

Material Safety Data Sheet

1. Product and Company Identification

Product name :GLU-GLUE U#805 (A Liquid)

Name of supplier :SOLAR CO., LTD.

Address :1-7, Nunobiki-cho-2-chome, Chuo-ku, Kobe, Hyogo-Pref. 651-0097 JAPAN

Division :R & D DEPT.

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Product code(MSDS NO) :EN500131-2

2. Hazards Identification

GHS classification and label elements of the product

GHS classification

HEALTH HAZARDS

Acute toxicity Vapor inhalation : Category 2

Acute toxicity Dust/Mists inhalation : Category 4

Skin corrosion/irritation : Category 2

Serious eye damage /eye irritation : Category 1

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Specific target organ toxicity-single exposure : Category 2

Specific target organ toxicity-repeated exposure : Category 1

Specific target organ toxicity-repeated exposure : Category 2

ENVIRONMENTAL HAZARDS

Hazardous to the aquatic environment-acute toxicity : Category 3

Hazardous to the aquatic environment-chronic toxicity : Category 3



Signal word :Danger

HAZARD STATEMENT

Fatal if inhaled Vapor

Harmful if inhaled dust/mist

Causes skin irritation.

Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

May causes damage to nerve/nervous system, kidney, heart and respiratory apparatus/system

Causes damage to kidney and respiratory apparatus/system through prolonged or repeated exposure.

May causes damage to blood, liver, heart and adrenal through prolonged or repeated exposure.

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing should not be allowed out of the workplace.
 Avoid release to the environment (- if this is not the intended use).
 Wear protective gloves.
 Wear eye protection/face protection.
 Wear respiratory protection.(as specified by the manufacturer/supplier or the competent authority.)

Response

Immediately call a POISON CENTRE or doctor/physician.
 Get medical advice/attention if you feel unwell.
 Take off contaminated clothing and wash before reuse.
 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.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If exposed or you feel unwell: Call a POISON CENTER or doctor/physician.
 If skin irritation or rash occurs: Get medical advice/attention.
 If experiencing respiratory symptoms call a POISON CENTER or doctor/physician.

Storage

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

Disposal

Dispose of contents/container in accordance with local/national regulation.

Class name of hazardous chemicals for MSDS in Japan

Miscellaneous dangerous substances

3. Composition/Information on Ingredients

Substance/Preparation :Preparation

Ingredient name	content(%)	CAS No.	PRTR law No, Japan
Hydroxyl- terminated prepolymer	90 - 95		
Methylene diphenyl diisocyanate	2.5	101-68-8	1-448
Dimethyldicyane	1 - 5	6864-37-5	2-97
Additive	0.1 - 1		

4. First-Aid Measures**IF INHALED :**

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

Skin contact

Never use solvent or thinner.
 Wash with plenty of soap and water.
 If you observe unusual symptom, have irritation/pain and/or feel unwell, seek medical advice.

IF IN EYES :

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.

IF SWALLOWED :

Rinse mouth.
 Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor/physician.

5. Fire-Fighting Measures

Suitable extinguishing media

In case of fire, use water mist, foam, dry powder or CO₂.

Specific fire-fighting measures

Use appointed fire extinguisher.

Remove flammable matters quickly from nearby.

Apply water from a safe distance to cool and protect surrounding area.

Special protective equipment and precautions for fire-fighters

Fire extinguishing work has to be done from windward.

Wear proper protective equipment.

6. Accidental Release Measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

Keep unauthorized personnel away.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Methods and materials for containment and cleaning up

Place in a covered container.

Use non-sparking tools to collect absorbed material.

Preventive measures for secondary accident

Prepare extinguishers before catching fire.

7. Handling and Storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Use personal protective equipment as required.

(Protective measures against fire & explosion)

Take precautionary measures against static discharge.

Safety Measures/Incompatibility

Do not handle until all safety precautions have been read and understood.

Handle in good ventilation.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

Keep container tightly closed.

Protect from sunlight. Store in a well-ventilated place.

8. Exposure Control/Personal Protection

Control parameters e.g. occupational exposure limit values or biological limit values

Adopted value

(Methylene diphenyl diisocyanate)JSOH(1993) 0.05mg/m³

(Methylene diphenyl diisocyanate)ACGIH (1985) TWA: 0.005ppm (Resp sens)

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Exhaust/ventilator should be available.

Individual protection measures, such as personal protective equipment

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear protective gloves/clothing

9. Physical and Chemical Properties

Physical properties

Appearance :liquid

Color :clear pale yellow

Flash point :No data

Specific gravity :ca 1.01

10. Stability and Reactivity

Chemical stability

Stable under normal storage/handling conditions.

11. Toxicological Information

Symptoms related to the physical, chemical and toxicological characteristics

Acute toxicity

Oral toxicity component(s) data

(Methylene diphenyl diisocyanate)rat LD50 9200 mg/kg

Inhalation toxicity component(s) data

(Methylene diphenyl diisocyanate)rat LC50 178 mg/m3

Irritant properties

Serious eye damage /eye irritation

Eye damage/irritation component(s) data

(Methylene diphenyl diisocyanate)rabbit 100µg ; MILD

Carcinogenic effects

(Methylene diphenyl diisocyanate)IARC-Gr.3 ; Not Classifiable as a Human Carcinogen.

(Methylene diphenyl diisocyanate)EPA "Cannot Be Determined" to be carcinogenic(1996)

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

Aquatic toxicity(component(s) data)

(Methylene diphenyl diisocyanate)Algae EC50 = 1.5 mg/L/72hr

(Dimethyldicyane)Crustacea(Daphnia magna) EC50=4.6mg/L/48hr (EPA_Japan :

Bioeffects evaluation test, 2000)

Water solubility

(Methylene diphenyl diisocyanate)reaction (ICSC, 1999)

(Dimethyldicyane)0.4 g/100 ml (20 C) (ICSC, 2002)

Persistence and degradability

(Dimethyldicyane)BOD_Degradation : 0%(Registered chemicals safety check & review data, Japan)

Bioaccumulative potential

(Dimethyldicyane)log Pow=2.5 (ICSC, 2002) ; BCF=6 (Check & Review, Japan)

13. Disposal Considerations

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

Avoid release to the environment (- if this is not the intended use).
Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No, UN CLASS

UN No :No data

Special precautions in connection with transport or conveyance

Follow instruction in Handling & Storage.

15. Regulatory Information

Industrial Safety and Health law, Japan

Chemical name et al should be informed :Methylene diphenyl diisocyanate

Labor standard law, Japan; Toxic :Methylene diphenyl diisocyanate

Labor safety and hygiene control law, Japan; Mutagenic existing chemicals :Methylene diphenyl diisocyanate

PRTR law, Japan

Listed chemicals Gr.1 :Methylene diphenyl diisocyanate

Listed chemicals Gr.2 :Dimethyldicyane

Fire protection law, Japan

Petroleums Gr.4, (Class III)

Chemical Substances Control Law, Japan

Supervised chemicals, Gr. 2 :Dimethyldicyane, Methylene diphenyl diisocyanate

Supervised chemicals, Gr. 3 :Dimethyldicyane

16. Other Information/References

Reference Book

Recommendations on the TRANSPORT OF DANGEROUS GOODS 15th edit. UN
2008 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2008 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/monoeval/grlist.html>

JIS Z 7250 2005

Supplier's SDS

ezCric(Retrieval System/ Japan Chemical Database Ltd.)

Other information

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own test