



Glow the world

# GLOW IN THE DARK PIGMENT

DATE: 2015-04-15

## MATERIAL SAFETY DATA SHEET

Prepared under 1272/2008/CLP, GHS 2nd Revised Edition, 2007

### SECTION 1 - IDENTIFICATION

- **Product/TradeName** Photoluminescent Pigment  
GLOW IN THE DARK PIGMENT
- **Supplier** THE TNN DEVELOPMENT LIMITED
- **Address** RM2901, RAINBOW BUILDING, NO.23 RENMIN ROAD, ZHONGSHAN DIST, DALIAN, CHINA
- **Phone** +86-411-82561427
- **Recommended use of the chemical and restrictions on use** Glow in the dark ink, signs, toys, sticker, etc. glow in the dark products.

### SECTION 2 - HAZARDS IDENTIFICATION

- **Information pertaining to particular dangers for man and environment:**  
Experience in use of the product shows that it is not a known hazard to human and environment.
- **Classification system:**  
The classification is in line with current EC list. It is expanded, however, by information from technical literature and by information furnished by supplier companies.
- **Physical hazards**
  - Explosive :No
  - Flammable Solid :No
  - Self-Reactive Substances :No
  - Pyrophoric Solid :No
  - Self-Heating Substances :No
  - Oxidizing Solid :No
  - Substances Corrosive to Metal :No
- **Health hazards**
  - Acute Toxicity(Oral) :Category 5+
  - Acute Toxicity(Dermal) :Category 5+
  - Acute Toxicity(inhalation) :No
  - 21days Repeated Oral Toxicity :No (200mg/kg/day)
  - Skin Corrosion/Irritation :No
  - Eye Irritation :No
  - Respiratory Sensitizer :N/D
  - Skin Sensitizer :No

|   |  |
|---|--|
| <b>Germ Cell Mutagenicity</b>   | :No  |
| <b>Carcinogenicity</b>  | :N/D   |
| <b>Reproductive Toxicity</b>  | :No  |
| <b>TOST</b>   | :N/D   |
| <b>Aspiration Hazard</b>  | :N/D   |
| ● <b>Environmental Hazards</b>  |  |
| <b>Degradation</b>  | :YES   |
| <b>Bioaccumulation</b>  | :Very Low  |
| <b>Acute Aquatic Toxicity</b>   | :No  |
| <b>Chronic Aquatic Toxicity(LC<sub>50</sub>)</b>                            | :Cat. 3  |
| <b>Chronic Aquatic Toxicity(EC<sub>50</sub>)</b>                            | :Cat. 3  |
| <b>Chronic Aquatic Toxicity(ErC<sub>50</sub>)</b>                           | :Cat. 3  |
| ● <b>GHS Label Elements</b>   |  |
| <b>Symbol</b>   | :None  |
| <b>Signal Words</b>   | :None  |
| <b>Hazard Statements</b>  | :None  |
| <b>Hazard and toxicity information</b>                                      | :Unconfirmed long-term effects on Aquatic organisms.   |
| <b>Dangerous</b>  | :Non-combustible. No risk in fire fighting.  |
| <b>Harmful Affect</b>   | :Dust-inhalation may irritate respiratory tract and cause cough.   |
| <b>Handling(Protection)</b>   | :To ware protection equipments and avoid directly exposure. Gloves, goggles, masks are recommended to use during handling pigment directly.<br>Don't breath dust.<br>To avoid releasing to environment.  |
| <b>Handling(Emergency Remedy)</b>   | :Inhalation by accident - remove to fresh air.<br>Oral - Spit the dust out and clean the mouth by clean water.<br>Eyes Contacting - Hold eyelids open and flush eyes by clean water.<br>Skin Contacting - Clean by water stream with soap.<br>Consult Doctor for advice. |
| <b>Storage</b>  | :Keep the material in sealed, dry, clean container to avoid water and high moisture.   |
| <b>Abandon</b>  | :Ask authorized organization to handle.  |
| Unconfirmed long-term effects on Aquatic organisms.                         |  |
| Inorganic powderform pigment with slightly solubility. To avoid inhalation. |  |

### SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

|                                     |   |
|-------------------------------------|---|
| ● <b>Type</b>                       | Substance   |
| ● <b>Chemical characterization:</b> |   |
| - C.A.S. No. Designation:           | 12004-37-4  |
| - EINECS No.:                       | 234-455-3   |
| - Name & Alias:                     | Strontium Aluminate, Dialuminium Strontiumtetroxide   |
| ● <b>Formula:</b>                   | MA <sub>2</sub> O <sub>4</sub> .nB <sub>2</sub> O <sub>3</sub> :Eu <sup>2+</sup> .Dy <sup>3+</sup> (M stands for one or some of Sr, Ca, Ba, etc.) |
|                                     | <b>Contains no radioactive components.</b>  |
| ● <b>Purity:</b>                    | 99%min  |

### SECTION 4 - FIRST AID MEASURES

|                          |      |
|--------------------------|------|
| ● <b>General advice:</b> | none |
|--------------------------|------|

## SAFETY DATA SHEET

- **If inhaled:** remove to fresh air. Call physician.
- **On skin contact:** wash with simple water.
- **On contact with eyes:** wash with mild soap solution.
- **On ingestion:** seek medical aid immediately.
- **Note to physician:** nothing particular ; consult physician for prolonged effect.

## SECTION 5 - FIRE FIGHTING MEASURES

- **Suitable extinguishing media:** water fog, foam, carbon dioxide, dry chemical.
- **Unsuitable extinguishing media for safety reasons:** none
- **The following can be given off in a fire:** not required as not flammable.
- **Special protective equipment:** none
- **Further information:** none

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** not required as not hazardous; in case of spillage sweep and collect contents and wash out area with water.
- **Environmental precautions:** ----
- **Methods for cleaning up:** sweep and place in a closable container for disposal.

## SECTION 7 - HANDLING AND STORAGE

- **Handling:** keep in a tightly closed containers, stored in a cool, dry, ventilated area, keep away from water.  
To pick the material mildly to avoid dust generation.
- **Protection against fire and explosion:** not explosive ; no special precaution is necessary even then due to carrying effect. To be kept away from fire.
- **Storage:** To avoid storing in high temperature/moisture place.  
Remove with suitable packing.

## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

- **Additional information on the lay-out of technical plant:** ----

### PERSONAL PROTECTIVE EQUIPMENT:

- **Respiratory protection:** cover with cloth veil

- **Hand protection:** gloves
- **Eye protection:** goggles
- **Body protection:** wear protective clothing to avoid body contact
- **General safety and hygiene measures:** use a respiratory if necessary with suitable filter recommended.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- **Form:** powder
  - **Odour:** odorless
- Change in physical stage:**
- **Melting point/melting range:** 1745 °C DIN
  - **Boiling point/boiling range:** n.a. °C DIN
  - **Flash point:** n.a. °C DIN
- Combustibility:** free of combustibility
- Explosion limits:** n.a.
- |         |      |         |      |
|---------|------|---------|------|
| - lower | Vol% | - upper | Vol% |
|---------|------|---------|------|
- **Ignition temperature:** n.a. °C DIN
  - **Self ignition temperature:** n.a. °C DIN
  - **Self ignition:** n.a.
  - **Explosion hazard:** n.a.
  - **Fire promoting properties:** none
  - **Vapour pressure:** n.a. °C DIN
  - **Density:** 3.6 g/cm<sup>3</sup>
  - **Bulk density:** 935 Kg/m<sup>3</sup>
  - **Solubility in water:** 0.1g/L at 20°C decompose in water
  - **Solubility in other solvents:** n.a.
  - **PH value:** 6-8 at g/1 °C
  - **Octanol/water partition coefficient (log POW):** <0 at 20°C
  - **Viscosity:** n.a. °C
  - **Other information:** Decrease its glowing property after absorbing moisture.

## SECTION 10 - STABILITY AND REACTIVITY

- **Condition to avoid:** Avoid contacting with water and acids.
- **Substances to avoid:** Acids.
- **Hazardous reactions:** n.a.

- **Hazardous decomposition products:** this product is boric-aluminate product and can be worked at temperature between -20~500°C. No hazardous products to human and environment after decomposing in water.

## SECTION 11 - TOXICOLOGICAL INFORMATION

- **LD<sub>50</sub> oral / rat:** >5000 mg/Kg
- **LC<sub>50</sub> inhall. / rat:** n.a. mg/l
- **Primary skin irritation/rabbit:** not irritant
- **Primary mucous membrane irritation / rabbit's eyes:** not irritant
- **Sensitizing:** n.a.
- **Subacute-chronic toxicity:** n.a.
- **Experience in humans:** n.a.
- **Additional information:** n.a.

## SECTION 12 - ECOLOGICAL INFORMATION

- **Elimination information:** clean and sweep and wash the area with water.
- **Product decomposing in water** yes except waterproof type.
- **Water hazard class:** **WGK** (dangerous class for water in RFT) = 0  
not dangerous (self assessment)

## SECTION 13 - DISPOSAL CONSIDERATIONS

- **Product:** In accordance with federal, state and local regulations.
- **Contaminated packaging:** -----

## SECTION 14 - TRANSPORT INFORMATION

No special information for transport.

## SECTION 15 - REGULATORY INFORMATION

**67/548/CE and 1999/45/CE (Classification and labelling):**

- **Classification & labelling:** none. The product doesn't need any label.
- **Symbols:** none.

- **FDA Status:** this product does not have FDA approval as a food additive.
- **USDA Status:** this product has not been evaluated by USDA for use in packaging material in direct contact with meat or poultry food product prepared under federal inspection.

## SECTION 16 - OTHER INFORMATION

- **Department issuing data specification sheet:** Quality Control Laboratory.
- **Contact:** Quality Control Laboratory
- **Heavy metals:**  
The possible content of soluble heavy metals are micro contaminants are typically below 25 ppm for each of the following:
 

|          |         |          |
|----------|---------|----------|
| Antimony | Arsenic | Zinc     |
| Lead     | Cadmium | Chromium |
| Mercury  | Nickel  | Selenium |
- **Polychlorinated biphenyls (PCB's):**  
From a theoretical assessment the product does not contains PCB.
- **Inventories :**
  - Australia: the components of the product are included in the AICS.
  - Canada: the components of the product are included in the DSL.
  - EU: the components of the product are included in the EINECS.
  - USA: the components of the product are included in the TSCA.
- **FDA and BGVV Approvals for food packaging :**  
In common with most other pigments/pigment preparations the product is not specially approved by FDA and BGVV , but to the best of our knowledge there is no reason for any hesitations as to use the product for food packaging if no migration or peeling.
- **Aromatic amines:** n.a.
- **CONEG:** The heavy metal levels referred above for cadmium, lead, mercury and chromium (hexavalent) are to be in full compliance with the U.S. CONEG's permitted maximum concentration of 100 ppm in packaging materials.
- **EU Packaging Directive 94/62/EU:**
- The heavy metal levels referred above for cadmium, lead, mercury and chromium (hexavalent) are to be in full compliance with the **EU Packaging Directive 94/62/EU** permitted maximum concentration of 100 ppm in packaging materials.

The information contained in this safety profile is based on our present knowledge and must not be considered as a guarantee of specific properties. The standards and legal disposition in force must be respected by the consignee of our products under his own responsibility.

**This MSDS cancels and replaces any preceding release.**