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

1.1. Product identifier

Product Identity Gobright TAM-55-M10

Alternate Names Chemical family: Aqueous solution containing organic

acids and salts

MSDS Code: 22-0055

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

Intended use Plating makeup for immersion gold. For industrial use

only

Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name Uyemura International Corporation

3990 Concours, Suite 425 240 Town Line Road Ontario, CA 91764 Southington, CT 06489

Emergency

24 hour Emergency Telephone No. 24 hours a day: In case of spill, leak, exposure or

accident- Call Chemtrec 1-800-424-9300 /+1-703-527-

3887.

Customer Service: Uyemura International Corporation CA: 909-466-5635, CT: 860-793-4011

Number for non-emergency questions concerning MSDS

(860) 793-4011

Additional information on this product may be obtained by

calling (800) 243-3564

2. Hazard identification of the product

2.1. Classification of the substance or mixture

Skin Irrit. 3;H316 Causes mild skin irritation. (Not adopted by US OSHA)

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Warning

H316 Causes mild skin irritation.

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[Prevention]:

No GHS prevention statements

[Response]:

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

[Storage]:

No GHS storage statements

[Disposal]:

No GHS disposal statements

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, disodium salt CAS Number: 0000139-33-3		Skin Irrit. 2;H315 Eye Irrit. 2;H319 STOT RE 2;H373	[1]

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

4. First aid measures

4.1. Description of first aid measures

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.

Eyes Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes

with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get

medical attention if any discomfort continues.

Skin In the case of contact, immediately flush skin with plenty of water for at least 15 minutes

while removing all contaminated clothing and shoes. Wash clothing before reuse. Clean

shoes thoroughly before reuse. Get immediate medical attention.

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

vomiting.

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

Overview This product may cause mild irritation to eyes and skin upon contact.

See section 2 for further details.

Skin Causes mild skin irritation. (Not adopted by US OSHA)

^[2] Substance with a workplace exposure limit.

^[3] PBT-substance or vPvB-substance.
*The full texts of the phrases are shown in Section 16.

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5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.

Do not use; water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.

5.3. Advice for fire-fighters

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water courses.

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Persons performing the clean-up work should wear personal protective clothing and equipment.

6.2. Environmental precautions

Do not allow spills to enter drains or watercourses.

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

6.3. Methods and material for containment and cleaning up

Steps to be taken in case material is released or spilled: Liquid or solid spills should be responded to immediately. The spill, if liquid can be absorbed with an inert material; the solid spill can be swept or shoveled and put into a clean container/cover to ensure proper containment. All cleanup materials when contained must be labeled properly and stored in a safe place to await proper disposal. Persons performing the clean-up work should wear personal protective clothing and equipment.

7. Handling and storage

7.1. Precautions for safe handling

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

7.2. Conditions for safe storage, including any incompatibilities

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Incompatible materials: Strong oxidizing agents, strong acids and alkalis

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

7.3. Specific end use(s)

No data available

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8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000139-33-3	0000139-33-3 Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, disodium salt	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
	Supplier	No Established Limit	

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000139-33-3	Glycine, N,N'-1,2-ethanediylbis[N-	OSHA Select Carcinogen: No	
	(carboxymethyl)-, disodium salt		Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory If workers are exposed to concentrations above the exposure limit they must use the

appropriate, certified respirators.

Eyes Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the

splash of liquids.

Skin Overalls which cover the body, arms and legs should be worn. Skin should not be exposed.

All parts of the body should be washed after contact. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and

should be approved by a specialist before handling this product.

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.

Other Work Practices An eyewash fountain should be located in areas where the product is used. Use good

personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet.

Promptly remove soiled clothing and wash thoroughly before reuse.

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

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9. Physical and chemical properties

Appearance Colorless Liquid

Odor None

Odor threshold Not Measured

pH 4.6

Melting point / freezing point Not Measured

Initial boiling point and boiling range 100C

Flash Point

Evaporation rate (Ether = 1)

Flammability (solid, gas)

Not Measured

Not Applicable

Upper/lower flammability or explosive limits Lower Explosive Limit: Not Measured

Upper Explosive Limit: Not Measured

Vapor pressure (Pa)Not MeasuredVapor DensityNot Measured

Specific Gravity

Solubility in Water

Partition coefficient n-octanol/water (Log Kow)

Auto-ignition temperature

Decomposition temperature

Viscosity (cSt)

Not Measured

Not Measured

Not Measured

Not Measured

Not Measured

Not Measured

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

High temperatures, flames, and incompatibles.

10.5. Incompatible materials

Strong oxidizing agents, strong acids and alkalis

10.6. Hazardous decomposition products

No hazardous decomposition data available.

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11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, disodium salt - (139-33-3)	No data available	No data available	No data available	No data available	No data available

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).

Classification	Category	Hazard Description	
Acute toxicity (oral)		Not Applicable	
Acute toxicity (dermal)		Not Applicable	
Acute toxicity (inhalation)		Not Applicable	
Skin corrosion/irritation	3	Causes mild skin irritation. (Not adopted by US OSHA)	
Serious eye damage/irritation		Not Applicable	
Respiratory sensitization		Not Applicable	
Skin sensitization		Not Applicable	
Germ cell mutagenicity		Not Applicable	
Carcinogenicity		Not Applicable	
Reproductive toxicity		Not Applicable	
STOT-single exposure		Not Applicable	
STOT-repeated exposure		Not Applicable	
Aspiration hazard		Not Applicable	

12. Ecological information

12.1. Toxicity

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

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish,	48 hr EC50 crustacea,	ErC50 algae,
	mg/l	mg/l	mg/l
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, disodium salt - (139-33-3)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

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12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.

14. Transport information

DOT (Domestic Surface IMO / IMDG (Ocean ICAO/IATA Transportation) **Transportation**) 14.1. UN number Not Applicable Not Applicable Not Applicable Not Regulated Not Regulated Not Regulated

14.2. UN proper shipping name

14.3. Transport hazard

class(es)

DOT Hazard Class: Not

Applicable

DOT Label: ---

IMDG: Not Applicable

Air Class: Not Applicable

Sub Class: Not Applicable

14.4. Packing group Not Applicable Not Applicable Not Applicable

14.5. Environmental hazards

IMDG Marine Pollutant: No

14.6. Special precautions for user

No further information

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected

> regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification

Not Regulated

US EPA Tier II Hazards

Sudden Release of Pressure: No.

Reactive: No

Fire: No

Immediate (Acute): Yes Delayed (Chronic): No

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EPCRA 311/312 Chemicals and RQs:

(No Product Ingredients Listed)

EPCRA 302 Extremely Hazardous:

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:

(No Product Ingredients Listed)

Proposition 65 - Carcinogens (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0.0%):

(No Product Ingredients Listed)

N.J. RTK Substances (>1%):

(No Product Ingredients Listed)

Penn RTK Substances (>1%):

(No Product Ingredients Listed)

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

UIC urges each customer or recipient of this MSDS to study carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals that are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: 1) Notify its employees, agents, contractors and others whom it knows or believes will use this material or the information in this MSDS and any other information regarding hazards or safety; 2) Furnish this same information to each of its customers for the product; and 3) Request its customers to notify their employees, customers, and other users of the product of this information. The information, recommendations and suggestions herein is believed to be reliable. However, it is the user's responsibility to determine the safe handling and suitability for his/her use of the product described herein. Since the use by others is outside our control, no guarantee, expressed or implied, is made by Uyemura International Corporation as to the effects of such use, the results obtained or the safety and toxicity of the product nor does UIC per se assume any liability arising out of use, by others of the product referred to herein. Nor is the information herein to be construed as absolutely complete since more information may be desirable or necessary when particular or exceptional circumstances exist, or because of applicable laws or government regulations.

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