

# Safety Data Sheet

No. 98N

SDS Version: 1.0

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## 1. CHEMICALS AND COMPANY IDENTIFICATION

**Chemical Name :** PU Adhesive

**Other Names :** -

**Product Code :** 98N

**Use recommendations and limitations :** See Technical Data Sheet.

**Name, addresses, and phone numbers of the manufacturer, importer or supplier :**

GREAT EASTERN RESINS INDUSTRIAL CO., LTD

35, 34 Road, Taichung Industrial Park, Taichung, Taiwan, R. O. C.

(886)-4-23587676 fax number: (886)-4-23581291

**Emergency contact phone numbers/fax numbers :**

(886)-4-23587676 / (886)-4-23581291

**E-mail address of person responsible for Safety Data Sheet :**

tw2499@greco.com.tw

## 2. HAZARDS IDENTIFICATION

**Chemicals hazard classification :**

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2;H225

Eye Irrit. 2;H319

STOT RE 2;H373

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause damage to organs through prolonged or repeated exposure. Specific Target Organs: (Not Available)

**Label contents:**

According to Regulation (EC) No 1272/2008

**Pictograms:**


Flame



Exclamation Mark



Health Hazards

**Signal Word:** Danger

**Hazard Statements :**

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

**Precautionary Statements :**

**[Prevention]:**

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P233 Keep container tightly closed.

P235 Keep cool.

P240 Ground / bond container and receiving equipment.

P241 Use explosion-proof electrical / ventilating / light / equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P314 Get Medical advice / attention if you feel unwell.

P331 Do NOT induce vomiting.

P332+313 If skin irritation occurs: Get medical advice / attention.

P337+313 If eye irritation persists: Get medical advice / attention.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

**[Storage]:**

P403+235 Store in a well ventilated place. Keep cool.

P405 Store locked up.

**[Disposal]:**

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

See Technical Data Sheet.

**Other hazards :** This product contains no PBT/vPvB chemicals.

**3. INGREDIENTS IDENTIFICATION INFORMATION**

If the product contains substances that present a hazard according to Regulation (EC) No. 1272/2008 [CLP/GHS] (as amended by (EU) 2015/830), they are listed below.

**MIXTURE :**

**Chemical Property :**

Chemical Name	CAS No.	Concentration or concentration ranges (% of contents)	Classification according to regulation EC No. 1272/2008*	Notes
Methyl ethyl ketone	CAS No.: 78-93-3 EC No. Index No.:	41 - 56	Flam. Liq. 2;H225  Eye Dam. 2A;H319 STOT RE 2;H373	[1][2]
Acetone	CAS No.: 67-64-1 EC No. Index No.:	16 - 31	Flam. Liq. 2;H225  Eye Dam. 2A;H319	[1][2]
Polyurethane Resin	CAS No.: 9009-54-5 EC No. Index No.:	12.5 – 16.5		[1]
Ethyl acetate	CAS No.: 141-78-6 EC No. Index No.:	6 - 21	Flam. Liq. 2;H225  Eye Dam. 2A;H319	[1][2]

\*CLP<sup>31</sup> Reference EC No. 1272/2008 1.1.3.1. Notes relating to the identification, classification and labelling of substances (Table 3.1).

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

\*The full texts of the phrases are shown in Section 16.

#### 4. FIRST-AID MEASURES

##### The first-aid measures for different exposure routes :

##### General :

In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

##### Inhalation :

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

##### Skin contact :

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

**Eye contact :**

Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

**Ingestion :**

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

**Most important symptoms and hazardous effects :****General :**

No available information See section 2 for further details.

**Inhalation :**

May be harmful if swallowed and enters airways. (Not adopted by EU CLP)

**Eye contact :**

Causes serious eye irritation.

**Skin contact :**

Causes mild skin irritation. (Not adopted by EU CLP)

**The protection of first-aiders :**

No available information

**Notes to physicians :**

Treat symptomatically

**5. FIRE-FIGHTING MEASURES****Suitable fire extinguishing media :**

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder, water spray.

**Special hazards may be encountered during fire-fighting :**

Hazardous decomposition: Carbon Dioxide, Carbon Monoxide  
 Keep away from heat / sparks / open flames / hot surfaces - No smoking.  
 Keep container tightly closed.  
 Keep cool.  
 Ground / bond container and receiving equipment.  
 Use explosion-proof electrical / ventilating / light / equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Do not breathe mist / vapors / spray.

**Special fire-fighting methods :**

No available information

**Special equipment and protections for fire-fighters :**

Put on appropriate personal protective equipment (see section 8).

**NFPA Ranking**

Health (blue) :1

Fire (red) :3

Reactivity (yellow) :0

Special (white) :--

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions :**

Put on appropriate personal protective equipment (see section 8).

**Environmental precautions :**

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

**Methods for cleaning up :**

Small Spill: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

Large Spill: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for late disposal.

**7. SAFE HANDLING AND STORAGE MEASURES****Handling :**

Avoid contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment.

Observe good industrial hygiene practices.

See section 2 for further details. - [Prevention]:

**Storage :**

Store in cool, dry ventilated area. Avoid excessive heat. Always keep containers tightly closed when not in use.

Incompatible materials: Strong oxidizing agents

See section 2 for further details. - [Storage]:

**8. EXPOSURE CONTROLS MEASURES****Engineering Controls :**

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

**Control parameters**

Ingredient	8 hours time weighted average exposure limits	Short-term exposure limits	Maximum exposure limits	Other Regulations	
				ACGIH	NIOSH
141-78-6 / Ethyl acetate	400 ppm TWA; 1440 mg/m3 TWA	500 ppm 1440 mg/m3	No available information	ACGIH	TWA: 150 ppm
				NIOSH	TWA 400 ppm (1400 mg/m3)
67-64-1 / Acetone	200 ppm TWA; 475 mg/m3 TWA	250 ppm 593.75 mg/m3	No available information	ACGIH	TWA: 500 ppm STEL: 750 ppm
				NIOSH	250 ppm (590 mg/m3) TWA
78-93-3 / Methyl ethyl ketone	200 ppm TWA; 590 mg/m3 TWA	250 ppm 737.5 mg/m3	No available information	ACGIH	TWA: 50 ppm STEL: 100 ppm
				NIOSH	TWA 200 ppm (590 mg/m3) ST 300 ppm (885 mg/m3)

9009-54-5 / Polyurethane Resin	No available information	No available information	No available information	ACGIH	No available information
				NIOSH	No available information
Ingredient		BEI			
141-78-6 / Ethyl acetate		No available information			
67-64-1 / Acetone		Urine acetone 50mg/L (Ns)			
78-93-3 / Methyl ethyl ketone		The MEK in urine after work is 2mg/L (Ns)			
9009-54-5 / Polyurethane Resin		No available information			

**Personal protective equipment :****Respiratory protection :**

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

**Hand protection :**

Protective gloves recommended.

**Eye protection :**

Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.

**Skin and body protection :**

Avoid skin contact.

**Hygiene measures :**

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance (state, color, etc.) :</b> Gel like liquid	<b>Odor :</b> Pungent Odor
<b>Odor threshold :</b> No available information	<b>Melting point :</b> -94.6 ~ -83°C
<b>pH value :</b> No available information	<b>Boiling point / Boiling range :</b> 56.2°C
<b>Flammability (solid, liquid) :</b> No available information	<b>Flashpoint :</b> <23°C <b>Test method(Open cup or Close cup) :</b> Close cup
<b>Decomposition temperature :</b> No available information	<b>Explosion limits :</b> 1.8% - 12.8%
<b>Auto-ignition temperature :</b> 404°C	<b>Vapor Density :</b> 2~3.04 (Air =1)
<b>Vapor pressure :</b> 73~180mmHg	<b>Solubility :</b> Slightly soluble in water
<b>Density :</b>	<b>Evaporation rate :</b>

< 1 (H <sub>2</sub> O=1)	No available information
<b>Octanol/Water partition coefficient :</b> No available information	<b>Explosive properties :</b> No available information
<b>Viscosity :</b> 1400 ~ 1800cP	<b>Oxidising properties :</b> No available information

### 10. STABILITY AND REACTIVITY

<b>Reactivity :</b> Hazardous Polymerization will not occur.
<b>Chemical stability :</b> Stable under normal circumstances.
<b>Possible hazardous reactions occurring under specific conditions :</b> No available information
<b>Conditions to avoid :</b> Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Materials to avoid :</b> Strong oxidizing agents
<b>Hazardous decomposition products :</b> Carbon Dioxide, Carbon Monoxide

### 11. TOXICOLOGICAL INFORMATION

<b>Exposure routes/symptom :</b>		
Exposure routes	Category	Symptom
Serious eye damage/irritation	2	Causes serious eye irritation.
STOT-repeated exposure	2	May cause damage to organs through prolonged or repeated exposure. Specific Target Organs: (Not Available)

### Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapour LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Ethyl acetate - (141-78-6)	5,600.00, Rat - Category: NA	No available information	No available information	No available information	16,000.00, Rat - Category: NA
Acetone - (67-64-1)	5,800.00, Rat - Category: NA	No available information	No available information	No available information	50,100.00, Rat - Category: NA
Methyl ethyl ketone - (78-93-3)	2,740.00, Rat -	No available	No available	No available	No available

	Category: 5	information	information	information	information
Polyurethane Resin - (9009-54-5)	2,193.00, Rat - Category: 5	3,001.00, Rabbit - Category: 5	No available information	No available information	No available information

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

### Carcinogen Data

CAS No.	Ingredient	Source	Value
141-78-6	Ethyl acetate	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
67-64-1	Acetone	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
78-93-3	Methyl ethyl ketone	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
9009-54-5	Polyurethane Resin	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;

### Chronic toxicity or long term toxicity :

No available information

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l	Biodegradability %
Ethyl acetate - (141-78-6)	No available information	No available information	No available information	No available information
Acetone - (67-64-1)	8,300.00,	10.00,	No available information	No available information
Methyl ethyl ketone - (78-93-3)	1,690.00,	No available information	No available information	No available information
Polyurethane Resin - (9009-54-5)	4,600.00, Fish	0.00, Daphnia magna	2,029.00 (96 hr), Algae	Readily biodegradable



<b>Persistence and degradation :</b> There is no data available on the preparation itself.
<b>Organism accumulation :</b> No available information
<b>Movement through soil, Koc :</b> No available information
<b>Other negative effects :</b> No available information

### 13. WASTE DISPOSAL MEASURES

<b>Methods of waste disposal :</b> Observe all federal, state and local regulations when disposing of this substance.
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### 14. TRANSPORT INFORMATION

	<b>DOT (Domestic Surface Transportation)</b>	<b>IMO / IMDG (Ocean Transportation)</b>	<b>ICAO/IATA</b>
<b>United Nation number (UN No)</b>	UN1133	UN1133	UN1133
<b>UN proper shipping name</b>	UN1133, Adhesives, containing a flammable liquid, 3, II	Adhesives, containing a flammable liquid	Adhesives, containing a flammable liquid
<b>Transport hazard classification</b>	<b>DOT Hazard Class: 3</b>	<b>IMDG: 3</b> <b>Sub Class: Not Applicable</b>	<b>Air class: 3</b>
<b>Packing group</b>	II	II	II
<b>Ocean contaminants (Yes/No)</b>	No		
<b>Specific transport measures and precautionary conditions :</b>	No available information		

### 15. REGULATORY INFORMATION

<b>Applicable regulations :</b> <b>EU Legislation :</b> REGULATION (EU) 2015/830 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). <b>Taiwan Legislation :</b> Occupational Safety and Health Act, Regulation of Labelling and Hazard Communication of Dangerous and
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Harmful Materials, Road Traffic and Safety Regulation, Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste, Public Hazardous Substances & Flammable Pressurized Gases Establishment Standards & Safety Control Regulations, Standards of Permissible Exposure Limits of Airborne Hazardous Substances in Workplace.

#### 16. OTHER INFORMATION

<b>Reference</b>	1. Department of Occupational Safety and Health, GHS Chemical Global Harmonization System website ( <a href="http://ghs.osha.gov.tw/CHT/masterpage/index_CHT.aspx">http://ghs.osha.gov.tw/CHT/masterpage/index_CHT.aspx</a> ) 2. Environmental Protection Department of the Executive Yuan Department of Toxic Chemical Substances ( <a href="http://www.epa.gov.tw/np.asp?ctNode=31422&amp;mp=epa">http://www.epa.gov.tw/np.asp?ctNode=31422&amp;mp=epa</a> ) 3. The website of the European Chemical Agency. ( <a href="http://echa.europa.eu/">http://echa.europa.eu/</a> )	
<b>Company</b>	Name : Great Eastern Resins R&D Center Address / Telephone : No. 12, Jingke Second Road, Nantun District, Taichung, Taiwan 40852 R.O.C / 04-2358-0919	
<b>Prepared by</b>	Title : Researcher	Name (Signature) : Huang Shih Chin
<b>Issue Date</b>	2022-02-15	

<b>Remarks</b>	<p>The information and recommendations contained herein are based upon what is believed to be correct, reliable, and for information purposes only. Greco does not assume responsibility for any results obtained by persons over whose methods Greco has no control.</p> <p>The full text of the phrases appearing in section 3 is:          H225 Highly flammable liquid and vapor.          H319 Causes serious eye irritation.          H373 May cause damage to organs through prolonged or repeated exposure.</p>
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