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1. Identification

Product identifier used on the label

Micron-Pearl Gold #64

Recommended use of the chemical and restriction on use

Recommended use*: pigment

Details of the supplier of the safety data sheet

Distributed by:

Gold Leaf and Metallic Powders 6001 Santa Monica Boulevard Los Angeles, CA 90038 USA Telephone (800) 569-5323 E-mail: info@glandmp.com Website: www.GLandMP.com

Emergency telephone number

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: additives, metal oxides

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

No need for classification according to GHS criteria for this product.

Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

^{*} The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

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No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

| CAS Number | Weight % | Chemical name |
|-------------------|-------------------|---------------------|
| 13463-67-7 | >= 50.0 - < 75.0% | Titanium dioxide |
| 12001-26-2 | >= 25.0 - < 50.0% | Mica-group minerals |
| 18282-10-5 | >= 0.0 - <= 1.0% | Tin oxide (SnO2) |

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

If on skin:

Wash thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open. If irritation develops, seek medical attention.

If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Seek medical attention if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: dry powder, foam

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Unsuitable extinguishing media for safety reasons: carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting: No particular hazards known.

Advice for fire-fighters

Protective equipment for fire-fighting:

Wear a self-contained breathing apparatus.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

If exposed to fire, keep containers cool by spraying with water.

6. Accidental release measures

Further accidental release measures:

Forms slippery surfaces with water.

Personal precautions, protective equipment and emergency procedures

Avoid dust formation.

Wear appropriate respiratory protection. Use personal protective clothing. Ensure adequate ventilation.

Environmental precautions

Do not empty into drains.

This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund').

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of. For large amounts: Pick up with suitable appliance and dispose of.

Spills should be contained and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation. Avoid contact with the skin, eyes and clothing.

Closed containers should only be opened in well-ventilated areas.

Protection against fire and explosion:

No special precautions necessary.

See MSDS section 5 - Fire fighting measures. Prevent electrostatic charge accumulation.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep in a cool place. Keep container dry.

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8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Mica-group minerals OSHA PEL TWA value 3 mg/m3 Respirable dust ; TWA

value 20 millions of particles per cubic foot of air

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ACGIH TLV TWA value 3 mg/m3 Respirable fraction;

Titanium dioxide OSHA PEL PEL 15 mg/m3 Total dust ; TWA value 10

mg/m3 Total dust;

ACGIH TLV TWA value 10 mg/m3;

Tin oxide (SnO2)

ACGIH TLV TWA value 2 mg/m3 (tin (Sn));

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Chemical resistant protective gloves

Eye protection:

Safety glasses with side-shields.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Due to the colouring properties of the product closed work clothes should be used, to avoid stains during manipulation. Hands and/or face should be washed before breaks and at the end of the shift. Wash soiled clothing immediately.

9. Physical and Chemical Properties

Form: powder
Odour: odourless
Odour threshold: not determined

Colour: off-white with pale gold reflection

pH value: 4.0 - 8.0

(4%(m))

(as aqueous suspension)

decomposition point: approx. 620 °C

The data refers to the cover

material.

Melting temperature: > 1,000 °C

Boiling point: not applicable, solid with a melting

temperature over 300 °C

Flash point: Study does not need to be conducted.

Flammability: not flammable

Lower explosion limit: Study does not need to be conducted. Upper explosion limit: Study does not need to be conducted. Autoignition: Study does not need to be conducted.

Vapour pressure: not applicable

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Density: 3.4 g/cm3

(25 °C)

Relative density: 3.4 Bulk density: 292 kg/m3

Vapour density: The product is a non-volatile solid.
Partitioning coefficient n- Study does not need to be conducted.

octanol/water (log Pow):

Self-ignition not self-igniting

temperature:

Thermal decomposition: No decomposition if stored and handled as

prescribed/indicated.

Viscosity, dynamic: Study does not need to be conducted.

Particle size: D10 3.6 - 5.5 µm

D50 6.3 - 9.0 μm D90 10.6 - 14.4 μm

Solubility in water: insoluble

Evaporation rate: The product is a non-volatile solid.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

not fire-propagating

Chemical stability

The product is chemically stable.

Possibility of hazardous reactions

No hazardous reactions when stored and handled according to instructions.

The product is chemically stable.

Hazardous polymerization will not occur.

Conditions to avoid

No conditions known that should be avoided.

Incompatible materials

No substances known that should be avoided.

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

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Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion.

Oral

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg

The product has not been tested. The statement has been derived from the properties of the

individual components.

Inhalation

Type of value: LC50 not determined

Dermal

Type of value: LD50 not determined

Irritation / corrosion

Assessment of irritating effects: Inhalation of dust may cause respiratory tract irritation, coughing and breathing difficulties. Contact with the eyes or skin may cause mechanical irritation.

Skin

May cause mechanical irritation.

Eve

May cause mechanical irritation.

Sensitization

Assessment of sensitization: The chemical structure does not suggest a sensitizing effect.

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Prolonged and repeated exposure of dust may cause lung damage.

Genetic toxicity

Assessment of mutagenicity: No data was available concerning mutagenic activity. The chemical structure does not suggest a specific alert for such an effect.

Carcinogenicity

Information on: Titanium dioxide

Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans). In long-term studies in rats in which the substance was given by inhalation, a carcinogenic effect was observed. Tumors were only observed in rats after chronic inhalative exposure to high concentrations which caused sustained lung inflammation. In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. Dermal exposure is not expected to be carcinogenic.

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Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Medical conditions aggravated by overexposure

Contact may aggravate pulmonary disorders.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

At the present state of knowledge, no negative ecological effects are expected.

The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish LC50 (96 h), Fish not determined

Aquatic invertebrates LC50 (48 h), daphnia not determined

Aquatic plants EC50 (72 h), algae not determined

Chronic toxicity to fish No data available.

Chronic toxicity to aquatic invertebrates

No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms bacteria/EC50 (0.5 h): not determined

Persistence and degradability

Assessment biodegradation and elimination (H2O)

The colourant is insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plant

Additional information

The product contains: Tin

The product contains heavy metals, which are firmly built in a matrix and are therefore not bioavailable. The local waste-water limit values are to be considered for the mentioned heavy metals.

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Other ecotoxicological advice:

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product has not been tested. The statement has been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with local authority regulations. This product does not possess any of the four identifying characteristics of hazardous waste (ignitability, corrosivity, reactivity, or toxicity). Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected.

Must be disposed of or incinerated in accordance with local regulations.

Container disposal:

Uncontaminated packaging can be re-used. Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

| State RTK | CAS Number | Chemical name |
|-----------|------------|---------------------|
| PA | 12001-26-2 | Mica-group minerals |
| | 13463-67-7 | Titanium dioxide |
| MA | 12001-26-2 | Mica-group minerals |
| | 13463-67-7 | Titanium dioxide |
| NJ | 12001-26-2 | Mica-group minerals |

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13463-67-7 Titanium dioxide

NFPA Hazard codes:

Health: 1 Fire: 0 Reactivity: 0 Special:

HMIS III rating

Health: 1 Flammability: 0 Physical hazard: 0

16. Other Information

SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2018/08/09

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

Micron-Pearl Gold #64 END OF DATA SHEET