

**LaserForm® Ni718 Type A**  
Revision Date: December 12<sup>th</sup>, 2016

---

**1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY/UNDERTAKING**

---

Chemical product name : LaserForm® Ni718 Type A  
Chemical product detail : Ni base super alloy

## Supplier information (Japan)

Company name : 3D Systems Japan K.K.  
Address : Ebisu Garden Place Tower 27F  
4-20-3, Ebisu, Shibuya-ku, Tokyo  
150-6027 Japan  
Phone number : 03-5798-2500  
E-mail address : moreinfo@3dsystems.com  
Emergency phone number : 03-4520-9637 – Chemtrec

## Manufacturer information

Company name (USA) : 3D Systems Inc.  
Address : 333 Three D Systems Circle  
Rock Hill, South Carolina U.S.A.  
Phone number : 803.326.3900  
800.793.3669 (Toll free in the U.S.A)  
E-mail address : moreinfo@3dsystems.com  
Emergency phone number : 800.424.9300 – Chemtrec

Recommended use and restriction on use : For use with ProX® DMP 320 direct metal printer

**LaserForm® Ni718 Type A**Revision Date: December 12<sup>th</sup>, 2016

---

**2. HAZARDS IDENTIFICATION**

---

## GHS Classification

## Physicochemical hazards

Explosives	: Not applicable
Flammable gases (including chemically unstable gases)	: Not applicable
Aerosols	: Not applicable
Oxidizing gases	: Not applicable
Gases under pressure	: Not applicable
Flammable liquids	: Not applicable
Flammable solids	: Not classified
Self-reactive chemicals	: Not applicable
Pyrophoric liquids	: Not applicable
Pyrophoric solids	: Not classified
Self-heating chemicals	: Not classified
Substances and mixtures which, in contact with water, emit flammable gases	: Not classified
Oxidizing liquids	: Not applicable
Oxidizing solids	: Not applicable
Organic peroxides	: Not applicable
Corrosive to metals	: Classification not possible

## Health hazards

Acute toxicity (oral)	: Classification not possible
Acute toxicity (dermal)	: Classification not possible
Acute toxicity (Inhalation: gas)	: Not applicable
Acute toxicity (Inhalation: vapour)	: Classification not possible
Acute toxicity (Inhalation: dust, mist)	: Classification not possible
Skin corrosion/irritation	: Classification not possible
Serious eye damage/eye irritation	: Category 2

**Safety Data Sheet**  
according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**  
Revision Date: December 12<sup>th</sup>, 2016

Respiratory/skin sensitization	:	Respiratory sensitization: Category 1 Skin sensitization: Category 1
Germ cell mutagenicity	:	Category 2
Carcinogenicity	:	Category 2
Reproductive toxicity	:	Category 1B
Target organ systemic toxicity (Single exposure)	:	Category 1 (respiratory system, kidney) Category 2 (systemic toxicity) Category 3 (respiratory tract irritation)
Target organ systemic toxicity (Repeated exposure)	:	Category 1 (respiratory system) Category 2 (cardiovascular system, thyroid, blood system)
Aspiration hazard	:	Classification not possible
Environmental hazard		
Hazard to the aquatic environment (acute)	:	Classification not possible
Hazard to the aquatic environment (long-term)	:	Category 4
Hazard to the ozone layer	:	Not applicable

GHS label elements

Pictogram or symbol :



Signal word : Danger

## Safety Data Sheet

according to Regulation JIS Z 7253 (2012) Japan

### LaserForm® Ni718 Type A

Revision Date: December 12<sup>th</sup>, 2016

Hazard statements	:	H317: May cause allergic skin reaction H319: Causes serious eye irritation H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled H335: May cause respiratory irritation H341: Suspected of causing genetic defects H351: Suspected of causing cancer H360: May damage fertility or the unborn child H370: Causes damage to respiratory system and kidney H371: May cause systemic toxicity H372: Causes damage to respiratory system through prolonged or repeated exposure H373: May cause damage to cardiovascular system, thyroid and blood system through prolonged or repeated exposure H413: May cause long lasting harmful effects to aquatic life
Precautionary statements		
Safety measures	:	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P260: Do not breathe dust/fume. P264: Wash hands thoroughly after handling. P270: When using do not eat, drink or smoke. P271: Use only outdoors or in a well-ventilated area. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection.

## Safety Data Sheet

according to Regulation JIS Z 7253 (2012) Japan

### LaserForm® Ni718 Type A

Revision Date: December 12<sup>th</sup>, 2016

	<hr/>	P284: [In case of inadequate ventilation,] wear respiratory protection.
Response	:	P302+P352: IF ON SKIN: Wash with plenty of soap and water. P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P311: IF exposed or concerned: Call a doctor/physician. P308+P313: IF exposed or concerned: Get medical advice/attention P312: Call a doctor/physician if you feel unwell. P314: Get medical advice/attention if you feel unwell. P337+P313: If eye irritation persists: Get medical advice/attention. P333+P313: If skin irritation or rash occurs: Get medical advice/attention. P342+P311: If experiencing respiratory symptoms: Call a doctor/physician. P362+P364: Take off contaminated clothing and wash it before reuse.
Storage	:	P403+P233: Keep in a cool, well-ventilated place. Keep container tightly closed. P405: Store locked up.
Disposal	:	P501: Dispose of contents/container in accordance with local/regional/national/international regulation.
Other precautions	:	None.

## Safety Data Sheet

according to Regulation JIS Z 7253 (2012) Japan

### LaserForm® Ni718 Type A

Revision Date: December 12<sup>th</sup>, 2016

---

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

---

Substance/mixture : Mixture (metallic alloy)  
Chemical/general name : Metallic alloy powder

Composition	CAS No.	Concentration or concentration range (%)	Reference number in gazetted list of Japan
Nickel	7440-02-0	50-55 (53) *	Not applicable
Chromium	7440-47-3	17-21 (19) *	Not applicable
Molybdenum	7439-98-7	13-24	Not applicable
Iron	7439-89-6	4.5-5.5	Not applicable
Niobium	7440-03-1	2.5-3.5 (3.0) *	Not applicable
Cobalt	7440-48-4	≤ 1 (0.80) *	Not applicable
Manganese	7439-96-5	≤ 0.35	Not applicable

\* : Concentrations in the parenthesis are typical values.

---

### 4. FIRST AID MEASURES

---

If inhaled : Move affected person to fresh air, rest and keep warm. In severe cases, if exposure has been great, or if respiratory irritation occurs, obtain medical attention.

If on skin : Wash off thoroughly with soap and water. If rash occurs, get medical attention/advise.

If in eyes : Irrigate gently but thoroughly, including under the eyelids, with water for at least 10 to 20 minutes. Obtain medical attention if irritation persists.

If ingested : Wash out mouth thoroughly with water. If symptom develops, get medical attention/advise.

Most important symptoms and effects, both acute and delayed :  
If inhaled: Symptom like asthma  
If on skin: Rash may develop  
If in eyes: Mechanical irritation.  
If ingested: No information available

**Safety Data Sheet**  
according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**

Revision Date: December 12<sup>th</sup>, 2016

- Self-protection of the first aider : Put on appropriate protective equipment (see section 8).
- Indications of any immediate medical attention and special treatment needed : Treat symptomatically.

---

## **5. FIRE-FIGHTING MEASURES**

---

- Suitable extinguishing media : The product itself is not flammable. Adapt extinguishing measures to surroundings against surrounding fire.  
Use powder extinguisher for metal oxidation fire or sand to extinguish.
- Unsuitable extinguishing media : Do not use straight stream water including high volume water jets.
- Specific hazard arising from the chemical : Fire hazard is increased if dust is formed.  
Fight fire from the windward.
- Special protective equipment for fire-fighters : Wear breathing protection in the presence of dust.

---

## **6. ACCIDENTAL RELEASE MEASURES**

---

- Personal precautions, protective equipment and emergency procedures : Keep unnecessary personnel away. Wear appropriate protective equipment and clothing.
- Environmental precautions : Take precautions to ensure product does not contaminate ground or enter the sewer or drainage system.

**Safety Data Sheet**  
according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**

Revision Date: December 12<sup>th</sup>, 2016

- Methods, materials for containment and cleaning up : Wear appropriate protective equipment and antistatic clothing.  
Containment: No information available.  
For cleaning up small spillage: Use a vacuum cleaner with equipment fitted with HEPA filter or immersion filtration.
- For cleaning up large spillage: Solids should be carefully transferred to suitable salvage containers. Any residues should be treated as small spillages with a vacuum cleaner.
- Prevention of secondary disaster : Keep unnecessary personnel away.  
Prevent the formation of dust clouds.

---

## 7. HANDLING AND STORAGE

---

### Handling

- Engineering measures : Work using a suitable extraction/ventilation system.  
Prevent the formation of dust clouds.  
Use appropriate containment to avoid environmental hazard.
- Contact avoidance (Incompatible materials) : Avoid contact with oxidizing substances, strong acids and strong alkalis.
- Hygiene measures : Avoid contact with skin and eyes. Do not breathe dust. Do not blow dust off from clothing or skin with compressed air.  
Use good housekeeping and sanitation practices.  
Do not smoke nor eat food in work area.



**Safety Data Sheet**

according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**Revision Date: December 12<sup>th</sup>, 2016

Wash hands thoroughly after handling and before eating/drinking/smoking, using the lavatory and at the end of the day. Contaminated clothing should be removed and washed before re-use.

## Storage

- Safety storage condition : Store in a sealable container in dry conditions and keep the container closed when not in use.  
Containers should be stored under cover in a clean and dry environment.  
Store this product in accordance with related Acts/regulations.
- Safe materials for container : Keep in the container supplied, or suitable metal, plastic or polythene container.

---

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION EQUIPMENT**

---

## Exposure limit:

Substance	ISHL (Administrative level)	JSOH (Allowable exposure limit)	OSHA/PEL (US)	ACHIG/TLV (US)
Nickel	None	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>
Chromium	None	0.5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Niobium	None	None	None	None
Iron	None	None	None	None
Molybdenum	None	None	15 mg/m <sup>3</sup> *	10 mg/m <sup>3</sup> **
Cobalt	0.02 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup>
Manganese	0.2 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>

ISHL : Industrial Safety and Health Law, JSOH: The Japan Society for Occupational Health

\* : Insoluble substance, total dust, \*\* : Insoluble substance, inhalable dust

## **Safety Data Sheet**

according to Regulation JIS Z 7253 (2012) Japan

### **LaserForm® Ni718 Type A**

Revision Date: December 12<sup>th</sup>, 2016

- Facility measures : Ensure adequate ventilation to maintain exposures below occupational limits. Whenever possible the use of local exhaust explosion proof ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. It is recommended that eyewash stations and safety showers are installed close to the workstation location. If a dusty work falls within a “dusty work” stipulated in Ordinance on Prevention of Hazards Due to Dust, take prevention measures against exposure of dusts stipulated in the ordinance.
- Personal protection equipment
- Respiratory protection : If ventilation cannot effectively keep dust concentrations below exposure limits, an appropriate certified respiratory protection must be provided. Use a dust mask equipped with the national certificated: filter for liquid particles of RL2 (replacement type), filter for solid particles of RS2 (replacement type), filter for liquid particle of DL2 (disposable type) or filter for solid particle of DS2 (disposable type), or a more effective performance dust mask with a filter.
- Hand protection : Use impervious nitrile gloves.
- Eye protection : Wear safety or chemical goggles.
- Skin and body protection : Use long sleeved antistatic garments and closed, antistatic safety shoes.

**LaserForm® Ni718 Type A**Revision Date: December 12<sup>th</sup>, 2016

---

**9. PHYSICAL AND CHEMICAL PROPERTIES**

---

## Appearance

Physical state, appearance	: Powder
Color	: Silver/Gray
Odour	: Odourless
Odour threshold	: No data available
pH (20°C)	: Not applicable
Melting point (°C)	: 1354 to 1413
Boiling point, initial boiling point and boiling range (°C)	: No data available
Flash point (°C)	: No data available
Evaporation rate	: No data available
Combustibility (solid, gas)	: Incombustible
Ignition/Explosion limit, Lower limit, Upper limit	: No data available
Vapour pressure	: No data available
Vapour density	: No data available
Density (g/cm <sup>3</sup> )	: 8.19
Bulk density (kg/m <sup>3</sup> )	: No data available
Solubility	: No data available
n-Octanol/water partition coefficient	: Not applicable
Auto-ignition point (°C)	: No data available
Decomposition point	: No data available
Viscosity	: Not applicable
Oxidizing property	: No data available
Particle size	: 100% <1mm
Explanation for GHS classification	:
Flammable solids	: Product: Not classified (Incombustible)

**Safety Data Sheet**  
according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**

Revision Date: December 12<sup>th</sup>, 2016

Pyrophoric solids : Product: Not classified (Incombustible)  
Self-heating chemicals : Product: Not classified (Incombustible)  
Substances and mixtures : Product: Not classified  
which, in contact with water, Does not react with water to produce flammable  
emit flammable gases: gas (hydrogen gas).

---

## 10. STABILITY AND REACTIVITY

---

Chemical Stability : Stable under normal handling and recommended storage conditions.  
Reactivity : No data available  
Possibility of hazardous reactions : No data available  
Conditions to avoid : Prevent formation of dust clouds or accumulation of fines.  
Incompatible materials : Oxidizing agents, strong acids and strong bases.  
Hazardous decomposition products : No data available

---

## 11. TOXICOLOGICAL INFORMATION

---

Acute toxicity (oral) : 'Classification not possible' due to lack of data.  
Component information: Ingestion of iron may cause vomiting, diarrhea, pink urine, black stool, and liver damage. Iron compounds may also cause damage to the kidneys.  
Acute toxicity (dermal) : 'Classification not possible' due to lack of data.  
Acute toxicity (Inhalation) : 'Classification not possible' due to lack of data.  
Product as shipped does not present inhalation hazard; however subsequent operations may create dusts or fumes which could be inhaled.

**Safety Data Sheet**

according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**Revision Date: December 12<sup>th</sup>, 2016

- Skin corrosion/irritation : 'Classification not possible' due to lack of data.  
Component information: Molybdenum: Category 2.  
Dust and fume may irritate skin, caused by its physical effect.
- Serious eye damage/eye irritation : Product: 'Category 2' because it contains 17-21% of Chromium of Category 2B and 2.5-3.5% of Molybdenum of Category 2.  
Component information: Chromium: Category 2B; Molybdenum: Category 2.  
Dust and fume may irritate skin, caused by its physical effect.
- Respiratory/skin sensitization : Product: Respiratory sensitization: 'Category 1' because it contains 1% or more of components of Category 1.  
Skin sensitization: 'Category 1' because it contains 1% or more of components of Category 1.  
Component information: Nickel: Category 1 (Respiratory/skin sensitizers); Chromium: Category 1 (Respiratory/skin sensitizers); Cobalt: Category 1 (Respiratory/skin sensitizers).  
Chromium and Nickel is classified as Group 2 (respiratory track), Group 1 (skin) by The Japan Society for Occupational Health.  
Cobalt is classified as Group 1 (respiratory tract), Group 1 (skin) by The Japan Society for Occupational Health.
- Germ cell mutagenicity : Product: 'Category 2' because it contains 1 % or more of Chromium of Category 2.  
Component information: Chromium: Category 2.

## Safety Data Sheet

according to Regulation JIS Z 7253 (2012) Japan

### LaserForm® Ni718 Type A

Revision Date: December 12<sup>th</sup>, 2016

- Carcinogenicity : Product: 'Category 2' because it contains 1 % or more of components of Category 2.  
Component information: Nickel: Category 2;  
Cobalt: Category 2.  
Nickel compounds (metallurgy dust) are classified as Group 1 (the agents which are carcinogenic to humans) (The Japan Society for Occupational Health).  
Nickel and Nickel alloy are classified as Group 2B (Possibly carcinogenic to humans) (IARC).  
Nickel fine dust is classified as Group A (EPA) and metal Nickel is classified as Group R (Reasonably anticipated to be human carcinogen) (NTP).  
Nickel powder (diameter < 1 mm) is classified as Group 2 (Substances presumed to have carcinogenic potential for humans) (EU).  
Chromium metal is classified as Group 3 (Probably not carcinogenic to humans) (IARC).  
Cobalt and its compounds (except Tungsten carbide) is classified as Group 2B (the agents which are probably or possibly carcinogenic to humans) (those with less possibly carcinogenic to humans) (The Japan Society for Occupational Health).  
Cobalt metal (except Tungsten carbide) is classified as Group 2B (possibly carcinogenic to humans) (IARC).
- Reproductive toxicity : Product: 'Category 1B' because it contains 0.3 % or more of Manganese of Category 1B.  
Component information: Manganese: Category 1B.

**Safety Data Sheet**  
according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**  
Revision Date: December 12<sup>th</sup>, 2016

Manganese and Manganese compounds are classified as Group 2 (the agents which probably or possibly shows reproductive toxicity to humans) (The Japan Society for Occupational Health).

Chromium, Chromium compounds, Nickel and Nickel compounds are classified as Group 3 (the agents which are suspected reproductive toxicity to humans) (The Japan Society for Occupational Health).

Target organ systemic toxicity : Product: 'Category 1 (respiratory system, kidney), (Single exposure) Category 2 (systemic toxicity), Category 3 (respiratory tract irritation)' because it contains 10 % or more of Nickel of Category 1 (respiratory system, kidney), 10% or more of Chromium of Category 2 (systemic toxicity) and total of 20% or more of Chromium, Molybdenum and Cobalt of Category 3 (respiratory tract irritation).

Component information: Nickel: Category 1 (respiratory system, kidney); Chromium: Category 2 (systemic toxicity) and Category 3 (respiratory tract irritation); Molybdenum: Category 3 (respiratory tract irritation); Cobalt: Category 3 (respiratory tract irritation) (all of NITE classification).

Iron is irritating to the respiratory tract, iron compounds may cause pulmonary fibrosis if dusts are inhaled. Inhalation of large amounts may cause iron pneumoconiosis.

**Safety Data Sheet**  
according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**

Revision Date: December 12<sup>th</sup>, 2016

- Target organ systemic toxicity : Product: 'Category 1 (respiratory system),  
(Repeated exposure) Category 2 (cardiovascular system, thyroid, blood system)' because it contains 10 % or more of Nickel of Category 1 (respiratory system) and may contain 1% or more of Cobalt of Category 1 (cardiovascular system, thyroid, blood system).  
Component information: Nickel: Category 1 (respiratory system); Cobalt: Category 1 (cardiovascular system, thyroid, blood system).  
Chronic inhalation of finely divided Iron powder may cause chronic iron poisoning and pathological deposition of iron in the body tissue.  
Chronic exposure to cobalt by inhalation in humans results in effects on the respiratory system, such as respiratory irritation, wheezing, asthma, decreased lung function, pneumonia, and fibrosis.  
Chronic inhalation exposure of humans to high levels of manganese may result in a syndrome called manganism which typically begins with feelings of weakness and lethargy and progresses to other symptoms such as gait disturbances, clumsiness, tremors, speech disturbances, a mask-like facial expression and psychological disturbances.
- Aspiration hazard : Not applicable



**LaserForm® Ni718 Type A**Revision Date: December 12<sup>th</sup>, 2016

---

**12. ECOLOGICAL INFORMATION**

---

Ecotoxicity	:	
Aquatic hazard (acute)	:	‘Classification not possible’ due to lack of data.
Aquatic hazard (long-term)	:	Product: ‘Category 4’ because it contains 25 % or more of Nickel of Category 4. Component information: Nickel: Category 4 (Safety net classification (NITE))
Persistence and degradability	:	Not readily biodegradable.
Bio-accumulative potential (BCF)	:	No data available.
Mobility in soil	:	No data available.
Hazard to the ozone layer	:	Not applicable. The components of the product is not listed in annex of Montreal Protocol.
Additional information	:	Do not allow this product to enter drains. Do not flush into surface water. Do not let product contaminate subsoil.

---

**13. DISPOSAL CONSIDERATIONS**

---

Residual product	:	Do not contaminate sewers, drains, soil or surface waters with this product. Reduce waste by attempting to utilize product completely. Dispose of this container and its contents in accordance with Waste Management and Public Cleansing Act and local/prefectural regulations.
Contaminated container/packing	:	If there is a risk that dusts are released into a working place from a used container, take measures to prevent from releasing dusts. Dispose of a contaminated container/packing in accordance with Waste Management and Public Cleansing Act and local/prefectural regulations.

## Safety Data Sheet

according to Regulation JIS Z 7253 (2012) Japan

### LaserForm® Ni718 Type A

Revision Date: December 12<sup>th</sup>, 2016

Additional information : Prior to disposal, consulting your local waste disposal authority or an approved waste disposal firm to ensure regulatory compliance is recommended.

---

#### 14. TRANSPORT INFORMATION

---

##### International regulations

UN number : Not applicable  
UN proper shipping name : Not applicable  
UN class : Not applicable  
Packing group : Not applicable  
Marine pollutant : Not applicable  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC code : Not applicable

##### Domestic Japanese regulations

Land regulations : Not applicable  
Marine transport : Not applicable  
Air regulations : Not applicable  
Emergency response guidance : Not applicable

No.

Special safety measures : Always transport in closed containers that are upright and secure. Load the product in a way that does not cause tumbling, falling or damaging. Ensure to take measures to prevent load collapse. Confirm that product is transported by those familiar with the countermeasures needed in case of accidents and/or leakage.

**LaserForm® Ni718 Type A**  
Revision Date: December 12<sup>th</sup>, 2016

---

**15. REGULATORY INFORMATION**

---

## Industrial Safety and Health

## Act

- Substance for labeling, etc. : Nickel and its compounds (No.418) (labelling:  
and deliver of documents, powder  $\geq$  1wt%, SDS :  $\geq$  0.1wt%)  
etc. (Article 57 and 57-2) and Chromium and its compounds (No.142) (labelling:  
for risk assessment (Article powder $\geq$ 1wt%, SDS:  $\geq$  0.1wt%)  
57-3) Molybdenum and its compounds (No.603)  
(labelling: powder  $\geq$  1wt%, SDS:  $\geq$  0.1wt%)  
Cobalt and its compounds (No.172) (labelling:  
powder  $\geq$  1wt%, SDS :  $\geq$  0.1wt%)  
Manganese and its inorganic compounds (No.550)  
(labelling: powder  $\geq$  0.3wt%, SDS:  $\geq$  0.1wt%)
- Ordinance on Prevention of : Not applicable  
Organic Solvent Poisoning
- Ordinance on Prevention of : Product: Not applicable.  
Hazards due to Specified Component: Cobalt (Class 2 substance),  
Chemical Substances Manganese (Class 2 substance)
- Ordinance on Prevention of : Not applicable  
Lead Poisoning
- Ordinance on Prevention of : If a dusty work falls within a “dusty work”  
Hazards Due to Dust stipulated in this ordinance, handle this product  
in accordance with the ordinance.

**Safety Data Sheet**  
according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**  
Revision Date: December 12<sup>th</sup>, 2016

Labor Standards Act	:	Nickel and its compounds (except Nickel carbonyl) (symptom of illness/disorder: skin disorder) Chromium and its compounds (symptom of illness/disorder: skin disorder, respiratory track/lung disorder, nasal septum punch/olfactory disturbance) Cobalt and its compounds (symptom of illness/disorder: skin disorder, respiratory track/lung disorder) Manganese and its inorganic compounds (symptom of illness/disorder: subjective symptoms such as headache, dizziness and/or vomiting, nervous disorders such as speech impediment, gait disorders and/or tremor).
Pneumoconiosis Act	:	If a dusty work falls within a “dusty work” stipulated in this Act, handle this product in accordance with the Act.
Poison and Deleterious Substance Control Act	:	Not applicable
PRTR Act	:	Nickel: Class 1 designated substance (1-308) Chromium and trivalent chromium compounds: Class 1 designated substance (1-87) Molybdenum and its compounds: Class 1 designated substance (1-453) Cobalt and its compounds: Class 1 designated substance (1-132) (not applicable when content is less than 1%)
Fire Service Act:	:	Not applicable
Explosives Control Act	:	Not applicable
High Pressure Gas Safety Act	:	Not applicable
Ship Safety Act	:	Not applicable
Civil Aeronautics Act	:	Not applicable

**Safety Data Sheet**  
according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**  
Revision Date: December 12<sup>th</sup>, 2016

Water Pollution Control Act	:	Effluent Standard: Chromium content, Dissolved iron, Dissolved Manganese. Substances subject to taking emergency measures and reporting in the Event of Accident: Iron and its compounds (No.52), Chromium and its compounds (No.50), Nickel and its compounds (No.45), Molybdenum and its compounds (No.46), Manganese and its compounds (No.51).
Sewerage Act	:	Effluent Standard: Chromium content, Dissolved iron, Dissolved Manganese.
Air Pollution Control Act	:	Hazardous air pollutants: Chromium and its compounds (No.49), Nickel and its compounds (No.148), Molybdenum and its compounds (No.243), Cobalt and its compounds (No601),
Soil Contamination Countermeasures Act	:	Not applicable
Basic Environment Act	:	Substances requiring monitoring of water quality (public waters, groundwater): Nickel, Molybdenum, Manganese
Waste Management and Public Cleansing Act	:	Chromium and its compounds (No.29) Nickel and its compounds (No.30)

---

## 16. OTHER INFORMATION

---

Reference:

- 1) SDS of LaserForm<sup>TM</sup>Ni718 Type A, EC and USA version (Revised on Nov. 22, 2016, SDS revision No.: 00-C)
- 2) Chemical Risk Information Platform (CHRIP),GHS classification result, Ministry of Health, Labour and Welfare and Ministry of the Environment, Government of Japan
- 3) Ministry of Environment, Chemical Substance Information Research Support System



**Safety Data Sheet**  
according to Regulation JIS Z 7253 (2012) Japan

**LaserForm® Ni718 Type A**  
Revision Date: December 12<sup>th</sup>, 2016

Classification was performed according to JIS Z7252: 2014. Description was performed according to JIS Z7253: 2012.

Further information:

SDS Creation Date: December 12<sup>th</sup>, 2016

SDS Revision #: 01-A

SDS Revision Date: /

Reason for Revision: /

**DISCLAIMER OF LIABILITY:** The following supersedes any related provision in your company's forms, letters, and agreements from, by or with 3D Systems Corporation. 3D Systems, Inc. makes no warranty whether expressed or implied, including warranties of merchantability or of fitness for a particular purpose for this product. No statements or recommendations contained in the product literature are to be construed as inducements to infringe any relevant patent now or hereafter in existence. Under no circumstances shall 3D Systems, Inc. be liable for incidental, consequential, or other damages from alleged negligence, breach of warranty, strict liability or any other theory, arising out of the use or handling of this product. The sole liability of 3D Systems, Inc. for any claims arising out of the manufacture, use or sale of its products shall be for the buyer's purchase price.

The contents of this safety data sheet are subject to change without notice. 3D Systems, Inc. recommends that you periodically check [www.3dsystems.com](http://www.3dsystems.com) to make sure you are using the most current safety data sheet.