Physical Hazards

Explosives	Classification not possible
Flammable gases	Not applicable
Flammable aerosols	Not applicable
Oxidizing gases	Not applicable
Gases under pressure	Not applicable
Flammable liquids	Not applicable
Flammable solids	Not applicable
Self-reactive substances and mixtures	Classification not possible
Pyrophoric liquids	Not classified
Pyrophoric solids	Not applicable
Self-heating substances and mixtures	Classification not possible
Substances and mixtures which, in contact with water, emit flammable gases	Not applicable
Oxidizing liquids	Not applicable
Oxidizing solids	Not applicable
Organic peroxides	Not applicable
Corrosive to metals	Not classified

Human Health Hazards

Acute toxicity (Oral)	Category 4
Acute toxicity (Dermal)	Not classified
Acute toxicity (Inhalation: Gases)	Not applicable
Acute toxicity (Inhalation: Vapours)	Classification not possible
Acute toxicity (Inhalation: Dusts)	Not applicable

Acute toxicity (Inhalation: Mists)	Classification not possible
Skin corrosion/irritation	Not applicable
Serious eye damage/eye irritation	Not applicable
Respiratory sensitization	Classification not possible
Skin sensitization	Not applicable
Germ cell mutagenicity	Category 1B
Carcinogenicity	Classification not possible
Reproductive toxicity	Classification not possible
Specific target organ toxicity-Single exposure	Not applicable
Specific target organ toxicity-Repeated exposure	Classification not possible
Aspiration hazard	Classification not possible

Environmental Hazards

Acute toxicity to the aquatic environment	Category 3
Chronic toxicity to the aquatic environment	Classification not possible

Label Elements

Pictogram and Symbol: Exclamation Mark

Signal word:

Warning



Hazard statement:

Combustible liquid.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

Precaution:

[Prevention]

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

Avoid breathing mist/vapours /spray.

Wash hands thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

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

[Response]

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

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

If in eyes: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do.

[Storage]

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

[Disposal]

Dispose of contents/container in accordance with local/regional/national/
International/regulations

3. Composition/information on ingredients

3.1 Substance: Ethyl 2-cyanoacrylate

3.2 Other name: 2-Cyanoacrylic acid, ethyl ester, 2-Cyano-2-propenoic acid, ethyl ester,

ETHYL 2-CYANOACRYLATE, Ethyl alpha-cyanoacrylate

3.3 Ingredients

Ingredients	wt %	CAS registry No	Chemical Formula
Ethoxyethyl 2-Cyanoacrylate	90~99	21982-43-4	C ₈ H ₁₁ NO ₃
PMMA	Less than 10	Secret	Secret
Pigment	Less than 1	Secret	Secret
Carbon black	Less than 1	1333-86-4	C

4. First aid measures

4.1 Description of necessary measures, subdivided according to the different routes of exposure, ie, inhalation, skin and eye contact, and ingestion

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

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Immediately call a POISON CENTER or doctor/physician.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

4.2 Most important symptoms/effects, acute and delayed

Causes skin irritation (Skin corrosion/irritation Category 2)

Causes serious eye irritation (Serious eye damage/eye irritation Category 2B)

May cause an allergic skin reaction (Skin sensitization Category 1)

May cause respiratory irritation (Specific target organ toxicity – Single exposure Category 3 (respiratory Irritation))

4.3 Indication of immediate medical attention and special treatment needed, if necessary

If skin irritation or rash occurs: Get medical advice/attention

If eye irritation persists: Get medical advice/attention

5. Firefighting measures

- 5.1 Acute hazards/ symptoms in fire: Combustible.
- 5.2 Prevention in fire: No open flames.
- 5.3 First aid/fire Fighting in fire: In case of fire in the surroundings: use appropriate extinguishing media.
- 5.4 Acute hazards/symptoms in explosion: Above 75 °C explosive vapour/air mixtures may be formed.
- 5.5 Prevention in explosion: Above 75 °C use a closed system, ventilation, and explosion-Proof electrical equipment.
- 5.6 First aid/firefighting in explosion: In case of fire: keep drums, etc., cool by spraying with water.

6. Accidental release measures

- 6.1 Evacuate nonessential personnel.
- 6.2 Shut off all sources of ignition; No fires, smoking or flames in area.
- 6.3 Ventilate area after material pick up is completed.
- 6.4 For small spills: Absorb spill with inert material (dry cloth, dry sand), then place in a chemical waste Containers using non-sparking tools. Flush residual spill(area) with plenty of water.
- 6.5 For large spills: Dike for later disposal. Wash with plenty of water.

7. Handling and storage

7.1 Precautions for safe handling.

- Keep away from heat/sparks/open flames/ hot surfaces. No smoking.
- Avoid breathing mist/vapours/spray.
- Wash hands thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities.

- Store in a well-ventilated place. Keep container tightly closed.
- Store locked up.

8. Exposure controls/personal protection

8.1 Control parameters, eg, occupational exposure limit values or biological limit values

ACGIH 2007, TLV-TWA 0.2ppm

8.2 Appropriate engineering controls (Please refer to engineering controls described in “7.1 Precautions for safe handling”).)

8.3 Individual protection measures, such as personal protective equipment (Please refer to Individual protection measures described in “7.1 Precautions for safe handling”).)

9. Physical and chemical properties

9.1 Appearance (physical state, color, etc): Black

9.2 Odor: Special irritating odor

9.3 Odor threshold: No data

9.4 pH: No data

9.5 Melting point/Freezing point: No data

9.6 Initial boiling point and boiling range : 180°C or higher

9.7 Flash point:75°C(closed-cup)

9.8 Evaporation rate: No data

9.9 Flammability (solid, gas): Liquid

9.10 Upper/lower flammability or explosive limits: lower limit 1.7vol%

9.11 Vapor pressure:<1 Pa(25°C)

9.12 Relative density: 0.9~1.1(water=1)

9.13 Solubility (ies): not soluble in water. slightly soluble in alcohol, acetone, MEK, toluene, DMF, nitromethane.

9.14 Partition coefficient: n- octanol /water: No data

9.15 Autoignition temperature:485°C

9.16 Decomposition temperature: No data

10. Stability and reactivity

10.1 Condition to avoid: High humidity, high temperature or direct sunlight.

10.2 Stability: Stable (cool and dry area).

10.3 Materials to avoid: Polymerized by contact with water, alcohols, amines, alkalies.

10.4Hazardous decomposition or by products: CO₂, oxides and nitrogen and unknown hydrocarbons.

11. Toxicological information

11.1 Acute toxicity(Oral)

Ethyl cyanoacrylate: Since the death of one in six rat is reported in oral 5000mg/kg (CICAD, 2001), LD₅₀ >5000mg/kg is presumed.

Signs of other toxicity are not acknowledged. Therefore, it was set as outside of Category.

Hydroquinone: Category 4(NITE Date).

11.2 Acute toxicity (Dermal)

Ethyl cyanoacrylate: Death is not reported at rabbit 2000mg/kg bw (CICAD, 2001).

Therefore, it was considered as the outside of Category.

Hydroquinone: Outside of Category (NITE Data)

11.3 Acute toxicity (Inhalation: Gases)

Liquid (GHS definition)

11.4 Acute toxicity (Inhalation: Vapours)

No data available

11.5 Acute toxicity (Inhalation: Dusts/Mist)

Classification not possible due to lack of data

11.6 Skin corrosion/irritation

Ethyl cyanoacrylate: Mild irritation is reported for the skin irritation study on rabbits (CICAD, 2001). Although irritation is not observed with single exposure on human skin (CICAD, 2001), reversible skin irritation is reported for repeated exposure (CICAD, 2001; ACGIH,2001).Therefore, it was classified as Category 2.

11.7 Serious eye damage / eye irritation

Ethyl cyanoacrylate: Although the stimulative influence (corneal epithelium damages, Blurred visions) on eye was seen in humans, has recovered completely within one week (CICAD, 2001). Moreover, the mild irritation to be recovered in eye of rabbit in three days is reported (CICAD, 2001). Therefore, it was set as Category 2B.

Hydroquinone: Category 1(NITE Data), but below 1.0% contained.

11.8 Respiratory sensitization / Skin sensitization

Ethyl cyanoacrylate: The animal data is not obtained. Two cases of skin sensitization in humans Have been reported (CICAD, 2001). Therefore, skin sensitization was set to Category 1. Respiratory sensitization cannot be classified due to the lack of data.

Hydroquinone: Skin sensitization was reported for Category 1, and respiratory sensitization was reported for out of Category (NITE Data).
but below 1.0% contained.

11.9 Germ cell mutagenicity

Hydroquinone: Category 1(NITE Data), but below 1.0% contained.

11.10 Carcinogenicity

Hydroquinone: Category 2(NITE Data), but below 1.0% contained.

11.11 Reproductive toxicity

Hydroquinone: Not classified. (NITE Data), and below 1.0% contained

11.12 Specific target organ toxicity-Single exposure

Ethyl cyanoacrylate: It is classified into Category 3(respiratory irritation) based on the report that the respiratory irritation by inhalation exposure of a rat (ACGIH,2001), and the respiratory irritation in humans (CICAD, 2001; ACGIH,2001).

Hydroquinone: Category 3(NITE Data), but below 1.0% contained.

11.13 Specific target organ toxicity-Repeated exposure

Hydroquinone: Category 2(Liver) (NITE Data), but below 1.0% contained.

11.14 Aspiration hazard

Ethyl cyanoacrylate: The dynamic viscosity (40°C) may be <14mm²/s (kinematic viscosity=1.7mm²/s (25°C)), however, we have no data of aspiration breathing apparatus hazards, therefore we could not classify it.

Hydroquinone: No data available

12. Ecological information

12.1 Acute toxicity to the aquatic environment

No data available.

12.2 Chronic toxicity to the aquatic environment

No data available.

13. Disposal considerations

13.1 Description of waste residues and information on their safe handling and methods of disposal

If you would like to dispose of this chemical, you should properly dispose of this by yourself or ask Qualified specific agents dispose of this according to related legislations and local regulations.

If you would like to ask the agents dispose of this chemical, you should provide sufficient information on dangerousness and hazard of this chemical.

13.2 The disposal of any contaminated packaging

Container should be recycled after cleaning or if you would like to dispose of container of this chemical, you should properly dispose of this by yourself or ask qualified specific agents dispose of this according to related legislations and local regulations. If you would like to ask the agents dispose of this container, you should provide sufficient information on dangerousness and hazard of this chemical in this container and information on ingredient and notice of container.

14. Transport information

14.1 U.S. Department of Transportation Ground Transport (49 CFR 172)

Proper shipping name:	Unrestricted (Not more than 450 liters.) Combustible liquids n.o.s. (Cyanoacrylate ester) (More than 450 liters)
Hazard class or division:	Unrestricted (Not more than 450 liters.) Combustible liquids. (More than 450 liters)
Identification number.	None (Not more than 450 liters) NA1993 (More than 450 liters)
Marine pollutant:	None.

14.2 International Air Transportation (ICA/IATA)

Proper shipping name:	Unrestricted
Class or division:	Unrestricted
UN or ID number:	None

14.3 Water Transportation (IMO/IMDG)

Proper shipping name:	Unrestricted
Hazard class or division:	None
Identification number:	None
Marine pollutant:	None

15. Regulatory information

15.1 safety, health and environmental regulations specific for the product in question (under survey)

CA Proposition 65:	No California proposition 65 chemicals are known to be present.
TSCA 8(b) Inventory Status:	All components are listed or are exempt from listing on Toxic Substances Control Act Inventory.
EINECS:	All components are listed on EINECS

REACH:

Ethyl 2-cyanoacrylate Reference number