1 SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Name : Sky Zone – Cyanoacrylate Glue
1.2 First Issue : Jan 08, 2018
1.3 Company Identification: Daejin Chemical Co., Ltd
: 467 Shinhyeon-ro, Siheung-si, Gyeonggi-do 14959 Rep of Korea

SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

2.1 Classication of the substance or mixture

SUBSTANCE NAME	CAS. NO	EC.NO	% BY WEIGHT(APPROX.)
Ethyl Cyanoacrylate	7085-85-0	230-391-5	92%
Polymethyl Methacrylate	9011-14-7	94-36-0	4%
CI 77266	1333-86-4	215-609-9	4%

2.1 Classication of the substance or mixture
Classification according to Regulation (EC) no. 1272/2008[CLP/GHS]

A) Polymethyl Methacrylate
Skit Irrit. 2(H315 Causes skin irritation)
Eye Irrit. 2(H319: Causes serious eye irritation)
STOT SE 3(H335: May cause respiratory irritation)

B) Ethyl Cynoacrylate
Skit Irrit. 2(H315 Causes skin irritation)
Eye Irrit. 2(H319: Causes serious eye irritation)
STOT SE 3(H335: May cause respiratory irritation)
Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)
STOT SE 3; H335: C ≥ 10 %

C) Carbon Black/ CI77266
Not classified

2.2 Label elements
Labelling according to Regulation (EC) no. 1272/2008[CLP/GHS]

Hazard pictograms: Exclamation mark

GHS07

Signal word: DANGER

Hazard Stamements:
H315 Causes skin irritation
H317: May cause an allergic skin reaction
H335 May cause respiratory irritation

Precautionary statements:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water
P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.
P337 + P313 IF eye irritation persists: Get medical advice/attention
P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage Precautionary statements
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P411 + P235 Store at temperatures not exceeding 25°C / 77°F. Keep cool.

Supplemental hazard information: Not applicable

SECTION 3 – HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW
Vapor is irritating to eyes, skin and mucous membranes and respiratory tract.

3.2 POTENTIAL HEALTH EFFECTS
May caused sensitization by inhalation, Narcotic effects, headache, dizziness, vomiting.
Skin : Dryness
Eye : Irritation

3.3 POTENTIAL ENVIROMENTAL EFFECTS:
Not available.

3.4 SIGN AND SYMPTOMS OF EXPOSURE:
Vapor is irritating to eyes and mucous membranes above TLV. Prolonged and repeated over exposure to vapors may cause symptoms of non-allergic asthma in sensitive individuals.

3.5 EXISTING CONDITIONS AGGRAVATED BY EXPOSURE:
None Known

SECTION 4 – FIRST AID MEASURES

4.1 Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.

4.2 Skin contact: Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

4.3 Eye contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.

4.4 Ingestion: Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.

Notes to physician: Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

SECTION 5 – FIRE FIGHTING MEASURE

Flash Point : above 115°c Method: Cleveland open cup. (Recommended)
Extinguishing Agents : Carbon dioxide, foam, dry chemical
Special Firefighting Procedures: Not Available
Hazardous Products Formed by fire or thermal decomposition: Irritating organic fragments
Unusual fire or explosion hazards: None
Explosive Limits : (% by volume in air) Lower Not available
: (% by volume in air) Upper Not available

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautionary measures: Refer to section 8 –personal protection. For large spills, evacuate the area and ensure good ventilation if possible - wear self-contained breathing apparatus if necessary. Wear suitable protective clothing.

6.2 Environmental protection measures: Polymerize slowly before disposal – see section 13.

6.3 Procedure for cleaning / absorption: For large spills wear self-contained breathing apparatus. Do not use cloths for mopping up. Polymerise slowly with water and scrape up.

SECTION 7 – HANDLING AND STORAGE

7.1 HANDLING:
Wear proper protective equipment, and avoid contact with skin or eyes.
Use only in well ventilated areas.
Use exhaust ventilation to keep air concentration below exposure limit.
Keep container tightly closed when not in use. .

7.2 STORAGE:
Keep away from possible source of ignition.
Store in cool, dry and well ventilated location.
Keep container tightly closed.
Keep away from combustible materials, hear, and steam pipe or sunlight.
Keep away from oxidizing materials.

7.3 OTHER PRECAUTIONS:
Wash hands, face and gargle after work.
Practice good personal hygiene after using this material, especially before eating, drinking, smoking or using the rest room.
Keep out of reach of children.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Engineering controls: Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

8.2 Respiratory protection: Ensure adequate ventilation

8.3 Eye protection: Wear protective glasses.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Black Liquid
Odor	: Odorless, irritating
Boiling Point	: Above 190°c (374. F)
Melting Point	: N/A
Specific Gravity (H2O = 1)	: 0.9-1.1
Vapor Pressure (at 25°c)	: 1Pa
Vapor Density (Air =1)	: 4.9
Evaporation Rate (Butyl acetate =1)	: N/A

Solubility in Water: Insoluble (Polymerized by water)
Additional information: Soluble in acetone

SECTION 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 Material to avoid	: Polymerized by contact with water, alcohols, amines or alkalis.

Hazardous Decomposition or by Products: CO2, Oxides, Nitrogen and unknown Hydrocarbons.

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicity : Skin contact may cause burns, bond skin rapidly and strongly skin and eye irritant
Routes of Entry: Inhalation (Yes), Skin (Yes), Ingestion (Yes).

Ingredients which have exposure limits

	ACGIH (TLV)	OSHA (PEL)	OTHER
Ethyl Cyanoacrylate	0.2ppm TWA	None	None

	Literature Referenced	Carcinogen		
Ingredients	Target Organ and Other health Effects	NTP	IARC	OSHA
Ethyl Cyanoacrylate	ALG IRR RES	No	No	No

Abbreviations

N/A	Not applicable	AC3	ACGIH animal Carcinogen
ALG	Allergen	BLO	Blood
BNM	Bone Marrow	CNS	Central Nervous System
EYE	Eyes	IMM	Immune system
IRR	Irritant	LIV	Liver
MUT	Mutagen	Res	Respiratory

SECTION 12 – ECOLOGICAL INFORMATION

No date Available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Product: Polymerize adhesive by adding slowly to water (10:1, Adhesive:Water).
Dispose of solid residue according to national and local regulations.
Contaminated packaging: As above.

SECTION 14 – TRANSPORTATION INFORMATION

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 4 50 liters.)
Combustible liquids (More than 450 liters)
Identification number : None (Not more than 450 liters.)
NA1993 (More than 450 liters)
Marine Pollutant : None
International Air Transportation (ICA/IATA)
Proper shipping name : Unrestricted
Class or Division : Unrestricted
UN or ID number : None
Water Transportation (IMO/IMDG)
Proper Shipping Name : Unrestricted
Hazard class or division: None
Identification Number : None
Marine Pollutant : None

SECTION 15 – REGULATORY INFORMATION

CA Proportion 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

SECTION 16 – OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard : 1
Fire Hazard : 1
Reactivity Hazard : 1
Specific Hazard : Does not apply

Estimated HMIS(R) Code:
Health Hazard : 1
Flammability Hazard : 1

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HMIS is a registered trademark of the National Paint and Coating Assn.

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