



SAFETY DATA SHEET

MATERION

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name of the substance Nickel Pellets
Identification number 028-002-01-4 (Index number)
Registration number -
Synonyms None.
Materion Code 403
Issue date 24-May-2021
Version number 01

1.3. Details of the supplier of the safety data sheet

Supplier

Company name Materion Advanced Materials
Address 6070 Parkland Boulevard
United States
Division
Telephone 1.216.383.4019
e-mail ehs@materion.com
Contact person Theodore Knudson

1.4. Emergency telephone number See Section 16.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Scientific research and development
Manufacture of substances Other: Manufacture of medical and defense equipment
Uses advised against Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Consumer uses: Private households (= general public = consumers)

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.
Carcinogenicity	Category 2	H351 - Suspected of causing cancer.
Specific target organ toxicity - repeated exposure	Category 1	H372 - Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

Environmental hazards

Hazardous to the aquatic environment, acute Category 1 M-factor = 10.
aquatic hazard

Hazardous to the aquatic environment, Category 3
long-term aquatic hazard

Hazard summary May cause sensitisation by skin contact. Suspected of causing cancer. Prolonged exposure may cause chronic effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Nickel

Hazard pictograms



Signal word Danger

Hazard statements

H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H372 Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

Precautionary statements

Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302 + P350 If on skin: Wash with plenty of water.
P304 + P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P308 + P313 If exposed or concerned: Get medical advice/attention.
P391 Collect spillage.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information

For further information, please contact the Product Stewardship Department at +1.216.383.4019.

2.3. Other hazards

This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Nickel	100	7440-02-0 231-111-4	-	028-002-01-4	
Classification: Carc. 2;H351, Aquatic Chronic 3;H412					7,S

SECTION 4: First aid measures

General information If you feel unwell, seek medical advice (show the label where possible).

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed May cause an allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Powder. Dry sand. Water Spray or Fog

Unsuitable extinguishing media Carbon dioxide (CO₂).

5.2. Special hazards arising from the substance or mixture No unusual fire or explosion hazards noted.

5.3. Advice for firefighters

Special protective equipment for firefighters Wear suitable protective equipment.

Special firefighting procedures Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the PIS.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the PIS.

6.2. Environmental precautions Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Stop the flow of material, if this is without risk. For waste disposal, see section 13 of the PIS.

6.4. Reference to other sections For personal protection, see section 8 of the PIS. For waste disposal, see section 13 of the PIS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Do not handle until all safety precautions have been read and understood. Wear appropriate personal protective equipment. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities Store locked up. Store away from incompatible materials (see Section 10 of the PIS).

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ireland. Occupational Exposure Limits Components

	Type	Value
Nickel (CAS 7440-02-0)	TWA	0.5 mg/m ³

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
General information	Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Skin protection	
- Hand protection	Wear gloves to prevent metal cuts and skin abrasions during handling.
- Other	Use personal protective equipment as required.
Respiratory protection	In case of inadequate ventilation, use respiratory protection.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Observe any medical surveillance requirements. Contaminated work clothing should not be allowed out of the workplace.
Environmental exposure controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid.
Colour	Grey metallic.

Odour None.

Odour threshold Not applicable.

pH Not applicable.

Melting point/freezing point 1455 °C (2651 °F) estimated / Not applicable.

Initial boiling point and boiling range Not applicable.

Flash point Not applicable.

Evaporation rate Not applicable.

Flammability (solid, gas) None known.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not applicable.

Explosive limit - lower (%) temperature Not applicable.

Explosive limit – upper (%) Not applicable.

Explosive limit - upper (%) temperature Not applicable.

Vapour pressure Not applicable.

Vapour density Not applicable.

Relative density Not applicable.

Solubility(ies)

Solubility (water) Not applicable.

Partition coefficient (n-octanol/water) Not applicable.

Auto-ignition temperature Not applicable.

Decomposition temperature Not applicable.

Viscosity Not applicable.

Explosive properties Not explosive.

Oxidising properties Not oxidising.

9.2. Other information

Density 8.90 g/cm³ estimated

SECTION 10: Stability and reactivity

- 10.1. Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.
- 10.2. Chemical stability** Material is stable under normal conditions.
- 10.3. Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.
- 10.4. Conditions to avoid** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
- 10.5. Incompatible materials** Strong acids.
- 10.6. Hazardous decomposition products** No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

- Inhalation** Prolonged inhalation may be harmful.
- Skin contact** May cause an allergic skin reaction.
- Eye contact** Not likely, due to the form of the product.
- Ingestion** Expected to be a low ingestion hazard.

Symptoms May cause respiratory irritation. May cause an allergic skin reaction. Dermatitis. Rash.

11.1. Information on toxicological effects

- Acute toxicity** None known.
- Skin corrosion/irritation** May cause skin irritation.
- Serious eye damage/eye irritation** Not likely, due to the form of the product.
- Respiratory sensitisation** Not a respiratory sensitizer.
- Skin sensitisation** May cause an allergic skin reaction.
- Germ cell mutagenicity** Not classified.
- Carcinogenicity** Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Nickel (CAS 7440-02-0) 2B Possibly carcinogenic to humans.

- Reproductive toxicity** Not classified.
- Specific target organ toxicity - single exposure** Not classified.
- Specific target organ toxicity - repeated exposure** May cause damage to organs through prolonged or repeated exposure.
- Aspiration hazard** Not an aspiration hazard.
- Mixture versus substance information** No information available.
- Other information** Not available.

SECTION 12: Ecological information

- 12.1. Toxicity** Based on available data, the classification criteria are not met for hazardous to the aquatic environment.
- 12.2. Persistence and degradability** No data is available on the degradability of any ingredients in the mixture.
- 12.3. Bioaccumulative potential** No data available.
- Partition coefficient n-octanol/water (log K_{ow})** Not applicable.
- Bioconcentration factor (BCF)** Not available.
- 12.4. Mobility in soil** No data available.
- 12.5. Results of PBT and vPvB assessment** Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. - 14.6.: Not regulated as dangerous goods.

RID

14.1. - 14.6.: Not regulated as dangerous goods.

ADN

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Nickel (CAS 7440-02-0)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Nickel (CAS 7440-02-0)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

National regulations Not available.

15.2. Chemical safety assessment Not available.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

CAS: Chemical Abstract Service.

CEN: European Committee for Standardization.

IATA: International Air Transport Association.

IBC: Intermediate Bulk Container.

IMDG: International Maritime Dangerous Goods.

MARPOL: International Convention for the Prevention of Pollution from Ships.

PBT: Persistent, bioaccumulative, toxic.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

STEL: Short term exposure limit.

TWA: Time Weighted Average.

vPvB: Very persistent and very bioaccumulative.

References Not available.

Information on evaluation method leading to the classification of mixture Not applicable.

Full text of any H-statements not written out in full under Sections 2 to 15

H351 Suspected of causing cancer.

H412 Harmful to aquatic life with long lasting effects.

Revision information None.

Training information Follow training instructions when handling this material.

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