



# CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

**MATERION**

Product name: Nickel - Sulfur Doped Products

Issue date: 05-15-2019

Revision date: 11-11-2019

Version #: 03

SDS No: -

## SECTION 1 Chemical product and company identification

<b>Chinese name of chemical</b>	<b>镍 - Sulfur Doped Products</b>	
<b>English name of chemical</b>	<b>Nickel - Sulfur Doped Products</b>	
<b>Manufacturer/Supplier</b>	Materion Advanced Materials Group	
<b>Address</b>	42 Mt. Ebo Road South Brewster, NY 10509 United States	
<b>Contact person</b>	Not available.	
<b>Telephone</b>	1+845.279.0900	
<b>e-mail</b>	Not available.	
<b>Emergency telephone number</b>	Chemtrec	1+703.527.3887
<b>Issue date</b>	05-15-2019	
<b>Revision date</b>	11-11-2019	
<b>Supersedes date</b>	10-31-2019	

## SECTION 2 Hazards identification

**Emergency overview** Suspected of causing cancer. Prolonged exposure may cause chronic effects.

<b>Hazard categories</b>		
<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Carcinogenicity	Category 2
<b>Environmental hazards</b>	Not classified.	

### Label elements



**Signal word** Warning

**Hazard statement**  
H351 Suspected of causing cancer.

### Precautionary statement

#### Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

#### Response

- P308 + P313 IF exposed or concerned: Get medical advice/attention.

#### Storage

- P405 Store locked up.

#### Disposal

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

**Physical and chemical hazards** The product is stable and non-reactive under normal conditions of use, storage and transport. No unusual fire or explosion hazards noted.

<b>Health hazards</b>	Prolonged inhalation may be harmful. Expected to be a low ingestion hazard. Direct contact with eyes may cause temporary irritation.
<b>Environmental hazards</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Supplemental information</b>	99.99% of the mixture consists of component(s) of unknown acute oral toxicity. 99.99% of the mixture consists of component(s) of unknown acute dermal toxicity. 99.99% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 99.99% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

### SECTION 3 Composition/information on ingredients

<b>Substance/mixture</b>	Mixture		
<b>Chemical name</b>	<b>Concentration (%)</b>	<b>CAS Number</b>	
Nickel	99 - 100	7440-02-0	
Sulfur	0.2 - 0.01	7704-34-9	

### SECTION 4 First aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms and health effects</b>	Direct contact with eyes may cause temporary irritation.
<b>Personal protection for first-aid responders</b>	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### SECTION 5 Fire-fighting measures

<b>Extinguishing media</b>	Dry sand.
<b>Extinguishing media to avoid</b>	Do not use water jet as an extinguisher, as this will spread the fire. Carbon dioxide (CO <sub>2</sub> ).
<b>Specific hazards</b>	During fire, gases hazardous to health may be formed.
<b>Special fire fighting procedures</b>	Move containers from fire area if you can do so without risk.
<b>Protection of fire-fighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

### SECTION 6 Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

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

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

**Clean-up methods and materials and containment measures** Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

**Prevention of secondary hazards** Not available.

## SECTION 7 Handling and storage

<b>Handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Storage</b>	Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## SECTION 8 Exposure controls/personal protection

### Exposure limits

China OELs. Occupational Exposure Limits for Hazardous Agents in the Workplace, Chemical Hazardous Agents (GBZ 2.1-2007)

Components	Type	Value
Nickel (CAS 7440-02-0)	PC-TWA	1 mg/m3

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Monitoring methods</b>	Follow standard monitoring procedures.
<b>Engineering measures</b>	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.
<b>Personal protective equipment</b>	
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Eye protection</b>	If contact is likely, safety glasses with side shields are recommended.
<b>Skin and body protection</b>	Use of an impervious apron is recommended.
<b>Hygiene measures</b>	Observe any medical surveillance requirements. 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.

## SECTION 9 Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Not available.
<b>Odor</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	2651 °F (1455 °C) estimated
<b>Boiling point, initial boiling point, and boiling range</b>	4946 °F (2730 °C) estimated
<b>Flash point</b>	Not available.
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	0.00001 hPa estimated
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Density</b>	8.91 g/cm3 estimated
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.

<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Other data</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Specific gravity</b>	8.91 estimated

## SECTION 10 Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong acids.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11 Toxicological information

<b>Acute toxicity</b>	Not known.
<b>Routes of exposure</b>	Inhalation.
<b>Symptoms</b>	Direct contact with eyes may cause temporary irritation.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitizer</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Suspected of causing cancer.
<b>China OELs for hazardous agents in the workplace: Carcinogen Category</b>	
NICKEL METAL (CAS 7440-02-0)	Possible human carcinogen.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Nickel (CAS 7440-02-0)	2B Possibly carcinogenic to humans.
<b>Toxic to reproduction</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity following single exposure</b>	Not classified.
<b>Specific target organ toxicity following repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

**SECTION 12 Ecological information****Ecotoxicological data**

Components	Species	Test Results
Sulfur (CAS 7704-34-9)		
<b>Aquatic</b>		
Fish	LC50	Western mosquitofish ( <i>Gambusia affinis</i> ) > 10000 mg/l, 96 hours
<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.	
<b>Bioaccumulation</b>	No data available.	
<b>Mobility in soil</b>	No data available for this product.	
<b>Other hazardous effects</b>	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**

<b>Residual waste</b>	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).
<b>Contaminated packaging</b>	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.
<b>Local disposal regulations</b>	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.

**SECTION 14 Transport information****CNDG**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**SECTION 15 Regulatory information****Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Not regulated.

**Regulations on the Control over Safety of Dangerous Chemicals****Catalog of Hazardous Chemicals**

SULFUR (CAS 7704-34-9)

**Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used****Directory of Highly Toxic Substances**

Nickel (CAS 7440-02-0)

**Provision on the Environmental Administration of New Chemical Substances****China Inventory of Existing Chemical Substances**

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**Other regulations**

This safety data sheet conforms to the following laws, regulations and standards:  
Measures for the Safe Use of Chemicals in Workplaces  
General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009 )  
Regulations on Labor Protection in Workplaces Where Toxic Products Are Used  
Packing Symbol of Dangerous Goods(GB190-2009)  
Regulations on the Control over Safety of Dangerous Chemicals  
Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)  
Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)

**China. National Catalogue of Hazardous Wastes**

Nickel (CAS 7440-02-0)

Sulfur (CAS 7704-34-9)

**International regulations****Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Montreal Protocol**

Not applicable.

**Kyoto protocol**

Not applicable.

**Basel Convention**

Not applicable.

**SECTION 16 Other information****Bibliography**

EPA: AQUIRE database  
GB6944-2012: Classification and Code of Dangerous Goods.  
GB12268-2012: List of Dangerous Goods.  
NLM: Hazardous Substances Data Base  
US. IARC Monographs on Occupational Exposures to Chemical Agents

Materion Advanced Materials Group cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.