Revision: 14 Mar 2021

MATERIAL SAFETY DATA SHEET

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

1.1 Product identifier

Product Name: Pigments Green Glow in the Dark Powder - for solvent based mediums

-
- **Chemical Name: Dialuminium x dysprosium y europium (1-x-y) strontium tetraoxide**
- **Synonyms:Alkaline Earth Aluminates (Europium-doped)**
- **CAS Number: 669771-69-1**
- **EC Number:416-840-1**

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

- **Use of the substance/mixture: Pigments**
- **Use advised against: No information available 1.3**

Details of the supplier of the safety data sheet

- **Name of Supplier: ECF Composites Ltd**
- **Address of Supplier: ECF Composites**

West Walpole Street
South Shields
United Kingdom

- **Telephone:** **00 44 (0) 191 497 5134**
- **Email:** **sales@ecfcomposites.co.uk**
- **Website:** **www.ecfibreglass.co.uk**

1.4 Emergency telephone number

- **Emergency Telephone: 00 44 (0) 207 118 3123 (Office hours only 09:00 - 17:00)**

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

- **Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Aquatic Chronic 2, H411**
- **Additional information: For full text of Hazard- and EU Hazard-statements: see section 16**

2.2 Label elements

GHS09

- **Signal Word: None**
- **Hazard statements**
  H411 - Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
  P273 - Avoid release to the environment.
  P391 - Collect spillage.

SECTION 2 Hazards identification (....)

P501 - Dispose of contents/container to an authorised waste collection point

- **Supplemental Hazard Information**
  (EU) None

2.3 Other hazards

- **Not a PBT according to REACH Annex XIII**
- **Not a vPvB according to REACH Annex XIII**

SECTION 3 Composition/information on ingredients

3.1 Substances

- **Dialuminium x dysprosium y europium (1-x-y) strontium tetraoxide Concentration: >95%**
  CAS Number: 669771-69-1
  EC Number: 416-840-1
  Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Aquatic Chronic 2, H411

3.2 Mixtures

SECTION 4 First aid measures

4.1 Description of first aid measures

- **Contact with eyes**
  If substance has got into eyes, immediately wash out with plenty of water for at least 15 minutes
  Irrigate eyes thoroughly whilst lifting eyelids
  If eye irritation persists: Get medical advice/attention.

- **Contact with skin**
  Wash with plenty of soap and water.
  If skin irritation occurs: Get medical advice/attention.

- **Ingestion**
  Give plenty of water to drink
  Induce vomiting (only if patient is conscious)
  Seek immediate medical attention

- **Inhalation**
  Remove person to fresh air and keep comfortable for breathing.
  If breathing is difficult, oxygen should be given by a trained person Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

- **May cause irritation to skin, eyes and the respiratory tract.**
- **May cause gastro-intestinal irritation**

4.3 Indication of any immediate medical attention and special treatment needed - Treat symptomatically

SECTION 5 Fire-fighting measures

5.1 Extinguishing media

SECTION 5 Fire-fighting measures (....)

- **In case of fire use water spray or fog, alcohol resistant foam, dry chemical or carbon dioxide**

5.2 Special hazards arising from the substance or mixture

- **Gives off irritating or toxic fumes (or gases) in a fire.**
- **Decomposition products may include oxides of aluminium, strontium, dysprosium and europium**

5.3 Advice for firefighters

- **Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.**
- **Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.**

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- **Personal precautions for non-emergency personnel: Avoid formation of dust; Wear protective clothing as per section 8; Wash thoroughly after dealing with spillage; Eyewash bottles should be available**
- **Personal precautions for emergency responders: Wear chemical protection suit; Wear self-contained breathing apparatus (SCBA).**

6.2 Environmental Precautions

- **Avoid release to the environment.**
- **Do not allow to enter public sewers and watercourses**
- **If polluted water reaches drainage systems or water courses, immediately inform appropriate authorities**

6.3 Methods and material for containment and cleaning up

- **Stop leak if safe to do so.**
- **Avoid formation of dust**
- **Absorb spillage in earth or sand**
- **Remove by mechanical means**
- **Place in appropriate container**
- **Remove contaminated material to safe location for subsequent disposal**

6.4 Reference to other sections

- **Wear protective clothing as per section 8**
- **See Section 13 for waste disposal**

SECTION 7 Handling and storage

7.1 Precautions for safe handling

- **Avoid raising dust**
- **Engineering controls should be provided to prevent the need for ventilation**
- **No respiratory protection is needed if ventilation/extraction is adequate, otherwise wear approved dust mask**
- **Do not get in eyes, on skin, or on clothing.**
- **Contaminated clothing should be laundered before reuse**
- **Wash thoroughly after handling.**
- **Do not eat, drink or smoke when using this product.**
- **Eyewash bottles should be available**

7.2 Conditions for safe storage, including any incompatibilities

- Store in a dry place. Store in a closed container.

SECTION 7 Handling and storage (....)

- Store in a well-ventilated place. Keep cool.
- Keep only in original container.
- Protect from sunlight.
- Keep out of reach of children
- Keep away from food, drink and animal feed
- Shelf life >24 months

7.3 Specific end use(s)

Used in the creation of glow-in-the-dark articles, displays and artwork. Applications exist in coatings, sealants, varnishes, adhesives, plastics and paints. The product is aimed at industrial, leisure and consumer markets.

SECTION 8 Exposure controls/personal protection

8.1 Control parameters

- No exposure limits have been set for this substance
- The UK HSE (EH40) recommends the following limits for dusts: 10 mg/m3 (8hr TWA) total inhalable dust; 4 mg/m3 (8hr TWA) total respirable dust
- PNEC aqua (freshwater) 3.2 - 6.8 ug/l
- PNEC aqua (marine water) 320 - 680 ng/l
- PNEC intermittent releases 3.2 - 68 ug/l
- PNEC (STP) 1 mg/l
- PNEC sediment (freshwater) 15 - 46.3 ug/kg
- PNEC sediment (marine water) 1.5 - 4.63 ug/kg

8.2 Exposure controls

- Engineering controls should be provided to prevent the need for ventilation
- In case of insufficient ventilation, wear suitable respiratory equipment
- Use type FFP2 (EN 143) dust masks
- Wear suitable protective clothing, including eye/face protection and gloves (neoprene are recommended)
- The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
- The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.
- Wear goggles giving complete eye protection
- Wear boots
- Eyewash bottles should be available
- Do not eat, drink or smoke when using this product.


Boots


Gloves


Goggles


Suit


Respirator


No Flames


No Smoking

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

SECTION 9 Physical and chemical properties (....)

- **Appearance:** Light yellow powder of varying micron sizes (25-40mu, 40-60mu, 75mu, 100mu, 200mu, 500mu, 1000mu)
- **Odour:** None
- **Odour threshold:** Not applicable
- **pH:** Not applicable
- **Melting point/freezing point: No information available**
- **Initial boiling point and boiling range: No information available**
- **Flashpoint:** >1050°C
- **Evaporation Rate:** Not applicable
- **Flammability (solid, gas): No information available**
- **Upper/lower flammability or explosive limits: No information available**
- **Vapour Pressure: No information available**
- **Vapour Density: No information available**
- **Relative Density: 3.6 g/cm3**
- **Solubility(ies):** Water solubility 300 mg/l @ 20°C and pH 11.35
- **Partition Coefficient (n-Octanol/Water): Log Pow : 0 @ 20°C and pH 11.92 - 11.96**
- **Autoignition Temperature: No information available**
- **Decomposition temperature: No information available**
- **Viscosity:** No information available
- **Explosive Properties:** No information available
- **Oxidising Properties:** Not oxidising

9.2 Other information

Dispersion properties: dispersed in low, medium and high viscosity binders. Binders should be clear and non-water based

SECTION 10 Stability and reactivity

10.1 Reactivity

- **This substance is non-**

volatile 10.2 Chemical stability

- **Considered stable under normal**

conditions 10.3 Possibility of hazardous reactions

- **No hazardous reactions known if used for its intended**

purpose 10.4 Conditions to avoid

- **Avoid contact with moist air**
- **Keep away from heat and light**

10.5 Incompatible materials

- **No information available**

10.6 Hazardous Decomposition Products

- **Decomposition products may include oxides of aluminium, strontium, dysprosium and europium**

SECTION 11 Toxicological information

11.1 Information on toxicological effects

- **Acute Toxicity**

  Based on available data, the classification criteria are not met

SECTION 11 Toxicological information (....)

LD50 (oral,rat) >2000 mg/kg
LD50 (dermal) : >2000 mg/kg

- Skin corrosion/irritation
Based on available data, the classification criteria are not met

- Serious eye damage/irritation
Based on available data, the classification criteria are not met

- Respiratory or skin sensitisation
Based on available data, the classification criteria are not met

- Germ cell mutagenicity
No evidence of mutagenic effects

- Carcinogenicity
No evidence of carcinogenic effects

- Reproductive toxicity
No evidence of reproductive effects

- Specific target organ toxicity (STOT) - single exposure
Based on available data, the classification criteria are not met

- **Specific target organ toxicity (STOT) - repeated exposure Based on available data, the classification criteria are not met**

- **Aspiration hazard**
Based on available data, the classification criteria are not met

- Contact with eyes
May cause redness and irritation

- **Contact with skin**
May cause irritation

- **Ingestion**
May cause gastro-intestinal irritation

- Inhalation
May cause respiratory tract irritation.

SECTION 12 Ecological information

12.1 Toxicity

- **Toxic to aquatic life with long lasting effects.**
- **LC50 (fish) 6.8 mg/l (96 hr)**
- **NOEC (fish) 4.6 mg/l (4 days)**
- **LC50 (fish) 3.6 mg/l (28 days)**
- **EC50 (aquatic invertebrates) 13 mg/l (48 hr)**
- **EC50 (aquatic algae and cyanobacteria) 19 - 29 mg/l (72 hr)**
- **EC50 (microorganisms) 100 mg/l (3 hr)**

12.2 Persistence and degradability

- **No information available**

12.3 Bioaccumulation Potential

- **No information**

available 12.4 Mobility in soil

- **No information available**

12.5 Results of PBT and vPvB assessment

SECTION 12 Ecological information (....)

- **Not a PBT according to REACH Annex XIII**
- **Not a vPvB according to REACH Annex XIII**

12.6 Other Adverse Effects

- **No information available**

SECTION 13 Disposal considerations

13.1 Waste treatment methods

- **Do not discharge into drains or the environment, dispose to an authorised waste collection point**
- **Bury on an authorised landfill site**
- **Incineration is not recommended**

13.2 Classification

- **The waste must be identified according to the List of Wastes (2000/532/EC)**
- **Waste Codes in accordance with the European Waste catalogue (EWC) are origin-defined. Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.**

SECTION 14 Transport information

UN 3077 and UN 3082, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5L/kg or less, are not subject to the provisions of ADR, RID, IMDG or IATA, provided the package meets the general packing quality provisions.

Dangerous Substance

ENVIRONMENTALLY HAZARDOUS

14.1 UN Number

- **UN No.: 3077**

14.2 UN Proper Shipping Name

- **Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.**

14.3 Transport hazard class(es)

- **Hazard Class: 9**

14.4 Packing group

- **Packing Group: III**

14.5 Environmental hazards

- **Marine pollutant**

14.6 Special precautions for user

- **This material is classified as dangerous for transport under the UN model regulations but is not subject to ADR/RID, IMGD and ICOA/IATA due to specific exemptions in those rules**

14.7 Transport in bulk according to Annex II of MARPOL and the IBC code

- **Not applicable**

14.8 Road/Rail (ADR/RID)

SECTION 14 Transport information (....)

- **Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.**
- **ADR UN No.: 3077**
- **ADR Hazard Class: 9**
- **ADR Packing Group: III**
- **Tunnel Code: E**
- **Special Provision(s): 375**

14.9 Sea (IMDG)

- **Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.**
- **IMDG UN No.: 3077**
- **IMDG Hazard Class: 9**
- **IMDG Pack Group.: III**

14.10 Air (ICAO/IATA)

- **Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.**
- **ICAO UN No.: 3077**
- **ICAO Hazard Class: 9**
- **ICAO Packing Group: III**

SECTION 15 Regulatory information

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

- **This Safety Data Sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 as amended by Regulation (EU) 2015/830**
- **Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe**
- **UN 3077 and UN 3082, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5L/kg or less, are not subject to the provisions of ADR, RID, IMDG or IATA, provided the package meets the general packing quality provisions.**

15.2 Chemical Safety Assessment

- **A REACH chemical safety assessment has not been carried out**

SECTION 16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Revision No. 3. Revised June 2016.
Changes made: Revised to conform to REACH Annex II

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

- **H411: Toxic to aquatic life with long lasting effects**