



CARTELL

CARTELL CHEMICAL CO., LTD  
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## SAFETY DATA SHEET according to (EC) No 1907/2006 (REACH)

### MXBON<sup>®</sup> 424S

#### 1. Identification of the substance/mixture and of the company/undertaking

##### 1.1 Product identifier:

Mxbon<sup>®</sup> 424S

##### 1.2 Relevant identified uses of the substance or mixture and uses advised against:

Intended use: Cyanoacrylate adhesive

##### 1.3 Details of the supplier of the safety data sheet:

Cartell Chemical Co., LTD

No. 18 Cheng Gong Street, Min-shyong

Industrial Park, Chia-yi Hsien

(621) Taiwan

Phone: 886-5-220-3715

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##### 1.4 Emergency telephone number:

Emergency Tel: 886-5-220-3715

#### 2. Hazards identification

##### 2.1 Classification of the substance or mixture

###### Classification according to Regulation (EC) No 1272/2008

Skin irritation	H315 Causes skin irritation.	Category 2
Serious eye irritation	H319 Causes serious eye irritation	Category 2
Specific target organ toxicity-single exposure	H335 May cause respiratory irritation	Category 3

###### Classification according to Directive 67/548/EEC

Xi-Irritant

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

##### 2.2 Label elements (CLP): Labeling according to Regulation (EC) No 1272/2008

**Hazard pictogram:****Single word:**

Warning

**Hazard statement:**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

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

**Precautionary statement:**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P350 If on skin: Wash with plenty of soap and water.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Label elements: Labeling according to Directive 67/548/EEC**

Xi-Irritant	
Risk phrases:	R36/37/38 Irritating to eyes, respiratory system and skin.
Safety phrases:	S2 Keep out of the reach of children. S23 Do not breathe vapor. S24/25 Avoid contact with skin and eyes. S26 In case of contact eyes, rinse immediately with plenty of water and seek medical advice.
Additional labeling:	Cyanoacrylate, Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

**2.3 Other hazards:**

None if used properly.

**3. Composition/information on ingredients****General chemical description:**

Cyanoacrylate Adhesive

**Base substances of preparation:**

Cyanoacrylate

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

Hazardous components CAS-No.	EINECS Number Index Number REACH-Reg No.	content	Classification
Ethyl 2-cyanoacrylate	230-391-5	>70-<100%	Skin irritation 2 H315

7085-85-0	607-236-00-9 -	607-236-00-9 -	Serious eye irritation 2 H319 Specific target organ toxicity – single exposure 3 H335
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For full text of the H – statements and other abbreviations see section 16 “Other information”.

#### Declaration of ingredients according to Directive 67/548/EEC :

Hazardous components CAS-No.	EINECS Number Index Number REACH-Reg No.	content	Classification
Ethyl 2-cyanoacrylate 7085-85-0	230-391-5 607-236-00-9 -	>70-<100%	Xi – Irritant; R36/37/38

For full text of the R – Phrases indicated by codes see section 16 “Other information”.

## 4. First aid measures

### 4.1 Description of first aid measures

- Inhalation: Don't breathe gas/fumes/vapor/spray (appropriate wording to be specified by the manufacturer). (S23)  
Evacuate from further exposure. If unconsciousness occurs, seek immediate medical assistance and call a physician.  
If the breath has stopped, have artificial respiration. If breathing difficulty occurs, have oxygen inhalation.
- Skin contact: Instantly wash affected parts of the body with water and soap and rinse thoroughly. Seek medical treatment and present this data sheet.
- Eye contact: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. (S26)
- Ingestion: 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.

### 4.2 Most important symptoms and effects, both acute and delayed

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

- Eye: Irritation, conjunctivitis.  
Skin: Redness, inflammation.  
Respiratory: Irritation, coughing, shortness of breath, chest tightness.

### 4.3 Indication of any immediate medical attention and special treatment needed

In the case of lung irritation: Primary treatment using corticoide spray, eg. Auxilason spray, Pulmicort-dosage-spray. (Auxilason and Pulmicort are registered trademarks).

## 5. Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media: Alcohol-resistant foam, dry powder, carbon dioxide, water spray jet.
- Unsuitable extinguishing media: High volume water jet.

### 5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released: Nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>).

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Firefighters should wear positive pressure

self-contained breathing apparatus (SCBA). Firefighting operations, rescue and cleaning work under effect of combustion and smolder gases just may be done with breathing apparatus. Dispose of contaminated extinction water according to official regulations.

## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Use personal protective clothing.

For emergency responders: Ensure adequate ventilation. Avoid contact with eyes or skin.

### 6.2 Environmental precautions

If leakage occurs, dam up. Resolve leaks if this possible without risk. Prevent surface and ground-water infiltration, as well as ground penetration. Prevent from entering drainage system. If accidental entry into drainage system occurs, inform responsible authorities.

### 6.3 Methods and material for containment and cleaning up

Do not use cloth for clean up. Flood with water to complete polymerization and scrape up the polymer. Solid material can be disposed as non-hazardous waste.

### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

## 7. Handling and storage

### 7.1 Precautions for safe handling

Recommendations: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mists. Wash thoroughly after handling. Avoid contact with fabric and paper goods. Contact with these may cause polymerization that can generate smoke and strong irritating vapors, and can cause thermal burns.

Advice on general occupational hygiene: Wash hands and face before eating.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep in a cool, well-ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. Incompatible products: Do not store together with alkalis.

### 7.3 Specific end use(s)

Cyanoacrylate

## 8. Exposure controls/ personal protection

### 8.1 Control parameters

Valid for Great Britain

Basis UK EH40 WELs

Ingredient	ppm	mg/m <sup>3</sup>	Type	Remarks
Ethyl 2-cyanoacrylate 7085-85-0	-	-	TWA (8 h)	EH40 WEL
Ethyl 2-cyanoacrylate 7085-85-0	0.3	1.5	Short Term Exposure Limit STEL (15 min)	EH40 WEL

### 8.2 Exposure controls

8.2.1 Appropriate Engineering Controls: If general ventilation is insufficient to maintain vapor concentration below established exposure limits, use protective downdraft exhaust ventilation.

## 8.2.2 Individual protection measures

General protective and hygienic measures

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Eye/Face protection

Safety glasses with side shields or chemical splash goggles.

Skin protection

Do not use PVC, rubber, cotton or nylon gloves.

Hand protection

Tested protective gloves are to be worn: Suitable material: Synthetic rubber gloves. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Respiratory protection

If there is a potential to exceed exposure limits, use an approved respirator.

8.2.3 Environmental exposure controls

Do not empty into drains or the aquatic environment.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Liquid, colorless to straw liquid
Odor:	Sharp, irritating
Odor threshold:	Not available.
pH:	Not applicable
Melting point/freezing point:	-22°C
Initial boiling point and boiling range:	>200°C
Flash point:	80-93.4°C (Method: Tag closed Cup)
Evaporation rate (Butyl acetate =1):	Not available.
Flammability:	Not available.
Upper/lower flammability:	Not available
Vapor pressure (25°C):	Less than 0.2 mmHg
Vapor density (Air=1):	Approximately 3
Relative density:	1.1 g/cm <sup>3</sup>
Solubility:	Polymerizes in presence of water.
Partition coefficient:	Not applicable
Auto-ignition temperature:	485°C
Decomposition temperature:	Not applicable
Viscosity:	900-1300 cps.
Explosive properties:	Product is not explosive.
Oxidizing properties:	Product is not oxidizing.

### 9.2 Other information

Specific gravity:	1.10 (25°C)
VOC content:	Less than 2%; 20g/l (California SCAQMD Method 361B)

## 10. Stability and reactivity

### 10.1 Reactivity

Rapid exothermic polymerization will occur in the presence of water, amines, alkalis, oxidizing agents and alcohols. Stable under recommended storage conditions.

### 10.2 Chemical stability

The product is in compliance with the storage and processing conditions, chemically stable.

### 10.3 Possibility of hazardous reactions

Danger of polymerization. Polymerization with evolution of heat.

### 10.4 Conditions to avoid

Spontaneous polymerizations.

### 10.5 Incompatible materials

Water, amines, alkalis, oxidizing agents and alcohols.

### 10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide. Nitrous oxides (NO<sub>x</sub>).

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Oral toxicity:

Cyanoacrylates are considered to have relatively low toxicity. Acute oral LD50 is >5000 mg/kg (rat). It is almost impossible to swallow as it rapidly polymerizes in the mouth.

#### Inhalative toxicity:

Irritating to respiratory system. Prolonged exposure to high concentrations of vapor may lead to chronic effects in sensitive individuals. In dry atmosphere with <50% humidity, vapor may irritate the eyes and respiratory system.

#### Skin irritation:

Irritating to the skin. Bonds skin in seconds. Considered to be of low toxicity: acute dermal LD50 (rabbit) >2000mg/kg. Due to polymerization at the skin surface allergic reaction is unlikely to occur.

#### Eye irritation:

Irritating to eyes. Liquid product will bond eyelids. In a dry atmosphere (RH<50%) vapor may cause irritation and lachrymatory effect.

#### Acute toxicity:

Hazardous components CAS-No.	Value Type	Value	Route of application	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	LD50	>5000mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
	LD50	>2000mg/kg	dermal		rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

#### Skin corrosion/irritation

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	Slightly irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation/Corrosion)

#### Serious eye damage/irritation

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	Slightly irritating	72 h	rabbit	OECD Guideline 405 (Acute Eye Irritation/Corrosion)

### Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study/ Route of administration	Metabolic activation/ Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	negative negative negative	Bacterial reverse mutation assay (e.g. Ames test) mammalian cell gene mutation assay in vitro mammalian chromosome aberration test	with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

### Carcinogenicity:

According NTP, OSHA and IARC, the substance is not carcinogen.

## 12. Ecological information

### 12.1 Toxicity

Biological and chemical oxygen demands (BOD and COD) are insignificant. Do not empty into drains/ surface water/ ground water. Do not allow uncontrolled leakage of product into the environment.

### 12.2 Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Ethyl 2-cyanoacrylate 7085-85-0		aerobic	57%	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

### 12.3 Bioaccumulative potential

Hazardous components CAS-No.	LogKow	Bioconcentration Factor (BCF)	Temperature	Method
Ethyl 2-cyanoacrylate 7085-85-0	0.776		22°C	EU Method A. 8 (Partition Coefficient)

### 12.4 Mobility in soil

Cured adhesives are immobile.

### 12.5 Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

### 12.6 Other adverse effects

No further relevant information available.

## 13. Disposal considerations

### 13.1 Waste treatment methods

Waste treatment containers:

Appropriate methods of waste treatment of  
substance:

Appropriate methods of waste treatment of

Dispose according local, province/state, country's  
governmental regulations.

Cured adhesive: Disposal of as water insoluble  
non-toxic solid chemical in authorized landfill or  
incinerate under controlled conditions.

After use, tubes, cartons, and bottles containing

packaging: residual product should be disposed of as chemically contaminated waste in an authorized legal land fill site or incinerated. Disposal must be made according to official regulations.

Sewage disposal: Dispose according local, province/state, country's governmental regulations.

Special precautions: Not available.

Relevant community/national/regional provisions: Not available.

#### 14. Transport information

	ADR/RID	AND/ADNR	IMDG	IATA
<b>14.1 UN Number</b>	UN 1993	Not available	Not available	UN 3334
<b>14.2 UN Proper Shipping Name</b>	COMBUSTIBLE LIQUIDS, N.O.S. (Cyanoacrylate ester)	Not available	Not available	AVIATION REGULATED LIQUID, N.O.S. (Cyanoacrylate ester)
<b>14.3 Transport hazard class(es)</b>	3	Not available	Not available	9
<b>14.4 Packing group</b>	None	Not available	Not available	None
<b>14.5 Environmental hazards</b>	Not available	Not available	Not available	Not available
<b>14.6 Special precautions for user</b>	Not available	Not available	Not available	Not available

#### 15. Regulatory information

##### 15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture

EU regulations: Regulation (EC) No 1907/2006  
Regulation (EC) No 1272/2008

Authorizations and/or Restrictions on Use: This product is not included on the Candidate List of Substances of Very High Concern for Authorization

Authorizations: Substances of Very High Concern for Authorization

Restrictions on use: The product is not subject to restrictions under Annex XVII of REACH Regulation.

##### 15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

#### 16. Other information

The labeling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

Relevant R-phrases (Number and full text): R/36/37/38 Irritating to eyes, respiratory system and skin.

Relevant S-phrase (Number and full text): S2 Keep out of the reach of children.  
S23 Do not breathe vapor.  
S24/25 Avoid contact with skin and eyes.  
S26 In case of contact eyes, rinse immediately with plenty of water and seek medical advice.

Relevant H-phrases (Number and full text): H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

Relevant P-phrases (Number and full text): P261 Avoid breathing

dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P350 If on skin: Wash with plenty of soap and water.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties. Substances has been classified in accordance with Regulation (EC) 1272/2008 (CLP) and Council Directive 67/548/EEC.

*Revision Date: Mar, 20<sup>th</sup>, 2015*

*Revision: 0001*