

SAFETY DATA SHEET on Gallium(III) oxide

SDS No. MH10-70-005

Nippon Rare Metal, Inc.

Creation Date: 2016/6/21

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1. Chemical Product

SDS Name : Gallium(III) oxide

SDS No. : MH10-70-005

2. Composition, Information on ingredients

CAS# : 12024-21-4

Chemical formula: : Ga₂O₃

3. Hazardous Identification

Appearance : White-fine

Caution! May cause eye and skin irritation. May cause respiratory and digestive tract irritation.

Target Organs : None known

Potential Health Effects

Eye: May cause eye irritation

Skin : May cause skin irritation.

Ingestion : May cause irritation of the digestive tract.

Low hazard for usual industrial handling.

Inhalation : May cause respiratory tract irritation.

The toxicological properties of this substance have not been fully investigated.

Chronic : No information found.

4. First Aid measures

Eye : Flush eyes with plenty of water for at least 15 minutes, Occasionally lifting the upper and lower eyelids. Get medical aid.

Skin : Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion : Never give anything by mouth to an unconscious person. Get medical aid. If conscious and alert, rinse mouth and drink 2-4 cups of milk or water.

Inhalation : Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. Get medical aid.

5. Fire fighting measures

General information : As in any fire, wear a self-contained breathing apparatus in pressure-demand. MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguish media : Use water spray, dry chemical, or carbon dioxide.

6. Accidental Release Measures

General Information : Use proper personal protective equipment as indicated section 8.

Spills/Leaks : Vacuum or sweep up material and place into a suitable disposal Container.

Avoid generating dusty condition. Provide ventilation.

7. Handling and Storage

Handling	:	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.
Storage	:	Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. Exposure controls, personal protection

Engineering controls	:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentration low.
Exposure limits	:	OSHA none listed
OSHA Vacated PELs	:	No OSHA vacated PELs are listed for this chemical
Personal protective equipment	:	Eyes-Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166. Skin-Wear appropriate protective gloves to prevent skin exposure. Clothing-Wear appropriate clothing to prevent skin exposure.

9. Physical and Chemical Properties

Physical state	:	Crystalline powder
Appearance	:	Whit-fine
Odor	:	Not available
pH	:	Not available
Vapor pressure	:	Not available
Vapor density	:	Not available
Boiling point	:	Not available
Melting point	:	1740°C
Flash point	:	Not available
Solubility	:	Insoluble in water
Molecular formula	:	Ga ₂ O ₃
Molecular weight	:	187.44
Specific Gravity	:	5.88 g /cm ³

10. Stability and Reactivity

Chemical Stability	:	Stable under normal temperature and pressures.
Conditions to avoid	:	Incompatible materials.
Incompatibilities with other materials	:	Oxidizing agents.
Hazardous Decomposition products	:	Will not occur.

11. Toxicological Information

RTECS#	:	CAS#12024-21-4
LD50/LC50	:	Oral, mouse : LD50 = 10gm/kg ;
Carcinogen city	:	No information available
Epidemiology	:	No information available

Teratogenicity : **No information available**
Reproductive Effects : **No information available**
Other Studies : **Not data available.**

12. Ecological Information : **No information available**

13. Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for a classification determination are listed in 40CFR part 261.3. Additionally, waste generators must consult state and local hazardous waste regulation to ensure complete and accurate classification.

14. Transport information

Hazardous : **Not hazardous for transportation**
Shipping name : **N/A**
Hazard class : **N/A**
UN number : **N/A**
Packing group : **N/A**

15. Regulatory Information

US Federal

TSCA

CAS#12024-21-4 is listed on the TSCA inventory.

Health&Safety reporting list

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test rules

None of the chemicals in this product are under a Chemical Test rule.

Section 12b

None of the chemicals are listed under TSCA section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have SNUR under TSCA.

SARA

Section 302(RQ)

None of the chemicals in this material have an RQ.

Section302(TPQ)

None of the chemicals in this product have a TPQ.

Section313

No chemicals are reportable under section 313.

Clean air act

This material does not contain any hazardous air pollutants, Class 1 Ozone depleters, Class 2 ozone depleters.

Clean water act

None of chemicals in this product are listed as Hazardous substances under the CWA, Priority Pollutants under CWA and Toxic pollutants under CWA.

OSHA

None of the chemicals in this product are considered highly hazardous by OSHA.

16. Additional Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or

for lost damages, howsoever arising, even if the company has been advised of the possibility of such damages.