

# SAFETY DATA SHEET

Version 1.3

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

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### Product identifier

Product Name Luminol  
Product Code CP-105

### Recommended use of the chemical and restrictions on use

For research use only. Not intended for diagnostic or therapeutic use.

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

#### IMT Formosa New Materials Co., Ltd.

Rm. 1, 4F., No. 15, Aly. 15, Ln. 71, Changyu St., Sanmin Dist., Kaohsiung City 807, Taiwan (R.O.C.)

#### Emergency telephone number

+886-926159317

## 2. HAZARDS IDENTIFICATION

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This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Classification

Acute toxicity - Oral Category 4  
Serious eye damage/eye irritation Category 2A  
Specific target organ toxicity (single exposure) Category 3

### Label elements

Signal word Warning  
Hazard statements Harmful if swallowed  
Causes serious eye irritation  
May cause respiratory irritation

Symbols/Pictograms



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
IF exposed or concerned: Get medical advice/attention  
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 INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal  
plant

### Hazards not otherwise classified (HNOC)

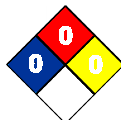
Hazards not otherwise classified (HNOC)

Not applicable

### Other Information

#### NFPA

Health hazards 0  
Flammability 0  
Stability 0  
Physical and chemical  
properties -



#### HMIS

Health hazards 0  
Flammability 0  
Physical hazards 0  
Personal protection -

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 521-31-3  
Molecular Weight 177.16  
Formula  $C_8H_7N_3O_2$

| Chemical Name | CAS No   | Weight % | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|----------|----------|-----------|-------------|-----------------|
| Luminol       | 521-31-3 | >98      | -         | -           | -               |

## 4. FIRST AID MEASURES

### First Aid Measures

**General advice** If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

**Eye contact** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

**Skin Contact** Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Immediate medical attention is not required.

**Inhalation** Remove to fresh air Call a physician If breathing is irregular or stopped, administer artificial respiration Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation Artificial respiration and/or oxygen may be necessary Immediate medical attention is not required Move to fresh air in case of accidental inhalation of vapors If symptoms persist, call a physician

**Ingestion** Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

**Self-protection of the first aider** Use personal protective equipment as required.

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

Symptoms No information available.

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

Note to physicians Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

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### Suitable Extinguishing Media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media None.

### Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NOx).

### Explosion data

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

### Protective equipment and precautions for firefighters

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.

### Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges.

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## 7. HANDLING AND STORAGE

### Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

### Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Store at -20 °C.

Incompatible materials None known based on information supplied.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Appropriate engineering controls

Engineering Controls Showers  
Eyewash stations  
Ventilation systems

### Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.  
Skin and Body Protection Wear protective gloves and protective clothing.  
Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.  
General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical State Solid  
Appearance powder  
Odor Odorless

| <u>Property</u>              | <u>Values</u>            |
|------------------------------|--------------------------|
| pH                           | No information available |
| Melting point/freezing point | 300 °C                   |
| Boiling point                | 467.05 °C                |
| Flash point                  | No information available |
| Density                      | 1.4 g/cm <sup>3</sup>    |
| Evaporation rate             | No information available |
| Upper flammability limits    | No information available |
| Lower flammability limit     | No information available |
| Vapor pressure               | No information available |
| Vapor density                | No information available |
| Specific gravity             | No information available |
| Water solubility             | No information available |
| Solubility in other solvents | No information available |
| Partition coefficient        | -0.46                    |
| Autoignition temperature     | No information available |
| Decomposition temperature    | No information available |
| Kinematic viscosity          | No information available |
| Explosive properties         | No information available |
| Oxidizing properties         | No information available |

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## 10. STABILITY AND REACTIVITY

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Reactivity Not applicable  
Chemical stability Stable under recommended storage conditions.  
Possibility of Hazardous Reactions None under normal processing.  
Hazardous polymerization No information available.  
Conditions to avoid Extremes of temperature and direct sunlight.  
Incompatible materials Strong oxidizing agents.

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Hazardous Decomposition Products    Carbon oxides. Nitrogen oxides (NOx).

## 11. TOXICOLOGICAL INFORMATION

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### Information on likely routes of exposure

|              |                    |
|--------------|--------------------|
| Inhalation   | No data available. |
| Eye contact  | No data available. |
| Skin Contact | No data available. |
| Ingestion    | No data available. |

### Information on toxicological effects

|          |                           |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                  |                          |
|------------------|--------------------------|
| Chronic Toxicity | Avoid repeated exposure. |
|------------------|--------------------------|

### Numerical measures of toxicity - Product Information

|                        |                          |
|------------------------|--------------------------|
| Unknown acute toxicity | No information available |
|------------------------|--------------------------|

The following values are calculated based on chapter 3.1 of the GHS document

|               |           |
|---------------|-----------|
| ATEmix (oral) | 500 mg/kg |
|---------------|-----------|

## 12. ECOLOGICAL INFORMATION

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|             |  |
|-------------|--|
| Ecotoxicity | May cause long lasting harmful effects to aquatic life |
|-------------|--|

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

|                               |                           |
|-------------------------------|---------------------------|
| Persistence and degradability | No information available. |
| Bioaccumulation               | No information available. |
| Mobility                      | No information available. |

## 13. DISPOSAL CONSIDERATIONS

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|                        |   |
|------------------------|---|
| Disposal of wastes     | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| Contaminated packaging | Do not reuse container.   |
| Other Information      | Waste codes should be assigned by the user based on the application for which the product was used. |

## 14. TRANSPORT INFORMATION

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|      |               |
|------|---------------|
| DOT  | Not regulated |
| IMDG | Not regulated |
| IATA | Not regulated |

## 15. REGULATORY INFORMATION

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### International Inventories

#### **All of the components in the product are on the following Inventory lists**

TSCA (United States): Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) China (IECSC) Philippines (PICCS)

| Chemical Name | TSCA | DSL | NDSL | EINECS | ELINCS | ENCS | IECSC | KECL | PICCS | AICS |
|---------------|------|-----|------|--------|--------|------|-------|------|-------|------|
| Luminol       | X    | X   | -    | X      | -      | -    | X     | -    | X     | X    |

#### **X - Listed**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### **SARA 311/312 Hazard Categories**

|                                   |     |
|-----------------------------------|-----|
| Acute health hazard               | Yes |
| Chronic Health Hazard             | No  |
| Fire hazard                       | No  |
| Sudden release of pressure hazard | No  |
| Reactive hazard                   | No  |

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations

## **16. OTHER INFORMATION**

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Revision note

No information available

#### **Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**