

# SAFETY DATA SHEET on Gallium nitride

Nippon Rare Metal, Inc.

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## Section 1: Identification of the substance/mixture and of the company/undertaking

### -1 Product Identifier

CAS No. 25617-97-4

### -2 Relevant identified uses of substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

### -3 Details of Supplier of the Safety Data Sheet

#### Manufacturer and Supplier

Nippon Rare Metal, Inc.

Address: 2-15-1, Nakayama, Midori-ku, Yokohama 226-0019, Japan

### -4 Emergency call:

Phone: #81-45-931-4841 (weekdays, office hours 8:10 to 17:10 JST, UTC +9 hours, Language: English/Japanese), Fax: #81-45-932-8401, e-mail: [info@nrm-inc.co.jp](mailto:info@nrm-inc.co.jp)

## Section 2: Hazards Identification

### -1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008

Skin irritation: Category 1

For the full text of the H-Statements mentioned in this Section, see Section 16.

### -2 Label element



**Signal Word: Warning**

#### Hazard statement(s)

H317 : Causes skin irritation

#### Precautionary statement(s)

P280 : Wear protective gloves

### -3 Supplemental hazards : none

### -4 Other hazards : none

## Section 3: Composition/Information on ingredients

### -1 Substances

CAS No : 25617-97-4

Chemical formula : GaN

EC No : 247-129-0

Concentration : 99.99% trace metals basis

#### ***Section 4: First Aid measures***

##### **-1 Description of first aid measures**

- Eye : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin : Wash off with soap and plenty of water. Consult a physician.
- Inhalation : If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- Swallowed : Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

##### **-2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

##### **-3 Indication of any immediate medical attention and special treatment needed**

No date available

#### ***Section 5: Fire fighting measures***

##### **-1 Extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

##### **-2 Special hazards arising from the substances or mixture**

nitrogen oxides (NO<sub>x</sub>), gallium oxide

##### **-3 Advice for firefighter**

Wear self contained breathing apparatus for fire fighting if necessary.

##### **-4 Further information**

No date available

#### ***Section 6: Accidental Release Measures***

##### **-1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas.

For personal protection see section 8.

##### **-2 Environmental precautions.**

Do not let product enter drains.

##### **-3 Methods and material for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

##### **-4 Reference to other sections**

For disposal see section 13.

#### ***Section 7: Handling and Storage***

##### **-1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition – No smoking. Keep away from heat and sources of ignition.

For precautions see section 2.2.

##### **-2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

##### **-3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## ***Section 8: Exposure controls/personal protection***

### **-1 Control parameters**

Components with workplace control parameters.

### **-2 Exposure control**

#### **Engineering Controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Personal protection:**

**Eyes** : Chemical safety glasses/goggles.

**Respirator** : Where risk assessment shows air-purifying respirators are appropriate use a full-face Respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a back up to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Skin** : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation(EU) 2016/425/ and the standard EN 374 derived from it.

**Practices** : Good personnel hygiene is essential. Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water immediately upon leaving the work area.

## ***Section 9: Physical and Chemical Properties***

### **Information on basic physical and chemical properties**

**Appearance and Odor**: powder

**Solubility in Water**: not applicable

**Melting Point**: 800°C

**Boiling Point**: not applicable

**Specific Gravity**: not applicable

**Flammability**: not applicable

**Vapor Pressure**: not applicable

**Vapor Density**: 6.1g/cc

**Decomposition temp**: not applicable

**Formule Weight**: 83.7297g/mol

## ***Section 10: Stability and Reactivity***

**-1 Reactivity**: no data available

**-2 Chemical stability**: Stable under recommended storage conditions.

**-3 Possibility of hazardous reactions** : no data available

**-4 Conditions to avoid**: no data available

**-5 Incompatible materials**: no data available

**-6 Hazardous Decomposition**: In the event of fire: see section 5

## ***Section 11: Toxicological Information***

### **Information on toxicological effects**

**Acute toxicity** : no data available

**Skin corrosion/irritation** : no data available

**Serious eye damage/eye irritation** : no data available

**Respiratory or skin sensitization** : no data available

**Germ cell mutagenicity** : no data available

**Carcinogenicity** : no data available

### ***Section 12: Ecological Information***

**Toxicity** : no data available

**Persistence and degradability** : no data available

**Bioaccumulative potential** : no data available

**Mobility in soil** : no data available

**Results of PBT and vPvB assessment** : PBT/vPvB assessment not available as chemical safety Assessment not required/not conducted.

**Other adverse effects** : no data available

### ***Section 13: Disposal Considerations***

**Waste treatment Method**

**Product** : Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging** : Dispose of as unused product.

### ***Section 14: Transport information***

**UN-No:** None

**Proper Shipping Name** : Not dangerous goods

**Proper technical name** : Gallium (III) nitride

**Hazard Class:** None

**Packing Group** : None

### ***Section 15: Regulatory Information***

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**-1 Safety, health and environmental regulations/legislation specific for the substance or mixture :**

No data available

**-2 Chemical safety assessment:**

For this product a chemical safety assessment was not carried out.

### ***Section 16. Additional Information***

**Full text of H-Statements referred to under section 2 and 3.**

Eye Irrit : Eye irritation.

H272 : May intensify fire; oxidizer.

H315 : Causes skin irritation.

H319 : Causes serious eye irritation.

H335 : May cause respiratory irritation.

Ox. Sol. : Oxidizing solids

STOT SE : Specific target organ toxicity – single exposure

**Full text of R-phrases referred to under section 2 and 3.**

O : Oxidising

R8 : Contact with combustible material may cause fire.

R36/37/38 : Irritating to eyes, respiratory system and skin.

Xi : Irritant

**Abbreviations :**

CAS number: The Chemical Abstracts Service number

EINECS: The European Inventory of Existing Commercial Chemical Substance

NTP: National Toxicity Program IARC: UN International Agency for Research on Cancer

OSHA: US Occupational Safety & Health Administration NIOSH : The National Agency for Occupational Safety and Health

EU: European Union

**Key Literature references and Source of data**

MSDS Europe website (<http://www.msds-europe.com/>)

Guidance on the compilation of safety data sheets - Version 2.1 February 2014 by ECHA (European Chemical Agency)

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