1. Product and Company Identification

Trade Name:	Nickel (II) sulfide
Chemical Formula:	NiS
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	Stanford Advanced Materials
Street:	23661 Birtcher Dr. Lake Forest
State:	CA
Zip Code:	92630
Country:	USA
Tel #:	(949) 407-8904

24-Hour Emergency Contact:

2. Hazards Identification

Signal Word: Danger

Hazard Statements:
H317: May cause an allergic skin reaction
H341: Suspected of causing genetic defects
H350: May cause cancer
H372: Causes damage to organs through prolonged or repeated exposure

Precautionary Statements:
P260: Do not breathe dust/fume/gas/mist/vapors/spray
P280: Wear protective gloves/protective clothing/eye protection/face protection
P308+P313: IF exposed or concerned: Get medical advice/attention
P405: Store locked up
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health:	3
Flammability:	0
Physical:	0

3. Composition

Chemical Family:	Nonmetal
Additional Names:	Nickel sulfide

Nickel (II) sulfide (NiS):

Percentage:	100 wt%
CAS #:	16812-54-7
EC #:	240-841-2

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep patient warm. Seek immediate medical attention.
Ingestion:	Seek immediate medical attention.
Skin:	Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.

5. Firefighting Measures

Flammability:	Non-flammable
Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store away from oxidizing agents. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	1 mg/m^3 as Ni, long-term value
Threshold Limit Value:	0.2 mg/m^3 as Ni, inhalable fraction, long-term value
Special Equipment:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Respiratory Protection:	Dust Respirator
Protective Gloves:	Nitrile rubber gloves with minimum thickness of 0.11 mm
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	N/A
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	0.0036 g/l
Boiling Point:	N/A
Melting Point:	797 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	5.3-5.65 g/cc
Molecular weight:	90.76 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents
Incompatible Conditions:	None
Hazardous Decomposition Products:	Metal oxide fume, sulfur oxides, hydrogen sulfide

11. Toxicological Information

Potential Health Effects:	
Eyes:	May cause irritation
Skin:	May cause irritation or allergic skin reaction
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	Causes damage to organs through prolonged or repeated exposure.
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	May cause cancer IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity. NTP-K: Known to be carcinogenic: sufficient evidence from human studies.

12. Ecological Information

Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A

Notes:	Also poisonous for fish and plankton in water bodies. May cause long lasting harmful effects to aquatic life. Very toxic to aquatic life. Avoid transfer into the environment.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous:	Hazardous as powder only.

Hazard Class:	9 Miscellaneous danger substances and articles
Packing Group:	III
UN Number:	UN3077
Proper Shipping Name:	Environmentally hazardous substances, solid, n.o.s. (Nickel (II) sulfide)

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	Yes

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given 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.

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