

SAFETY DATA SHEET
(REACH Regulation (EC) N° 1907/2006 - N° 453/2010)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

- Product name: NOVAMET® 15% SILVER COATED NICKEL POWDER.

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

- Conductive filler in elastomers, adhesives and inks.

1.3. Details of the supplier of the safety data sheet

- Registered company name: Novamet Specialty Products Corporation.
- Address: 681 Lawlins Road, Wyckoff, NJ 07481, United States.
- Telephone: +1-201 891 7976.
- Email : wnpu@compuserve.com
- Web : www.incosp.com

1.4. Emergency telephone number:

- English EU: **+44 (0) 870 600 6266** (National Poisons Information Service)
- English USA: **+1-800-424-9300** (Chemtrec)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

- Skin sensitisation, Category 1.
- Carcinogenicity, Category 2.
- Specific target organ toxicity (repeated exposure), Category 1.
- Hazardous to the aquatic environment - Chronic hazard, Category 3.
- This substance does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.

- Possibility of skin sensitisation. The substance may also irritate the skin and prolonged contact may aggravate this effect.
- Possibility of category three carcinogenic effects.
- Possibility of serious toxic effects in the event of repeated or prolonged exposure and by inhalation.
- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- This substance does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

- Hazard pictograms:



GHS07

GHS08

- Signal Word:
DANGER

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Revision: 1 (12.04.2011)

Version: 1 (12.04.2011)

- Product identifiers:

028-002-01-4	NICKEL POWDER [PARTICLE DIAMETER < 1 MM]
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- Hazard statements:

H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer .
H372	Causes damage to organs through prolonged or repeated exposure (if inhaled).
H412	Harmful to aquatic life with long lasting effects.

- 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.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.

- Precautionary statements - Response:

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.

- Precautionary statements - Storage:

- Precautionary statements - Disposal:

P501	Dispose of contents/container at a disposal facility in accordance with local regulations.
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In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.

- Hazard symbols:

**Toxic**

- Contains:

028-002-01-4	NICKEL POWDER [PARTICLE DIAMETER < 1 MM]
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- Risk phrase:

R 52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 43	May cause sensitisation by skin contact.
R 48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R 40	Limited evidence of a carcinogenic effect.

- Safety phrase:

S 36/37	Wear suitable protective clothing and gloves.
S 45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 39	Wear eye/face protection.
S 61	Avoid release to the environment. Refer to special instructions/Safety data sheets.
S (2)	Keep out of reach of children.

2.3. Other hazards

- In use, may form flammable/explosive dust-air mixture.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1. Substances****Composition :**

Identification	Name	Classification	%
INDEX: 028-002-01-4 CAS: 7440-02-0 EC: 231-111-4	NICKEL POWDER [PARTICLE DIAMETER < 1 MM]	GHS08, GHS07, Dgr T H:351-372-317-412 R: 40.C3-43-48/23-52/53	80-90 %
CAS: 7440-22-4 EC: 231-131-3	SILVER		10-20 %

3.2. Mixtures

- No substances fulfil the criteria set forth in annexe II section A of the REACH regulation (EC) n° 1907/2006.

SECTION 4: FIRST AID MEASURES

- As a general rule, in case of doubt or if symptoms persist, always call a doctor.
- NEVER induce swallowing in an unconscious person.

4.1. Description of first aid measures**In the event of exposure by inhalation:**

- In the event of inhalation, move patient to the open air. Keep warm and at rest.
- If breathing is irregular or has stopped, proceed with artificial respiration and seek medical attention.

In the event of splashes or contact with eyes:

- Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open.
- If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin:

- Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.
- Watch out for any remaining product between skin and clothing, watches, shoes, etc.
- In the event of an allergic reaction, seek medical attention.
- If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital

In the event of swallowing:

- Do not give the patient anything orally.
- In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.
- Seek medical attention immediately, showing the label.

4.2. Most important symptoms and effects, both acute and delayed

- No data available.

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

- No data available.

SECTION 5: FIREFIGHTING MEASURES

- Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

- In the event of a fire, use:
 - sprayed water or water mist
 - foam
 - powder
 - carbon dioxide (CO₂)

5.2. Special hazards arising from the substance or mixture

- A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.
- Do not breathe in smoke.
- In the event of a fire, the following may be formed:
 - nickel/nickel oxides

5.3. Advice for firefighters

- Due to the toxicity of the gas emitted on thermal decomposition of the products, fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

- Consult the safety measures listed under headings 7 and 8.

For non fire-fighters

- Avoid any contact with the skin and eyes.

For fire-fighters

- Fire-fighters will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

- Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

- Retrieve the product by mechanical means (sweeping/vacuuming): do not generate dust.

6.4. Reference to other sections

- No data available.

SECTION 7: HANDLING AND STORAGE

- Requirements relating to storage premises apply to all facilities where the substance is handled.
- Individuals with a history of skin sensitisation should not, under any circumstance, handle this substance.

7.1. Precautions for safe handling

- Always wash hands after handling.
- Remove and wash contaminated clothing before re-using.

Fire prevention:

- Prevent access by unauthorised personnel.

Recommended equipment and procedures:

- For personal protection, see section 8.
- Observe precautions stated on label and also industrial safety regulations
- Do not breathe in dust.
- Avoid exposure - obtain special instructions before use.

Prohibited equipment and procedures:

- No smoking, eating or drinking in areas where the substance is used.

7.2. Conditions for safe storage, including any incompatibilities**Packaging**

- Always keep in packaging made of an identical material to the original

7.3. Specific end use(s)

- No data available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****Occupational exposure limits:**

- - European Union (2009/161/EU, 2006/15/EC, 2000/39/EC, 98/24/EC)

CAS	VME-mg/m3:	VME-ppm:	VLE-mg/m3:	VLE-ppm:	Notes:
7440-22-4	0.1	-	-	-	-

- - ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010):

CAS	TWA:	STEL:	Ceiling:	Definition:	Criteria:
7440-02-0	1.5 mg/m3	-	-	-	I
7440-22-4	0.1 mg/m3	-	-	-	-

- - Germany - AGW (BAuA - TRGS 900, 21/06/2010):

CAS	VME:	VME:	Excess	Notes
7440-22-4	-	0,1 mg/m3 E	8(II)	DFG, EU

- - France (INRS - ED984:2007 and French Order of 30/06/2004):

CAS	VME-ppm:	VME-mg/m3:	VLE-ppm:	VLE-mg/m3:	Notes:	TMP No.:
7440-02-0	-	1	-	-	C3	-
7440-22-4	-	0.1	-	-	-	-

- - Switzerland (SUVA 2009):

CAS	VME-mg/m3:	VME-ppm:	VLE-mg/m3:	VLE-ppm:	Temps:	RSB:
7440-02-0	0,05 i	-	-	-	-	SB
7440-22-4	0,01 i	-	0,02 i	-	4x15	-

8.2. Exposure controls**Personal protection measures, such as personal protective equipment**

- Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE):



- Use personal protective equipment that is clean and has been properly maintained.
- Store personal protective equipment in a clean place, away from the work area.
- Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

- Avoid contact with eyes.
- Before handling powders or dust emission, wear mask goggles in accordance with standard EN166.

- Hand protection

- Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.
- Gloves must be selected according to the application and duration of use at the workstation.
- Protective gloves need to be selected according to their suitability for the workstation in question: other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.
- Recommended properties:
 - Impervious gloves in accordance with standard EN374

- Body protection

- Avoid skin contact.
- Wear suitable protective clothing
- These clothes shall be chosen to ensure there is no inflammation or irritation of the skin at the neck and wrist by contact with the powder
- Suitable type of protective clothing:
- Wear protective clothing against solid chemicals and particles suspended in the air (type 5) in accordance with standard EN13982-1 to prevent skin contact.
- Work clothing worn by personnel shall be laundered regularly.
- After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

- Avoid breathing dust.
- Type of FFP mask:
- Wear a disposable half-mask dust filter in accordance with standard EN149.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

(a) Appearance:	Solid
(b) Odour:	None
(c) Odour threshold:	Impossible to measure or value not relevant.
(d) pH:	Impossible to measure or value not relevant.
(e) Melting point/freezing point:	> 1400°C
(f) Initial boiling point and boiling range:	> 2700°C
(g) Flash point:	Impossible to measure or value not relevant.
(h) Evaporation rate:	Impossible to measure or value not relevant.
(i) Flammability (solid, gas):	Not flammable.
(j) Upper/lower flammability or explosive limits:	Impossible to measure or value not relevant.
(k) Vapour pressure:	Impossible to measure or value not relevant.
(l) Vapour density:	Impossible to measure or value not relevant.
(m) Relative density:	> 1
(n) Solubility(ies):	Insoluble in water
(o) Partition coefficient; n-octanol/water:	Impossible to measure or value not relevant.
(p) Auto-ignition temperature:	Impossible to measure or value not relevant.
(q) Decomposition temperature:	Impossible to measure or value not relevant.
(r) Viscosity:	Impossible to measure or value not relevant.
(s) Explosive properties:	Not explosive.
(t) Oxidising properties:	Not an oxidising agent.

9.2. Other information

- No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

- No data available.

10.2. Chemical stability

- This substance is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

- No data available.

10.4. Conditions to avoid

- Avoid:
 - formation of dusts
- Dusts can form an explosive mixture with air.

10.5. Incompatible materials

- Keep away from:
 - acids
- Oxidising agents
 - Powdered metals (aluminium, magnesium, potassium, sodium and zinc)
 - nitrogen compounds
 - fluorine
 - hydrogen
 - oxygen
 - methanol

10.6. Hazardous decomposition products

- No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

(a) acute toxicity.	Oral: Non toxic - LD50 ORAL RAT >9000 mg/kg.
(b) skin corrosion/irritation.	May cause an allergic reaction by skin contact. Repeated or prolonged contact with the substance may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.
(c) serious eye damage/irritation.	No data available.
(d) respiratory or skin sensitisation.	No data available.
(e) germ cell mutagenicity.	No data available.
(f) carcinogenicity.	Suspected human carcinogen.
(g) reproductive toxicity.	No data available.
(h) STOT-single exposure.	No data available.
(i) STOT-repeated exposure.	Causes severe damage to organs in the event of repeated or prolonged exposure.
(j) aspiration hazard.	No data available.

SECTION 12: ECOLOGICAL INFORMATION

- Harmful to aquatic life with long lasting effects.
- The product must not be allowed to run into drains or waterways.

12.1. Toxicity

Substances

- No aquatic toxicity data available for the substances.

12.2. Persistence and degradability

- No data available.

12.3. Bioaccumulative potential

- No data available.

12.4. Mobility in soil

- No data available.

12.5. Results of PBT and vPvB assessment

- No data available.

12.6. Other adverse effects

- No data available.

German regulations concerning the classification of hazards for water (WGK):

- WGK 2 (VwVwS vom 27/07/2005, KBws): Hazardous for water.
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SECTION 13: DISPOSAL CONSIDERATIONS

- Proper waste management of the substance and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

- Do not pour into drains or waterways.

Waste:

- Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.
- Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.
- Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging:

- Empty container completely. Keep label(s) on container.
 - Give to a certified disposal contractor.
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SECTION 14: TRANSPORT INFORMATION

- Exempt from transport classification and labelling.
 - Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2009 - IMDG 2008 - ICAO/IATA 2011).
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SECTION 15: REGULATORY INFORMATION

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

- Particular provisions:

- No data available.

- German regulations concerning the classification of hazards for water (WGK):

- Germany: WGK 2 (VwVwS vom 27/07/2005, KBws)

15.2. Chemical safety assessment

- No data available.

SECTION 16: OTHER INFORMATION

- Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.
- It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.
- The information in this safety data sheet must be regarded as a description of the safety requirements relating to the substance and not as a guarantee of the properties thereof.

Title for H, EUH and R indications mentioned in section 3:

H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer .
H372	Causes damage to organs through prolonged or repeated exposure .
H412	Harmful to aquatic life with long lasting effects.
R 40.C3	Limited evidence of a carcinogenic effect.
R 43	May cause sensitisation by skin contact.
R 48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R 52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Abbreviations:

- ADR: European agreement concerning the international carriage of dangerous goods by Road.
- IMDG: International Maritime Dangerous Goods.
- IATA: International Air Transport Association.
- ICAO: International Civil Aviation Organisation
- RID: Regulations concerning the International carriage of Dangerous goods by rail.
- WGK: Wassergefährdungsklasse (Water Hazard Class).