Materials Safety Data Sheet

Nickel Solid (Target,Foil,Wire,Rod,Pellets)

1. Product and Company Identification

Product Name： Nickel Solid
Formula： Ni
CAS: 7440-02-0
Synonyms: N/A

Recommended Use: Scientific research
Uses advised against: N/A

Supplier: UltraPurMat Group Co., Ltd
Address: Room307, Building2, Tengfei Innovation Center, No38Gaoxin 6th Road, High-tech Zone, Xian Shaanxi China
Tel: +86-29-88993870
Email: sales@ulpmat.com
Website: www.ulpmat.com

24-Hour Emergency Contact: +86-13572830939

2. Hazards Identification

Classification of the substance or mixture
Classified as hazardous according to Regulation (EC) No 1272/2008 (CLP)
Skin Sensitization Category 1 (H317)
Carcinogenicity Category 2 (H351)
STOT - repeated exposure Category 1 (H372)

GHS Label elements, including precautionary statemen
Pictogram:

Signal Word: Danger

Hazard statement(s):
H317 May cause an allergic skin reaction
H351 Suspected of causing cancer
H372 Causes damage to organs through prolonged or repeated exposure
Precautionary Statement(s):
P201 Obtain special instructions before use.
P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/protective clothing.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water
P308 + P313 IF exposed or concerned: Get medical advice/attention
P362 + P364 Take off contaminated clothing and wash it before reuse

Other hazards: None

3. Composition

Components	CAS	Classification （H）	Concentration
Nickel(Ni)	7440-02-0	H317 H351 H372	⩽100%

4. First Aid Procedures

Description of first aid measures
General Treatment: Seek medical attention if symptoms persist.
Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion: Seek Medical Attention.
Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if symptoms persist .
Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.
Indication of any immediate medical attention and special treatment needed
No data available

5. Firefighting Measures

Extinguishing media
Extinguishing Media: Use fire-extinguishing media suitable for the surrounding fire. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media: water jet
Special hazards arising from the substance or mixture

Nickel oxides; nickel dusts or fumes may form explosive mixtures with air, and in case of fire, nickel can produce nickel carbonyl, a highly toxic and confirmed carcinogen.

Advice for firefighters

Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

Further information

No data available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Non-emergency personnel shall evacuate to safe areas, wear required PPE, prevent dust inhalation and skin/eye contact, and eliminate all ignition sources; emergency responders must wear breathing apparatus when exposed to vapours, dust, spray or gases.

For personal protection see section 8.

Environmental precautions

Isolate runoff to prevent environmental pollution.

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.

Reference to other sections

For disposal see section 13.

7. Handling and Storage

Precautions for safe handling

Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid formation of dust. Do not get in eyes, on skin, or on clothing. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Store in a cool dry place in a tightly sealed container.

Storage class (TRGS 510): 6.1D

Store apart from materials and conditions listed in section 10.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

8. Exposure Controls/Personal Protection

Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Protective gloves (The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.)

Body Protection

Protective work clothing. Wear close-toed shoes and long sleeves/pants.

Respiratory protection

Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. Physical and Chemical Characteristics

Information on basic physical and chemical properties

Appearance

Form: Solid(Target,Foil,Wire,Rod,Pellets)

Colour: Silver gray

Odor: Odorless

pH: Not applicable (solid substance)

Melting point/range: 1455 °C

Boiling point/range: 2732 °C

Flash point: No data available

Evaporation rate: Not applicable (solid)

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor pressure: No data available

Relative density: 8.908 g/cm^3

Water solubility: insoluble

Partition coefficient: n-octanol/water: not relevant (inorganic)

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Other information

Molecular formula: Ni

Molecular weight: 58.69 g/mol

10. Stability and reactivity

Reactivity

Dust can form an explosive mixture with air.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No known hazardous reactions

Conditions to avoid

The following substances should be avoided as they can cause violent reactions: strong oxidizers, acetone, alcohols, hydrazine, perchlorates, nitric acid, sulfur, strong acids, organic solvents, and selenium.

Incompatible materials

strong oxidizers, acetone, alcohols, hydrazine, perchlorates, nitric acid, sulfur, strong acids, organic solvents, selenium

Hazardous decomposition products

In the event of fire: see section 5

11. Toxicological Information

Information on toxicological effects

Acute toxicity

The oral LD50 value for rats is greater than 9000 mg/kg, while no dermal or inhalation toxicity data are available.

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

Respiratory: No data available.

Skin: May cause an allergic skin reaction

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: Not listed.

OSHA: Not listed.

Reproductive toxicity

No data available

Specific target organ toxicity -single exposure

No data available

Specific target organ toxicity -repeated exposure

Target Organs Kidney, Skin, Lungs, Blood

Aspiration hazard

No data available

Additional Information

No data available

12. Ecological Information

Toxicity

Aquatic toxicity test results show the 96h-LC50 of the substance to rainbow trout is 15.3 mg/L, the 48h-LC50 to Ceriodaphnia dubia is 276 µg/L, the 72h-EC50 to Ankistrodesmus falcatus algae is 237 µg/L, and the 30min-EC50 to activated sludge microorganisms is 33 mg/L.

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

This product does not contain any known or suspected endocrine disruptors.

13. Disposal Considerations

Waste treatment methods

Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste.

14. Transportation Information

ADR

No data available

IMDG

No data available

IATA

No data available

15. Regulatory information

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

Regulation (EC) 1907/2006, REACH, Annex XIV list of substances subject to authorisation: Not applicable

Regulation (EC) 1907/2006, REACH, Annex XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances: Not applicable

Regulation (EC) 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) 850/2004 on persistent organic pollutants, amended by (EU) No 2019/1021: Not applicable

Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance

16. Other information

Revision Date： 2025-12-06

Version: 1.0

Disclaimer

The information of this safety data sheet is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.