

Material Safety Data Sheet

1. Company's Identification

Manufacture's Name : NIKKO RICA CORPORATION
Manufacture's Address : Ascend Kanda Bldg., 10-2 Kanda-tomiyamacho,
Chiyoda-ku, Tokyo 101-0043 Japan.
Telephone No. : +81-3-5209-9870
Facsimile No. : +81-3-5209-9874
Department : Kansai Sales Office
Telephone No. : +81-6-6232-2780
Facsimile No. : +81-6-6232-2790
Emergency Telephone No. : Kansai Sales Office, +81-6-6232-2780
File No. : K-Ni-2E
Revised On : 11 September 2012

2. Product Details

Product's Name : High Purity Nickel oxide F Grade, A Grade
Trade Name : High Purity Nickel oxide F Grade, A Grade

3. Composition/Information On Ingredients

Chemical characterization : Pure material
Chemical Name : Nickel oxide
Content : 98.0%
Chemical formula : NiO
Molecular Weight : 74.69
CAS No. : 1313-99-1
ENCS No.(Japan) : 1-517
EC-No. : 215-215-7

4. Hazard Identification

GHS Classification
Inhalation : Category 1
Carcinogenicity : Category 1A
Skin sensitization : Category 1
Chronic aquatic toxicity : Category 4
Specific target organ toxicity – repeated exposure : Category 1

5. GHS Label Elements

Pictogram or Symbol

:



Signal Word

: Danger

Hazard Risk Statement(s)

H317

: May cause an allergic skin reaction.

H350i

: May cause cancer by inhalation.

H372

: Cause damage to organs through prolonged or repeated exposure.

H413

: May cause long lasting harmful effects to aquatic life.

Precautionary Statement(s)

P201

: Obtain special instructions before use.

P280

: Wear eye protection/ face protection.

P308 + P313

: If exposed or concerned, get medical advice / attention.

Storage

: In room, in normal temperature. Keep container tightly closed.

Disposal

: It should be disposal based on the law related to 'Industrial waste disposal and management'.

6. First Aid Measures

In case of Eye Contact

: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if irritation develops and persists.

In case of Skin Contact

: Flush skin with running water.

In case of Inhalation

: If breathed in, move person into fresh air. Get medical attention if ill effects persist.

In case of Ingestion

: Rinse mouth with water. Get medical attention.

7. Fire Fighting Measures

Flammable properties

: This product is not flammable.

Suitable extinguishing media

: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Advice for firefighters

: Wear self contained breathing apparatus for fire if necessary.

8. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures : Keep unnecessary personnel away. Keep upwind. Ventilate the area. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
-

9. Handling and Storage

- Handling : Keep formation of airborne dusts to a minimum. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. See Section 10 of the MSDS for Personal Protective Equipment.
- Storage : Keep container tightly closed. Store in a well-ventilated place.
-

10. Exposure Controls and Personal Protection

- Concentration Control : 0.1 mg/m³ (as Ni)
- Permissible Concentration : JSOH (2009) 0.1 mg/m³ (as Ni, not soluble)
: ACGIH (2009) TLV-TWA 0.2 mg/m³ (as Ni, insoluble compounds)
: OSHA PEL TWA 1.0 mg/m³ (as Ni)
- Engineering controls : Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn.
- Personal Protective Equipment
- Eye / face protection : Use tight fitting goggles if dust is generated.
- Skin protection : Wear suitable protection clothing and gloves.
- Respiratory protection : Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirator may not provide adequate protection.
- General hygiene consideration : Provide eyewash station and safety shower. Always observe

good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

11. Physical and Chemical Properties

Appearance	: Green powder
Odor	: Odorless
Melting point	: 1998°C
Boiling point	: (Decompose in heating)
Flash point	: No data available.
Evaporation rate	: No data available.
Vapor density	: No data available.
Specific gravity	: 6.96g/cm ³
Solubility (water)	: Insoluble
Partition coefficient (n-octanol/water)	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.

12. Chemical Stability and Reactivity Information

Chemical stability	: Stable under normal temperature conditions.
Conditions to avoid	: Excessive heat.
Incompatible materials	: Strong acids.
Hazardous decomposition products	: Burning produces obnoxious and toxic fumes.
Possibility of hazardous reactions	: No data available.

13. Toxicological Information

Acute toxicity	: LD50 Subcutaneous - mouse - 50 mg/kg
Skin corrosion/irritation	: No data available.
Serious eye damage/eye irritation	: No data available.
Respiratory or skin sensitization	
Respiratory sensitization	: Category 1 (as Ni, Ni compounds) J5OH (2008), DFG (MAK/BAT No.43(2007))
Skin sensitization	: Category 1 (as Ni, Ni compounds) J5OH (2008), DFG (MAK/BAT No.43(2007)), EU (R43)
Germ cell mutagenicity	: No data available.
Carcinogenicity	: Cancer Hazard. Contains nickel, which can cause lung or nasal cancer. Long-term breathing of this material may cause chronic lung disease.
ACGIH Carcinogens	: A1 Confirmed human carcinogen. (ACGIH (2001))

IARC Monographs. Overall Evaluation of Carcinogenicity	: 1 Carcinogenic to humans. (IARC 49 (1990))
US NTP Report on Carcinogens	: Known carcinogen.
EU	: Carc. Cat. 1 (EU-Annex 1 (2009))
JSOH	: 1 (JSOH (2008))
Reproductive toxicity	: No data available.
Specific target organ toxicity - Single exposure	: No data available.
Specific target organ toxicity - Repeated exposure	: Inhalation – Causes damage to organs through prolonged or repeated exposure. (Ministry of Health, Labour and welfare Report (2009)) (ATSDR (2005)), (NTP TR-451 (1996))
Aspiration hazard	: No data available.

14. Ecological Information

Ecotoxicity	: May cause long lasting harmful effects to aquatic life.
Environmental effects	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	: This product is not readily biodegradable.

15. Disposal Consideration

Waste treatment methods	
Product	: Offer surplus and non-recyclable solution to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging	: Offer rinsed packaging material to local recycling facilities. Since emptied containers retain product residue, follow label warning even after container is emptied.

16. Transport Information

UN number	: Non-pertinence
UN proper shipping name	: ADR/RID Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods
Environmental hazards	: No

17. Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives

Hazard Symbols	: T
Risk Phrases	: R 49 May cause cancer by inhalation. : R 43 May cause sensitization by skin contact. : R 53 May cause long-term adverse effects in the aquatic environment.
Safety Phrases	: S 53 Avoid exposure - obtain special instructions before use. : S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). : S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

18. Other Information

This information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of Nikko Rica Corporation. It relates only to the specific material designated herein, and does not relate to use in combination with any other material or in any process. Nikko Rica Corporation assumes no legal responsibility for use of or reliance upon this information.