

Safety Data Sheet

Photoluminescent Pigment

Revision date: 03/28/2022

Section 1 Product Identification

1.1 Product identifier:

Identification or trade name: Photoluminescent Pigment

Additional identification: alumane dysprosium europium oxidanylidene strontium

Identification of the product: CAS#201426-52 EC#416-840-1

1.1 Relevant identified uses of the substance or mixture and uses advised against:

1.2.1 Identified uses:

PC 9a: Coatings and paints

PC 18: Ink and toners

PC 26: Paper and board treatment products

SU 6b: Manufacture of pulp, paper, and paper products

SU 7: Printing and reproduction of recorded media

SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)

SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU 11: Manufacture of rubber products

SU 12: Manufacture of plastics products and compounding

SU 13: Manufacture of other non-metallic mineral products, e.g., plasters, cement

SU 16: Manufacture of computer, electronic and optical products, electrical equipment

SU 23: Electricity, steam, gas water supply and sewage treatment

1.2.2 Uses advised against:

No uses advised against are identified.

1.2 Details of the supplier of the safety data sheet:

Company Name: The Science Company

Address: 7625 W. Hampden Ave #14 Lakewood, CO 80227

E-mail: info@sciencecompany.com

Phone: +1 (800) 372-6726

Emergency Phone Number: (800) 255-3924 (CHEM-TEL)

Section 2 Hazards Identification

2.1 Classification of the substance or mixture:

Product name: Photoluminescent Pigment SDS USA

2.1.1 Classification:

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

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

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

2.2 Label elements:

| | |
|---------------------------------|--|
| Hazard Pictograms: | Aquatic |
| Signal Word(s): | No signal word is used |
| 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 accordance with local regulations |

2.3 Other hazards:

PBT assessment does not apply.

Section 3 Composition Information on Ingredients

Substance/Mixture: Substance

Ingredient(s):

| Chemical Name | Registration No. | CAS No. | EC No. | Concentration |
|--|--------------------|-------------|-----------|---------------|
| alumane dysprosium europium oxidanylidene strontium | 01-xxxxxxx-xx-xxxx | 201426-52-0 | 416-840-1 | >99% |

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 patient to fresh air. Seek medical attention.

4.1.2 In case of skin contact:

Wash affected area with soap and water. If irritation develops seek medical attention.

4.1.3 In case of eye contact:

Wash with plenty of water. Seek medical attention.

4.1.4 In case of ingestion:

Seek medical attention.

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

The product is not classified as harmful to human health effect.

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

If skin irritation or rash occurs, get medical advice/attention.

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: The substance is a mixture of metal oxides and no products of combustion are expected. However, smoke may contain oxides of aluminum, strontium, dysprosium, and europium.

5.3 Advice for firefighters: Self-contained breathing apparatus with full-face mask and full protective clothing (standard wear).

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures:

6.1.1 For non-emergency personnel: Full personal protective equipment should be worn.

6.1.2 For emergency responders: Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.

6.2 Environmental precautions: Try to prevent the material from entering drains or water courses. Advise authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

6.3 Methods and material for containment and cleaning up: Isolate spill. Avoid dust formation. Sweep up spill or use industrial vacuum fitted with suitable dust filtration system. Dispose of at a landfill site in accordance with local regulations.

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.

Section 7 Handling and Storage

7.1 Precautions for safe handling:

7.1.1 Protective measures: Rubber gloves, goggles, dust mask and full personal protective clothing should be worn.

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 tightly sealed containers in a cool, dry, dark 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 conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values:

| | | |
|------------------------------|-------------------------|------------------------------|
| Hazard for aquatic organisms | Freshwater | PNEC=0.003 mg/L |
| Hazard for aquatic organisms | Marine water | PNEC=0 mg/L |
| Hazard for aquatic organisms | STP | PNEC=1 mg/L |
| Hazard for aquatic organisms | Sediment (freshwater) | PNEC=0.015 mg/kg sediment dw |
| Hazard for aquatic organisms | Sediment (marine water) | PNEC=0.002 mg/kg sediment dw |

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: | Protective eye wear |
| Hand protection: | Rubber gloves |
| Body protection: | Safety boots |
| Respiratory protection: | Dust mask |
| Thermal hazards: | Wear suitable protective clothing to prevent heat |

8.2.3 Environmental exposure controls: Avoid discharge into the environment according to local and federal regulations.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

| | |
|--|--------------------|
| Appearance: | Powder |
| Color: | Light yellow green |
| Odor: | Not available |
| Odor threshold: | Not available |
| pH: | Not available |
| Melting point/range (°C): | > 350 °C |
| Boiling point/range (°C): | Not available |
| Flash point (°C): | Not available |
| Evaporation rate: | Not available |
| Flammability limit - lower (%): | Not available |
| Flammability (solid, gas): | Not available |
| Ignition temperature (°C): | Not available |
| Upper/lower explosive limits: | Not available |
| Vapor pressure (20°C): | Not available |

| | |
|------------------------------------|-------------------------|
| Vapor density: | Not available |
| Relative density: | 3.63 (20 °C) |
| Bulk density: | 3.55g/cm ³ |
| Water solubility (g/l): | 300 mg/L (20 °C) |
| n-Octanol/Water (log Po/w): | < 0 (20 °C) |
| Auto-ignition temperature: | 363-425 °C |
| Decomposition temperature: | >= 220 °C |
| Viscosity, dynamic (mPa.s): | Not available |
| Explosive properties: | Not available |
| Oxidizing properties: | No oxidizing properties |
| Molecular formula: | Not available |
| Molecular weight: | Not available |

9.2 Other information:

| | |
|--|-------------------|
| Fat solubility (solvent-oil): | Not available |
| Surface tension: | 69.9 mN/m (25 °C) |
| Dissociation constant in water (pKa): | Not available |
| Oxidation-reduction potential: | 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 under normal storage and handling conditions. |
| 10.3 Hazardous reactions: | No dangerous reactions known. |
| 10.4 Conditions to avoid: | Incompatible materials. |
| 10.5 Incompatible materials: | Oxidizing agents. |
| 10.6 Hazardous decomposition products: | Oxides of aluminum, strontium, dysprosium, and europium |

Section 11 Toxicological Information

11.1 Information on toxicological effects:

| | |
|---|-----------------|
| Acute toxicity: | |
| LD50(Oral, Rat): | Not available |
| LD50(Dermal, Rat): | > 2000 mg/kg bw |
| LD50(Dermal, 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 (short-term) toxicity:

| | |
|-----------------------------------|----------|
| LC50 (96h, Fish): | 6.8 mg/L |
| EC50 (48h, Crustacea): | 13 mg/L |
| EC50 (72h, Algae/aquatic plants): | 29 mg/L |

Chronic (long-term) toxicity:

| | |
|------------------------------|---------------|
| NOEC (Fish): | 0.322 mg/L |
| NOEC (Crustacea): | Not available |
| NOEC (Algae/aquatic plants): | 4.6 mg/L |

| | |
|--|--|
| 12.2 Persistence and degradability: | Not available. |
| 12.3 Bio accumulative potential: | Not available. |
| 12.4 Mobility in soil: | Not available. |
| 12.5 Results of PBT and vPvB assessment: | PBT assessment does not apply. |
| 12.6 Other adverse effects: | Toxic to aquatic life with long lasting effects. |

Section 13 Disposal Considerations

13.1 Waste treatment methods:

Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture, or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

Section 14 Transportation Information

Dangerous Good in the Sense of the Transport Regulations: NO

In Accordance with IATA: Not Hazardous - Not Dangerous – Not Flammable.

Section 15 Regulatory 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 children must be observed. For use only by technically qualified individuals. |

Other National regulations: Not applicable

15.2 Chemical safety assessment: Yes

Section 16 Other Information

16.1 Indication of changes: Version 1.0 Amended by (EU) 2015/830

16.2 Abbreviations and acronyms:

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

RID: Regulation for Rail International Transportation of Dangerous goods

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 Registered substances data

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.