



SAFETY DATA SHEET

IN625 Powder

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 IN625 Powder

Product number SHP-MP0010

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

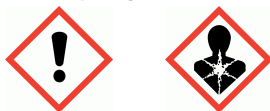
Physical hazards Not Classified

Health hazards Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 1B - H350 STOT SE 3 - H335 STOT RE 1 - H372

Environmental hazards Not Classified

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.
H350 May cause cancer.
H335 May cause respiratory irritation.
H372 Causes damage to organs through prolonged or repeated exposure.



IN625 Powder

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

Precautionary statements	<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>P271 Use only outdoors or in a well-ventilated area.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</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>P312 Call a POISON CENTRE/doctor if you feel unwell.</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>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
---------------------------------	---

Contains Nickel, Chromium, Cobalt

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	15-40%
Molybdenum Powder CAS number: 7439-98-7	7-13%
Cobalt CAS number: 7440-48-4	0.5-1.5%
Manganese CAS number: 7439-96-5	0.1-1%



IN625 Powder

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

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

Composition comments	Components listed, if any, are present above their levels of disclosure.
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

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	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. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place. In the event of any sensitization symptoms developing, ensure further exposure is avoided.
Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist.
Skin contact	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.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause sensitization or allergic reactions in sensitive individuals. A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing. Prolonged or repeated exposure may cause the following adverse effects: May cause cancer.
Ingestion	May cause sensitization or allergic reactions in sensitive individuals. Prolonged or repeated exposure may cause the following adverse effects: May cause cancer.
Skin contact	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: May cause cancer.
Eye contact	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



IN625 Powder

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

Suitable extinguishing media	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.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the hazardous product	
Specific hazards	None known.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.
Advice for firefighters	
Protective actions during firefighting	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.
Special protective equipment for firefighters	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

Personal precautions	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.
-----------------------------	---

Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.
----------------------------------	---

Methods and material for containment and cleaning up

Methods for cleaning up	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.
--------------------------------	---

Reference to other sections

Reference to other sections	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.
------------------------------------	---

7. Handling and storage

Precautions for safe handling



IN625 Powder

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

Usage precautions	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. May cause cancer. Avoid generation and spreading of dust. Avoid breathing dust. Avoid handling which leads to dust formation. 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.
Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.
Conditions for safe storage, including any incompatibilities	
Storage precautions	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.
Storage class	Chemical storage.
Specific end use(s)	
Specific end use(s)	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/m³ inhalable fraction
A5

Chromium

Long-term exposure limit (8-hour TWA): ACGIH 0.05 mg/m³
A4

Molybdenum Powder

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³ inhalable fraction
as Mo

Long-term exposure limit (8-hour TWA): ACGIH 3 mg/m³ respirable fraction
as Mo

Cobalt

Long-term exposure limit (8-hour TWA): ACGIH 0.02 mg/m³
as Co
A3

Manganese



IN625 Powder

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 0.02 mg/m³ respirable fraction as Mn

A4

Long-term exposure limit (8-hour TWA): ACGIH 0.1 mg/m³ inhalable fraction as Mn

A4

Long-term exposure limit (8-hour TWA): ACGIH 0.1 mg/m³ fume, inhalable fraction as Mn

A4

Long-term exposure limit (8-hour TWA): ACGIH 0.02 mg/m³ fume, respirable fraction as Mn

A4

Aluminum powder

Long-term exposure limit (8-hour TWA): ACGIH 1 mg/m³ 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.

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

Wear protective gloves. 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

Wear appropriate clothing to prevent any possibility of 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.



IN625 Powder

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

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. Gas and combination 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. 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.
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	Powder.
Colour	Gray.
Odour	Odourless.
Odour threshold	No information available.
pH	Not determined.
Melting point	No information available.
Initial boiling point and range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	The product is not flammable.
Upper/lower flammability or explosive limits	No information available.
Vapour pressure	No information available.
Bulk density	No information available.
Solubility(ies)	Slightly soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Viscosity	No information available.
Explosive properties	Not considered to be explosive.
Oxidising properties	Not determined.
Particle size	22 - 50 µm



IN625 Powder

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

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. When exposed to air, this product will absorb moisture.
Materials to avoid	Oxidizing agents. Hydrocarbons - halogenated. Strong acids.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Metal oxide(s).

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.
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	May cause 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	



IN625 Powder

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

Summary	May cause respiratory irritation.
Target organs	Respiratory system, lungs
Specific target organ toxicity - repeated exposure	
Summary	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	
Summary	Not relevant. Solid.
General information	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.
Inhalation	May cause sensitization or allergic reactions in sensitive individuals. A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
Ingestion	May cause sensitization or allergic reactions in sensitive individuals.
Skin contact	May cause skin sensitization or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.
Eye contact	May be slightly irritating to eyes.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	Respiratory system, lungs
Medical considerations	Skin disorders and allergies.

12. Ecological information

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.
Acute aquatic toxicity	
Summary	Based on available data the classification criteria are not met.
Chronic aquatic toxicity	
Summary	Based on available data the classification criteria are not met.
Persistence and degradability	
Persistence and degradability	The degradability of the product is not known.
Bioaccumulative potential	
Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	No information available.
Mobility in soil	
Mobility	No data available.
Other adverse effects	
Other adverse effects	None known.



IN625 Powder

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

13. Disposal considerations

Waste treatment methods

General information 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.

Disposal methods 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

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, TDG).
UN number	
UN No. (International)	Not applicable.
UN No. (DOT)	Not applicable.
UN proper shipping name	
Proper shipping name (International)	Not applicable.
Proper shipping name (DOT)	Not applicable.
Transport hazard class(es)	
Transport Labels (International)	No transport warning sign required.
DOT transport label	
Packing group	
Packing group (International)	Not applicable.
DOT packing group	Not applicable.
Environmental hazards	
Environmentally hazardous substance/marine pollutant No.	
Special precautions for user	
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.



IN625 Powder

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

15. Regulatory information

National regulations Hazardous Products Regulations - SOR/2015-17.
Transportation of Dangerous Goods Regulations -SOR/2015-100.

Inventories

Canada – DSL/NDSL

All the ingredients are listed or exempt.

16. Other information

Classification abbreviations and acronyms	Carc. = Carcinogenicity Resp. Sens. = Respiratory sensitisation Skin Sens. = Skin sensitisation STOT RE = Specific target organ toxicity-repeated exposure STOT SE = Specific target organ toxicity-single exposure
General information	Only trained personnel should use this material.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Issued by	Team DM - ExOne
Reviewed by	Desktop Metal - North America
Revision date	2022-10-03
Revision	2
Supersedes date	2022-05-27
SDS number	333
SDS status	Approved.
Hazard statements in full	H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H350 May cause cancer. H372 Causes damage to organs through prolonged or repeated exposure.
Notes	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.