



## SAFETY DATA SHEET

### Studio 2.0 IN625 Rods

According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

#### 1. Identification

##### Product identifier

Product name Studio 2.0 IN625 Rods

Product number BMD-MP2005

##### Recommended use and restrictions on use

Recommended use Product is used as part of direct metal 3D printing.

Restriction on use Use only for intended applications.

##### Details of the supplier of the safety data sheet

Manufacturer Desktop Metal  
63 3rd Ave.  
Burlington, MA 01803  
United States of America  
978.569.7851  
SDSInfo@desktopmetal.com

##### Emergency telephone number

Emergency telephone Emergency CONTACT (24-Hour-Number): Infotrac ID 106352: (USA domestic) 1 800 535 5053 or (International) 001 352 323 3500 or (GBK GmbH) ID 93315: +49 (0)6132-84463 (Germany)

#### 2. Hazard identification

##### Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT RE 1 - H372

Environmental hazards Aquatic Acute 3 - H402

##### Label elements

##### Hazard pictograms



Signal word Danger

Hazard statements  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H402 Harmful to aquatic life.



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According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

<b>Precautionary statements</b>	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe dust.</p> <p>P261 Avoid breathing dust.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P284 In case of inadequate ventilation wear respiratory protection.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P314 Get medical advice/ attention if you feel unwell.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
<b>Contains</b>	Nickel, Cobalt, Copper

### Other hazards

This product does not contain any substances classified as PBT or vPvB.

## 3. Composition/information on ingredients

### Mixtures

Nickel CAS number: 7440-02-0	45-70%
Chromium CAS number: 7440-47-3	10-30%
Molybdenum Powder CAS number: 7439-98-7	7-13%
Cobalt CAS number: 7440-48-4	0.1-1%
Manganese CAS number: 7439-96-5	0.1-1%
Copper CAS number: 7440-50-8	0.1-1%



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Aluminum powder	0.1-1%
CAS number: 7429-90-5	

**Composition comments** Components listed, if any, are present above their levels of disclosure. The product is not believed to present a hazard due to its physical nature.

**Ingredient notes** The exact percentage/concentration is withheld as a trade secret in accordance with the Regulations amending the Hazardous Products Regulations.

### 4. First-aid measures

#### Description of first aid measures

<b>General information</b>	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. Rinse nose and mouth with water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms are severe or persist. In the event of any sensitization symptoms developing, ensure further exposure is avoided.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.
<b>Skin contact</b>	It is important to remove the substance from the skin immediately. In the event of any sensitization symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognised skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

#### Most important symptoms and effects, both acute and delayed

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	May cause sensitization or allergic reactions in sensitive individuals. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
<b>Ingestion</b>	May cause sensitization or allergic reactions in sensitive individuals. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
<b>Skin contact</b>	May cause skin sensitization or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
<b>Eye contact</b>	May be slightly irritating to eyes.

#### Indication of any immediate medical attention and special treatment needed

**Notes for the doctor** Treat symptomatically. May cause sensitization or allergic reactions in sensitive individuals.

### 5. Fire-fighting measures

#### Extinguishing media



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According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

<b>Suitable extinguishing media</b>	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the hazardous product</b>	
<b>Specific hazards</b>	None known.
<b>Hazardous combustion products</b>	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.
<b>Advice for firefighters</b>	
<b>Protective actions during firefighting</b>	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing that provides a basic level of protection during chemical incidents is defined by the Canada Occupational Health and Safety Regulations, by provincial guidelines on occupational health and safety or by NFPA standards if applicable.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of dust. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.
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### Environmental precautions

<b>Environmental precautions</b>	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.
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### Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.
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### Reference to other sections

<b>Reference to other sections</b>	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.
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## 7. Handling and storage

### Precautions for safe handling

<b>Usage precautions</b>	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Suspected of causing cancer. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
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According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

<b>Advice on general occupational hygiene</b>	Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.
<b>Conditions for safe storage, including any incompatibilities</b>	
<b>Storage precautions</b>	Store away from incompatible materials (see Section 10). Store locked up. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.
<b>Storage class</b>	Chemical storage.
<b>Specific end use(s)</b>	
<b>Specific end use(s)</b>	The identified uses for this product are detailed in Section 1.

## 8. Exposure controls/Personal protection

### Control parameters

Occupational exposure limits

#### Nickel

Long-term exposure limit (8-hour TWA): ACGIH 1.5 mg/m<sup>3</sup> inhalable fraction  
A5

#### Chromium

Long-term exposure limit (8-hour TWA): ACGIH 0.05 mg/m<sup>3</sup>  
A4

#### Molybdenum Powder

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m<sup>3</sup> inhalable fraction  
as Mo  
Long-term exposure limit (8-hour TWA): ACGIH 3 mg/m<sup>3</sup> respirable fraction  
as Mo

#### Cobalt

Long-term exposure limit (8-hour TWA): ACGIH 0.02 mg/m<sup>3</sup>  
as Co  
A3

#### Manganese

Long-term exposure limit (8-hour TWA): ACGIH 0.02 mg/m<sup>3</sup> respirable fraction  
as Mn  
A4  
Long-term exposure limit (8-hour TWA): ACGIH 0.1 mg/m<sup>3</sup> inhalable fraction  
as Mn  
A4  
Long-term exposure limit (8-hour TWA): ACGIH 0.1 mg/m<sup>3</sup> fume, inhalable fraction  
as Mn  
A4  
Long-term exposure limit (8-hour TWA): ACGIH 0.02 mg/m<sup>3</sup> fume, respirable fraction  
as Mn  
A4

#### Copper



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According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

Long-term exposure limit (8-hour TWA): ACGIH 0.2 mg/m<sup>3</sup> fume  
as Cu

Long-term exposure limit (8-hour TWA): ACGIH 1 mg/m<sup>3</sup> dusts and mists  
as Cu

### Aluminum powder

Long-term exposure limit (8-hour TWA): ACGIH 1 mg/m<sup>3</sup> respirable fraction  
A4

ACGIH = American Conference of Governmental Industrial Hygienists.

A5 = Not Suspected as a Human Carcinogen.

A4 = Not Classifiable as a Human Carcinogen.

A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.

### Ingredient comments

Due to the physical nature of this product, exposure by this route is unlikely.

### Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

#### Eye/face protection

Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

#### Hand protection

It is recommended that chemical-resistant, impervious gloves are worn. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with the Canadian regulation on health and safety at work, SOR/86-304, Part XII (12.9), and any relevant provincial regulation relating to health and safety at work. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

#### Other skin and body protection

May cause skin sensitization or allergic reactions in sensitive individuals. Wear appropriate clothing to prevent repeated or prolonged skin contact.

#### Hygiene measures

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

#### Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Full face mask respirators with replaceable filter cartridges should comply with the Canadian regulation on health and safety at work, SOR/86-304, Part XII (12.7), and any relevant provincial regulation relating to health and safety at work. Half mask and quarter mask respirators with replaceable filter cartridges should comply with the Canadian regulation on health and safety at work, SOR/86-304, Part XII (12.7), and any relevant provincial regulation relating to health and safety at work. High-efficiency particulate filter. Particulate filters should comply with any relevant provincial regulation and/or provincial guidelines applicable to health and safety at work.



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According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

**Environmental exposure controls** Keep container tightly sealed when not in use. 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.

### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance	Metal or metallic solid.
Colour	Gray.
Odour	Not known.
Odour threshold	No information available.
pH	Not determined.
Melting point	No information available.
Initial boiling point and range	No information available.
Flash point	Not determined.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Bulk density	No information available.
Density	Not determined.
Solubility(ies)	Not determined.
Partition coefficient	No information available.
Auto-ignition temperature	Not determined.
Viscosity	Not determined.
Other information	No other information known.

### 10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.



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According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

<b>Materials to avoid</b>	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
<b>Hazardous decomposition products</b>	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

### 11. Toxicological information

#### Information on toxicological effects

Acute toxicity - oral

**Summary** Based on available data the classification criteria are not met.

Acute toxicity - dermal

**Summary** Based on available data the classification criteria are not met.

Acute toxicity - inhalation

**Summary** Based on available data the classification criteria are not met.

**ATE inhalation (dusts/mists mg/l)** 10.55

Skin corrosion/irritation

**Summary** Based on available data the classification criteria are not met.

Serious eye damage/irritation

**Summary** Based on available data the classification criteria are not met.

Respiratory sensitization

**Summary** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitization

**Summary** May cause an allergic skin reaction.

Germ cell mutagenicity

**Summary** Based on available data the classification criteria are not met.

Carcinogenicity

**Summary** Suspected of causing cancer.

**IARC carcinogenicity**

Contains a substance which has been shown to cause cancer in laboratory animals. IARC Group 2A  
Probably carcinogenic to humans.

Reproductive toxicity

**Summary** Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

**Summary** Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

**Summary** Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

**Summary** Not relevant. Solid.





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According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

<b>General information</b>	May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	May cause sensitization or allergic reactions in sensitive individuals.
<b>Ingestion</b>	May cause sensitization or allergic reactions in sensitive individuals.
<b>Skin contact</b>	May cause skin sensitization or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.
<b>Eye contact</b>	May be slightly irritating to eyes.
<b>Route of exposure</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target organs</b>	No specific target organs known.
<b>Medical considerations</b>	Skin disorders and allergies.

## 12. Ecological information

<b>Acute aquatic toxicity</b>	
<b>Summary</b>	Based on available data the classification criteria are not met.
<b>Chronic aquatic toxicity</b>	
<b>Summary</b>	Based on available data the classification criteria are not met.
<b>Persistence and degradability</b>	
<b>Persistence and degradability</b>	The degradability of the product is not known.
<b>Bioaccumulative potential</b>	
<b>Bioaccumulative potential</b>	No data available on bioaccumulation.
<b>Partition coefficient</b>	No information available.
<b>Mobility in soil</b>	
<b>Mobility</b>	No data available.
<b>Other adverse effects</b>	
<b>Other adverse effects</b>	None known.

## 13. Disposal considerations

### Waste treatment methods

<b>General information</b>	The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
<b>Disposal methods</b>	Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

## 14. Transport information



## Studio 2.0 IN625 Rods

According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

<b>General</b>	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, TDG).
<b>UN number</b>	
UN No. (International)	Not applicable.
UN No. (DOT)	Not applicable.
<b>UN proper shipping name</b>	
Proper shipping name (International)	Not applicable.
Proper shipping name (DOT)	Not applicable.
<b>Transport hazard class(es)</b>	
Transport Labels (International)	No transport warning sign required.
DOT transport label	
<b>Packing group</b>	
Packing group (International)	Not applicable.
DOT packing group	Not applicable.
<b>Environmental hazards</b>	
Environmentally hazardous substance/marine pollutant No.	
<b>Special precautions for user</b>	
Not applicable.	
DOT reportable quantity	Not applicable.
DOT TIH Zone	Not applicable.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

### 15. Regulatory information

<b>National regulations</b>	Hazardous Products Regulations - SOR/2015-17. Transportation of Dangerous Goods Regulations -SOR/2015-100.
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#### Inventories

##### Canada – DSL/NDSL

All the ingredients are listed or exempt.

### 16. Other information



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According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

<b>Classification abbreviations and acronyms</b>	Carc. = Carcinogenicity Resp. Sens. = Respiratory sensitisation Skin Sens. = Skin sensitisation STOT RE = Specific target organ toxicity-repeated exposure
<b>General information</b>	Only trained personnel should use this material.
<b>Revision comments</b>	NOTE: Lines within the margin indicate significant changes from the previous revision.
<b>Issued by</b>	Team DM - ExOne
<b>Reviewed by</b>	Desktop Metal - North America
<b>Revision date</b>	2022-07-26
<b>Revision</b>	6
<b>Supersedes date</b>	2022-07-18
<b>SDS number</b>	308
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H351 Suspected of causing cancer. H372 Causes damage to organs through prolonged or repeated exposure. H402 Harmful to aquatic life.
<b>Notes</b>	End of Safety Data Sheet

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.