

Safety Data Sheet
According to Regulation (EC) No 1907/2006, Annex II,
Amended by COMMISSION REGULATION (EU) 2020/878,
According to REGULATION (EC) No 1272/2008

Photoluminescent pigment

Version 1.0

Issue date: 24/10/2023

Revision date: 24/10/2023

SDS Record Number: CSSS-TCO-010-116365

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

1.1 Product identifier:

Identification on the label/Trade name: Photoluminescent pigment
Additional identification: alumane dysprosium europium oxidanylidene strontium
Identification of the product: CAS#201426-52-0 EC#416-840-1
Index Number: Not available
REACH Registration No.: 01-0000016367-66-0009

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Not available.

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): Chemical Inspection & Regulation Service Limited
Supplier(Manufacturer): ZHEJIANG MINHUI LUMINOUS TECHNOLOGY CO.,LTD.
Address: No. 668, Yingbin road,Shanghua district,Lanxi City, Zhejiang Province, P.R.China
Contact person(E-mail): sales@mphotoluminescent.com
Telephone: +86-579-88948789
Fax: +86-579-88948948

1.4 Emergency telephone Number:

+353 41 980 6916 (Only available during office hours (8:30a.m.-17:30p.m.))

Available outside office hours?

YES

☐

NO

X

Section 2 Hazards Identification

2.1 Classification of the substance/mixture:

2.1.1 Classification:

The substance is classified as following according to 67/548/EEC and REGULATION (EC) No 1272/2008:

| REGULATION (EC) No 1272/2008 | |
|---------------------------------|------------------|
| Hazard classes/Hazard categorie | Hazard statement |
| Aquatic Chronic 2 | H411 |

For full text of H- phrases: see section 2.2.

2.2 label elements:

Hazard Pictograms:



Product name: Photoluminescent pigment

Version #: 1.0 Issue date: 24-10-2023.

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SDS EU

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Signal Word: No signal word.

Hazard Statement: H411: Toxic to aquatic life with long lasting effects.

Precautionary statement: P273: Avoid release to the environment.
P391: Collect spillage.
P501: Dispose of contents/container in according with local regulation.
Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

2.3 Other hazards:

The substance is not PBT / vPvB.

The substance is not identified as having endocrine disrupting properties.

Section 3 Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

| Chemical Name | Pre-Registration No. | CAS No. | EC No. | Concentration | Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE) |
|--|-----------------------|-------------|-----------|---------------|--|
| Dysprosium and europium doped strontium dialuminium tetraoxide(monoclinic) | 01-0000016367-66-0009 | 201426-52-0 | 416-840-1 | ≥99% | Not available |

Section 4 First aid measures

4.1 Description of first aid measures:

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

4.1.1 In case of inhalation:

Remove to fresh air. If not breathing, give artificial respiration. Oxygen may additionally be given, by trained personnel, if it is available. Get medical attention if symptoms occur.

4.1.2 In case of skin contact:

Flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

4.1.3 In case of eyes contact:

Immediately flush eyes with plenty of water. If easy to do, contact lenses should be removed during the flushing, by trained personnel. Occasionally hold the eyelids apart during the flushing to ensure rinsing the entire surface of the eye and lids with water. Get medical attention if irritation persists.

4.1.4 In case of ingestion:

Call a physician or a poison control center immediately. Induce vomiting only if directed by medical personnel. The patient should lie on their left side while vomiting to reduce the risk of aspiration. Never give anything by mouth to an unconscious or convulsing person.

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

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

4.3 Indication of any immediate medical attention and special treatment needed:

Not available.

Section 5 Fire-Fighting measures

5.1 Extinguishing media:

Suitable extinguishing media:

Normal extinguishing agents may be used if the substance is involved in a fire.

Unsuitable extinguishing media:

Not available.

5.2 Special hazards arising from the substance or mixture

In case of fire, smoke may contain oxides of aluminium, strontium, dysprosium and europium.

5.3 Special fire fighting methods and special protective actions for fire-fighters:

Full personal protective equipment and a self-contained breathing apparatus should be worn.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:

Remove ignition sources. Provide adequate ventilation. Avoid inhalation dust. Avoid skin and eye contact. For personal protection see Section 8.

6.1.2 For emergency responders:

Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.

6.2 Environmental Precautions:

Avoid disposing into drainage/sewer system or directly into the aquatic environment.

6.3 Methods for Containment and Cleaning up:

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

6.5 Additional information:

Not applicable.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures:

Never weigh out in the storage room. When using do not eat, drink or smoke. Do not breathe dust. Handle in well ventilated areas. Eliminate all sources of ignition, and do not generate flames or sparks. Keep product and emptied container away from heat and sources of ignition. Confinement must be avoided. Avoid Incompatible materials (See Section 10).

7.1.2 Advice on general occupational hygiene:

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s):

Not applicable.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

Not available.

8.1.2 Additional exposure limits under the

Not available.

conditions of use:

8.1.3 DNEL/DMEL and PNEC-Values: Not available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal hazards: Wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure controls: Avoid discharge into the environment.
According to local regulations, Federal and official regulations.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

| | |
|-----------------------------------|--|
| Appearance: | Powder |
| Colour: | Light yellow |
| Odour: | Odorless |
| Odour threshold: | Not available |
| pH: | Not available |
| Melting point/range (°C): | No melting point was record until 350°C but only a continuous decomposition from 220°C |
| Boiling point/range (°C): | Not available |
| Flash point (°C): | Not available |
| Flammability (solid, gas): | non flammable |
| Ignition temperature (°C): | Not available |
| Vapour pressure (20°C): | 0 Pa (at 25°C) |
| Vapour density: | Not available |
| Relative Density: | 3.63 (at 20°C) |
| Water solubility (g/l): | 300 mg/L (at 20°C) |

| | |
|-----------------------------|--------------------------------|
| n-Octanol/Water (log Po/w): | 0 (at 20 °C) |
| Decomposition temperature: | Not available |
| Viscosity, dynamic (mPa.s): | Not available |
| Explosive properties: | non explosive |
| Oxidising properties: | no |
| Molecular Formula: | Al2 O4 .Dy0.02 .Eu0.01 .Sr0.97 |

9.2. Other information:

| | |
|--|---------------|
| Fat solubility(solvent– oil to be specified) etc: | Not available |
| Surface tension: | 69.9 |
| Dissociation constant in water(pKa): | Not available |
| Oxidation-reduction Potential: | Not available |
| Specific gravity: | Not available |

Section 10 Stability and reactivity

| | |
|--|---|
| 10.1 Reactivity: | The substance is stable under normal storage and handling conditions. |
| 10.2 Chemical stability: | Stable at room temperature in closed containers under normal storage and handling conditions. |
| 10.3 Possibility of hazardous reactions: | No dangerous reactions known. |
| 10.4 Conditions to avoid: | Incompatible materials. |
| 10.5 Incompatible materials: | Not available. |
| 10.6 Hazardous decomposition products: | Strontium oxides, Aluminum oxide. |

Section 11 Toxicological information

11.1 Toxicokinetics, metabolism and distribution:

| | |
|-------------------------------|---------------|
| Non-human toxikological data: | Not available |
|-------------------------------|---------------|

11.2 Information on toxicological effects:

| | |
|------------------------------------|----------------|
| Acute toxicity: | |
| LD50(Oral, Rat): | Not available |
| LD50(Dermal, Rabbit): | Not available |
| LC50(Inhalation, Rat): | Not available |
| Skin corrosion/Irritation: | Not classified |
| Serious eye damage/irritation: | Not classified |
| Respiratory or skin sensitization: | Not classified |
| Germ cell mutagenicity: | Not classified |
| Carcinogenicity: | Not classified |
| Reproductive toxicity: | Not classified |
| STOT- single exposure: | Not classified |
| STOT-repeated exposure: | Not classified |
| Aspiration hazard: | Not classified |

Section 12 Ecological information

12.1 Toxicity:

| Acute toxicity | | Time | Species | Method | Evaluation | Remarks |
|----------------|-----|------|---------|----------|------------|---------|
| LC50 | N/A | 96h | Fish | OECD 203 | N/A | N/A |
| EC50 | N/A | 48h | Daphnia | OECD 202 | N/A | N/A |
| EC50 | N/A | 72h | Algae | OECD 201 | N/A | N/A |

| | |
|---|--|
| 12.2 Persistence and degradability: | Not available. |
| 12.3 Bioaccumulative potential: | Not available. |
| 12.4 Mobility in soil: | Not available. |
| 12.5 Results of PBT&vPvB assessment: | Not available. |
| 12.6 Endocrine disrupting properties: | The substance is not identified as having endocrine disrupting properties. |
| 12.7 Other adverse effects: | Not available. |
| 12.8 Additional information | Not available. |

Section 13 Disposal considerations

| | |
|---|---|
| 13.1 Waste treatment methods: | Due to the high risk of contamination recycling/recovery is not recommended. Waste disposal in accordance with regulations (most probably controlled incineration). |
| 13.2 Product / Packaging disposal: | According to local regulations. Emptied container might retain product residues. Follow all warnings even after the container is emptied. |

Section 14 Transport information

| | Land transport(ADR/RID) | Sea transport (IMDG) | Air transport (ICAO/IATA) |
|---|-------------------------|----------------------|---------------------------|
| UN-Number | Not regulated | Not regulated | Not regulated |
| UN Proper shipping name | Not regulated | Not regulated | Not regulated |
| Transport hazard Class | Not regulated | Not regulated | Not regulated |
| Packaging group | Not regulated | Not regulated | Not regulated |
| Environmental hazards | No | No | No |
| Special precautions for user | See section 2.2 | See section 2.2 | See section 2.2 |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not regulated | Not regulated | Not regulated |

Section 15 Regulation information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

| | |
|---|--|
| Relevant information regarding authorization: | Not applicable. |
| Relevant information regarding restriction: | Not applicable. |
| Other EU regulations: | Employment restrictions concerning young person must be observed. For use only by technically qualified individuals. |
| Other National regulations: | Not applicable |
| Chemical Safety Assessment has been carried out? | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> |

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by EU No. 2020/878

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: Code international maritime dangerous goods code

ICAO: International Civil Aviation Organization

IATA: International Air Transport Association

LC50: median lethal concentration

EC50: The effective concentration of substance that causes 50% of the maximum response.

NOEC: No Observed Effect Concentration

DNEL: derived no-effect level

PNEC: predicted no-effect concentration

16.3 Key literature references and sources for data

ECHA C&L Notification.

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

| Classification according to Regulation (EC) No. 1272/2008 | | Classification procedure |
|---|------|--------------------------|
| Aquatic Chronic 2 | H411 | On basis of test data |

16.5 Relevant H-statements (number and full text):

H411: Toxic to aquatic life with long lasting effects.

16.6 Training instructions:

Not applicable.

16.7 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.8 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.