

Material Safety Data Sheet

1 Identification of substance:

- **Product details:** EL phosphor
- **Manufacturer/Supplier:**
Unilong Industry Co., Ltd

2 Composition/Data on components:

- **Main components:** ZnS:Cu
EINECS NO:271-904-2

3 Hazards identification

- **Hazard description:** Xn Harmful
- **Information pertaining to particular dangers for man and environment**
R 20/22 Harmful by inhalation and if swallowed.

4 First aid measures

- **After inhalation**
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
- **After skin contact**
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
- **After eye contact**
Rinse opened eye for several minutes under running water.
Then consult a doctor.
- **After swallowing** Seek immediate medical advice.

5 Fire fighting measures

- **Suitable extinguishing agents**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray.

- **Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Barium oxide

- **Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

- **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

- **Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

- **Measures for cleaning/collecting:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling**

- **Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

- **Information about protection against explosions and fires:**

No special measures required.

- **Storage**

- **Requirements to be met by storerooms and receptacles:**

No special measures requirements.

- **Information about storage in one common storage facility:**

Do not store together with oxidizing and acidic materials.

• **Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

• **Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:

Barium, and soluble compounds, as Ba mg/m³

• **Additional information:** No data

• **Personal protective equipment**

• **General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

• **Breathing equipment:**

Use suitable respirator when high concentrations are present.

• **Protection of hands:** Impervious gloves

• **Eye protection:** Safety glasses

- **Body protection: Protective work clothing.**

9 Physical and chemical properties:

Appearance and properties: turquoise powder

PH: 6-7

Melting point (°C): > 800°C

Boiling point (°C): no data

Relative density (water = 1): 4.13g/cm³

relative vapor density (air =1): no data

Saturated vapor pressure (kPa): no data is available

Heat of combustion (kJ/mol): meaningless

Critical temperature (°C): no data

Critical pressure (MPa): no data

Log value of octanol / water partition coefficient: no data

Flash point (°C): meaningless

Ignition temperature (°C): upper limit of meaningless

Explosion% (VM): lower limit of meaningless explosion% (V/V): meaningless

Solubility: almost insoluble in water (<0,1 mg/l at 25°C and pH=5,7)

Main uses: EL light, light billboard, light pattern, light watch piece, light charging line other physical and chemical properties:

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

- **Materials to be avoided:**

Oxidizing agents Acids

- **Dangerous reactions** No dangerous reactions known

- **Dangerous products of decomposition:** Barium oxide

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**

Barium compounds may cause severe gastroenteritis, including abdominal pain, vomiting and diarrhea, tremors, faintness, paralysis of the arms and legs, and slow or irregular heartbeat. Severe cases may produce collapse and death due to respiratory failure. Soluble barium compounds are more likely to cause these effects than insoluble compounds.

Inhalation of fumes may cause sore throat, coughing, labored breathing, and irritation of the respiratory tract as well as the above symptoms. Titanium compounds are considered physiologically inert. There are no reported cases in the literature where titanium as such has caused human intoxication.

- **Additional toxicological information:**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

12 Ecological information:

- **General notes:**

Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

- **Product:**
- **Recommendation**

Consult state, local or national regulations to ensure proper disposal.

- **Uncleaned packagings:**

- **Recommendation:**

Disposal must be made according to official regulations.

14 Transport information

Not a hazardous material for transportation.

- **DOT regulations:**
- **Hazard class: None**
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class: None**
- **Maritime transport IMDG:**
- **IMDG Class: None**

• **Air transport ICAO-TI and IATA-DGR:**

• **ICAO/IATA Class: None**

15 Regulations

Domestic Chemical safety management regulations:

Regulations on the Safety Administration of Chemicals and Dangerous Goods (January 26,2002 issued by The State Council)

Rules for the implementation of the Safety Administration of Dangerous Chemicals ([1992] No.677);

Regulations on the Safe Use of Chemicals in the Workplace ([1996] Ministry of Labor) and other regulations on the safe use, production, storage, transportation, loading and unloading of dangerous chemicals. International regulations.

16 Other information :

Employers should use this information only as a supplement to other information gathered by them , and should make independent judgement 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 Material Safety Data Sheet , or in combination with any other product or process , is the responsibility of the user .