

March 1, 2017

Material Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING Product name **OxiORANGE**TM GC3004-01 Product code Company name Goryo Chemical, Inc. Address EAREE Bldg. 5F, Kita 8 Nishi 18-35-100 Chuo-ku, Sapporo 060-0008 Japan Department Product development div. Tel $+81 \cdot 11 \cdot 624 \cdot 5860$ Fax +81-11-351-1822 E-mail info@goryochemical.com 2. HAZARDS IDENTIFICATION Not classified GHS classification Hazardous/Non-hazardous Components Nocuous No data available Effect on environment No data available Physically and chemical hazards Non-inflammable powder 3. COMPOSITION/INFORMATION ON INGREDIENTS Single Product Single or mixture Compound name OxiORANGE Component Single component 4. FIRST AID MEASURES Skin contact · Wash off immediately with plenty of water. If symptoms persist, call a physician. · If skin stimulates or rash appears, call a physician. Eye contact • Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, consult a physician. · Take off your contact lens when wash with water. Inhalation · Remove to fresh air immediately, give a rest and keep warm covering the body with blanket, and obtain medical attention. • If feeling bad, call a physician. Ingestion · Rinse out mouth thoroughly with water. · If feeling bad, call a physician. Protection of first-aiders • A rescuer should wear personal protective equipment, such as rubber gloves and airtight goggles. 5. FIRE-FIGHTING MEASURES Suitable extinguishing media Water spray, Alcohol resistance, Powder, Carbon dioxide Specifically dangerous hazards Thermal decomposition can lead to release of irritating and toxic gases and vapors. Extinguishing method Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so. Protection of fire-fighters Use personal protective equipment as required

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

· Go to the windward, and wearing protective clothing during procedures is imperative.

- Keep away the people under lee and seal off by roping spill site.
- Keep away near inflammables swiftly and prepare fire-fighting equipment.
- Environmental precautions
 - Prevent product from entering drains.
- Methods and materials for containment and cleaning up
 - Do not touch spilled material without suitable protection. After material is completely picked up, wash the spill site with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose of contaminated clothing.

7. HANDLING AND STORAGE

Handling

Technical measures

- Handling is performed in a well-ventilated place.
- · Avoid contact with skin, eyes and clothing.
- Wear suitable protective equipment.
- · Wash hands and face thoroughly after handling.
- Use a local exhaust if dust or aerosol will be generated.
- Advice on safe handling
 - \cdot Handle in accordance with good industrial hygiene and safety practice.
 - \cdot Vessel shouldn't be treated violently, such as rolling, shocking or dragging.

Storage

- Storage conditions
 - Keep container tightly closed. Store in a dark place under -20 degrees Celsius.
 - Avoid long storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| Engineering controls | | Install a closed system or local exhaust. | |
|-------------------------------|--------------------------|---|--|
| | | Install safety shower and eye bath. | |
| Co | ntrol parameters | Not set up | |
| Personal protective equipment | | | |
| | Respiratory protection | Dust respirator | |
| | Hand protection | Protective gloves | |
| | Eye protection | Safety glasses | |
| | Skin and body protection | Protective clothing. Protective boots, if the situation requires. | |
| | | | |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | Physical state (color/form) | Deep purple / Solid | | | |
|---|------------------------------|---------------------------|--|--|--|
| | Odor | Odorless | | | |
| | pH | No data available | | | |
| | Melting point/freezing point | No data available | | | |
| | Boiling Point/Range | No data available | | | |
| | Flash Point | No data available | | | |
| | Explosive limits | No data available | | | |
| | Vapor pressure | No data available | | | |
| | Vapor density | No data available | | | |
| | Density | No data available | | | |
| | Solubility | Soluble to DMSO, methanol | | | |
| | Firing point | No data available | | | |
| | Decomposition temperature | No data available | | | |
| ÷ | | | | | |

10. STABILITY AND REACTIVITY

| Stability | Stable under proper conditions. |
|----------------------------------|--|
| Reactivity | None under normal processing. |
| Incompatible materials | Strong oxidizing agents, reducing agents |
| Hazardous Decomposition Products | None under normal use. |

11. TOXICOLOGICAL INFORMATION

| Acute Toxicity | No data available | | |
|--------------------------------|--------------------------|--|--|
| Skin corrosion/irritation | No data available | | |
| Serious eye damage/irritation | No data available | | |
| Respiratory sensitization | No data available | | |
| Skin sensitization | No data available | | |
| Reproductive cell mutagenicity | No data available | | |
| Carcinogenicity | No data available | | |
| Reproductive toxicity | No data available | | |
| STOT-single exposure | No data available | | |
| STOT-repeated exposure | No data available | | |
| Aspiration hazard | No data available | | |
| 12. ECOLOGICAL INFORMATION | | | |
| Ecotoxicity effects | No information available | | |
| Mobility | No information available | | |
| Biodegradation | No information available | | |
| Bioaccumulation | No information available | | |
| 19 DIGDOGAL CONCIDEDATIONS | | | |

13. DISPOSAL CONSIDERATIONS

Chemical materials

• Dispose of in accordance with local regulations.

Polluted vessels and package

• Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

Hazards Class Does not correspond to the classification standard of the United Nations

IATA

| Proper shipping name | Not classified as dangerous in the meaning of transport regulations. | | |
|----------------------|--|--|--|
| Hazard Class | No information available | | |
| Subsidiary Class | No information available | | |
| Packing group | No information available | | |
| UN-No | No information available | | |
| | | | |

15. JAPANESE REGULATORY INFORMATION

Not applicable

16. OTHER INFORMATION

International Chemical Safety Card (ICSC) database in Japanese (National Institute of Health Sciences)

• This MSDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity.

- Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used.
- · Some new information or amendments may be added afterwards.
- If the products are to be used far behind the expected time of use or if you have any questions, please feel free to contact us.