

SAFETY DATA SHEET

MD-Diamond Pad 120, MD-Diamond Pad 400, MD-Diamond Pad 800



Section 1. Identification

GHS product identifier : MD-Diamond Pad 120, MD-Diamond Pad 400, MD-Diamond Pad 800
Cat. No. : 40800243, 40800244, 40800245, 40800247, 40800248, 40800249, 40800251, 40800252, 40800253
Container size : 0.25 - 0.5 kg
Other means of identification : Not available.
Product type : Solid.

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

Product use : For wet grinding of materialographic specimens.
Area of application : Professional applications.

Uses advised against	Reason
Dry grinding	-
Grinding of ductile materials or use outside of Struers recommendations	-

Supplier's details : Struers Inc.
24766 Detroit Rd. Westlake
Cleveland, OH 44145
United States
Telephone: +1 (440) 871 0071

e-mail address of person responsible for this SDS : sdsquestions@struers.dk

Emergency telephone number (with hours of operation) : National Capital Poison Center: 1-800-222-1222
Infotrac: 1-800-535-5053
Struers US:
1-440-871-0071

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : H317 SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 - May cause an allergic skin reaction.

Date of issue/Date of revision : 03/20/2026 **Date of previous issue** : 05/16/2025 **Version** : 2 1/14



Section 2. Hazards identification

Precautionary statements

Prevention	: P280 - Wear protective gloves. P261 - Avoid breathing dust. P272 - Contaminated work clothing must not be allowed out of the workplace.
Response	: P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P362 + P364 - Take off contaminated clothing and wash it before reuse.
Storage	: Not applicable.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	: None known.
Hazards identified when used	: No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

Ingredient name	Synonyms	%	Identifiers
Nickel	-	≥15 - ≤40	CAS: 7440-02-0

Trials conducted under conditions applicable to the 'intended use' does not reveal other components relevant for worker exposure.

As the grinding surface is diamonds, the underlying nickel binder is not exposed to grinding. Hence, no release of Nickel dust and thereby no inhalation risk of Nickel

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: The information provided is relevant for operations generating dust and fumes. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation	: The information provided is relevant for operations generating dust and fumes. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	: The information provided is relevant for operations generating dust and fumes. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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Section 4. First aid measures

Ingestion : The information provided is relevant for operations generating dust and fumes. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
 irritation
 redness
Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments : No specific treatment.
Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : No specific fire or explosion hazard.
Hazardous thermal decomposition products : Not applicable.



Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Dispose of via a licensed waste disposal contractor.
- Large spill** : Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If possible, ensure exhaustion when repacking.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container, protected from direct sunlight.



Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
 nickel Particulates not otherwise regulated	ACGIH TLV (United States, 1/2025) A5. TWA 8 hours: 1.5 mg/m³. Form: Inhalable fraction. NIOSH REL (United States, 10/2020) [nickel metal and other compounds] NIA. TWA 10 hours: 0.015 mg/m³ (as Ni). OSHA PEL (United States, 5/2018) [Nickel, metal and insoluble compounds] TWA 8 hours: 1 mg/m³ (as Ni). CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 0.5 mg/m³ (as Ni). [Air contaminant] ACGIH TLV (United States, 1/2025) [particles not otherwise specified] Notes: These recommended TWAs are supplied as a guideline rather than a TLV®. The recommendations apply to particles that 1) do not have an applicable TLV®; 2) are insoluble or poorly soluble in water; 3) have low toxicity. For additional information, refer to ACGIH TLVs® and BEIs® Appendix B. TWA 8 hours: 3 mg/m³. Form: respirable particle. TWA 8 hours: 10 mg/m³. Form: inhalable particle. OSHA PEL (United States, 5/2018) [Particulates not otherwise regulated] TWA 8 hours: 15 mg/m³. Form: Total dust. TWA 8 hours: 5 mg/m³. Form: Respirable fraction. CAL OSHA PEL (United States, 1/2025) [particulates not otherwise regulated] TWA 8 hours: 5 mg/m³. Form: respirable fraction. TWA 8 hours: 10 mg/m³. Form: total dust.

Biological exposure indices

Ingredient name	Exposure indices
 nickel	ACGIH BEI (United States, 1/2025) [nickel and inorganic compounds] BEI: 30 µg/l, nickel [in urine after exposure to soluble compounds]. Sampling time: post-shift at end of workweek. BEI: 5 µg/l, nickel [in urine after exposure to elemental nickel and poorly soluble compounds]. Sampling time: post-shift at end of workweek.

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.



Section 8. Exposure controls/personal protection

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Solid. [Massive solid.]
- Color** : Not available.
- Odor** : Not applicable.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not applicable.
- Boiling point or initial boiling point and boiling range** : Not applicable.
- Flash point** : Not applicable.
- Evaporation rate** : Not applicable.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not applicable.
- Vapor pressure** : Not applicable.
- Relative vapor density** : Not applicable.



Section 9. Physical and chemical properties

Relative density : Not applicable.

Density : Not applicable.

Solubility(ies) :

Media	Result
water	Insoluble

Miscible with water : No.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Dynamic (room temperature): Not applicable.
Kinematic (room temperature): Not applicable.
Kinematic (40°C (104°F)): Not applicable.

Flow time (ISO 2431) : Not available.

Particle characteristics

Median particle size : Not applicable.

Additional information

Physical/chemical properties comments : No additional information.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
For intended use, there is not expected to be hazardous decomposition products or dust.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

Nickel

Result

Rat - Oral - LD50
>2000 mg/kg



Section 11. Toxicological information

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Skin corrosion/irritation

Conclusion/Summary [Product] : Non-irritating to the skin.

Serious eye damage/eye irritation

Conclusion/Summary [Product] : Non-irritating to the eyes.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Sensitizer to skin

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
nickel	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name **Result**



Section 11. Toxicological information

nickel

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
 irritation
 redness
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates



Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
nickel	2500	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name

nickel

Result

Chronic - NOEC - Marine water
 Algae - Dinoflagellate - *Glenodinium halli*
 100 mg/l [72 hours]

Effect: Population

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/Water partition coefficient

: Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-			-	-
Transport hazard class(es)	-			-	-
Packing group	-			-	-
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification : **Reportable quantity** 400 lbs / 181.6 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are active or exempted.
Clean Water Act (CWA) 307: nickel

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients



Section 15. Regulatory information

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SKIN SENSITIZATION - Category 1

Composition/information on ingredients

Name	%	Classification
 Nickel	≥15 - ≤40	SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	 Nickel	7440-02-0	≥15 - ≤40
Supplier notification	 Nickel	7440-02-0	≥15 - ≤40

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: NICKEL
New York : The following components are listed: Nickel
New Jersey : The following components are listed: NICKEL
Pennsylvania : The following components are listed: NICKEL CATALYST

California Prop. 65

 **WARNING:** This product can expose you to Nickel, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Nickel	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.



Section 16. Other information

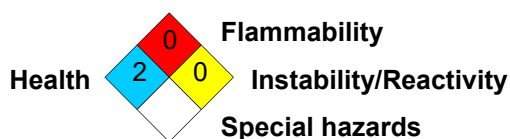
Hazardous Material Information System (U.S.A.)

Health	/ 2
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Classification	Justification
SKIN SENSITIZATION - Category 1	Calculation method

History

Date of issue/Date of revision	: 03/20/2026
Date of previous issue	: 05/16/2025
Version	: 2
Prepared by	: Sphera Solutions
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group TDG = Transportation of Dangerous Goods UN = United Nations
References	: HCS (U.S.A.)- Hazard Communication Standard International transport regulations

Indicates information that has changed from previously issued version.

Notice to reader



Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

