LAMINERIES MATTHEY
NOTZ group advanced metal solutions

MATERIAL SAFETY DATA SHEET

MSDS: Thermelast® 4002

1 Identification

1.1 Product identifier

Trade Name: Thermelast® 4002

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

Alloy in form of semi-finished products according to the trade names, high strength alloys (depending on the trade name concerned) supplied as solid, compact and non-inhalable metal in the form of slabs or hot or cold rolled strips.
Industrial uses: Uses of substances as such or in preparations at industrial sites. Manufacture of basic metals, including alloys Manufacture of fabricated metal products, except machinery and equipment. Manufacture of computer, electronic and optical products, electrical equipment. General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment. Electricity, steam, gas water supply and sewage treatment.

1.3 Details of the supplier of the safety data sheet

Lamineries Matthey, branch of Notz Metall AG
Rue Montagu 38,
CH-2520 La Neuveville,
Switzerland
e-mail: sales@matthey.ch
Website: www.matthey.ch

1.4 Emergency telephone number

Tox Info Suisse
From Switzerland: call 145
From abroad: call +41 44 251 51 51

Remarks for information sheet:
Semi-finished products from iron and iron-alloys are articles according to Regulation (EC) No. 1907/2006 (REACH Regulation). For articles there is no legal obligation to issue a safety data sheet. However, to be able to provide information typically included in a safety data sheet also for articles, the present information sheet for articles has been worked out.
We expressly point out that the information sheet for articles is a voluntarily issued information sheet which is not subject to the formal requirements of the REACH Regulation

2 Hazards identification

2.1 Classification of the substance

Classification according to Regulation (EC) No 1272/2008 (CLP-Regulation):
Semi-finished products are not classified within the scope of the CLP-regulation.

2.2 Label according to Regulation (EC) Nº. 1272/2008

Hazard Pictograms:	Not applicable
Signal Word:	Not applicable
Hazard Statements:	Not applicable
Precautionary statements:	Not applicable
Supplemental label information:	Not applicable

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:	Not applicable
vPvB:	Not applicable

3 Composition/information on ingredients

3.1 General information

Description:	Metal in compact form.
Material code (EN)	-
Material number (DIN):	-
UNS number:	N09902

Information:
The classifications listed below reflect the classification of the relevant alloying constituents and are only for information. Mentioned percentages are references values.

Chemical Element	% Weight	CAS-Nº	EINECS-Nº	Classification according to Regulation EC Nº 1278/2008
Iron	Balance	7439-89-6	231-130-8	-
Cobalt	41.00 - 43.5	7440-48-4	231-158-0	Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350; Repr. 1B, H360F; Skin Sens. 1, H317; Aquatic Chronic 4, H413
Chromium	4.90 - 5.75	7440-47-3	231-157-5	Flam. Sol. 2 H228, Carac. 2 H351, Aquatic Chronic 1 H410
Titanium	2.20 - 2.75	7440-32-6	231-142-3	Pyr.Sol.1, H250
Silicon	0.00 - 1.00	7440-21-3	231-096-4	Flam. Sol. 2 H228
Manganese	0.00 - 0.80	7439-96-5	231-105-1	Water-react.1, H260
Aluminium	0.30 - 0.80	7429-90-5	231-072-3	Pyr. Sol. 1, H250; Water-react. 2, H261
Carbon	0.00 - 0.06	7440-44-0	231-153-3	-
Phosphorous	0.00 - 0.04	7723-14-0	231-768-7	Flam. Sol. 1, H228; Repr. 2, H361
Sulfur	0.00 - 0.04	7704-34-9	231-722-6	Skin Irrit. 2, H315

4 First-aid measures

4.1 General information

There is no immediate medical risk associated with these alloys in massive form. If exposed or concerned: get medical attention/advice. Wash contaminated clothing before reuse. First aid measures provided are related to particulate containing beryllium.

4.2 Inhalation

Breathing difficulties caused by inhalation of particulate requires immediate removal to fresh air. If breathing has stopped, perform artificial respiration and obtain medical help.

4.3 Skin contact

Cuts should be treated by normal first aid. Embedded foreign bodies must be removed.

4.4 Eye contact

There is no special hazard to the eyes. Avoid transferring particulate material to the eyes from the hands. Any particulate which does enter the eyes could cause damage to the eye and surrounding tissues and should be removed by copious flushing with clean water, obtain medical help.

4.5 Ingestion

The alloys are not toxic, but ingestion should be avoided including ingestion via hand-to-mouth activity such as eating, drinking, and smoking. In case of accidental swallowing of dust or powder induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, obtain medical help.

5 Firefighting measures

5.1 General information

The alloys are non-flammable.

5.2 Extinguishing media

Suitable: Do not use water in fire-fighting metal melting operations.

Unsuitable: To avoid risk of explosion, dry sand or other fire-fighting powders should be used.

5.3 Advice for firefighters

Firefighters shall use full protective equipment. No especial measures are required.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

In solid form this material poses no special clean-up problems.

6.2 Environmental precautions

Not required.

6.3 Methods and material for containment and cleaning up

Clean up and dispose the material according to local regulations.

6.4 Reference to other sections

For information on safe handling, see Section 7.
For personal protection, see Section 8.
For waste disposal, see Section 13.

7 Handling and storage

7.1 Handling

No special precautions are required for handling alloys in massive forms. Use gloves when handling sharp edged alloy products, to prevent metal cuts.

7.2 Storage

No special precautions required. No prohibitions for mixed-goods-storage.
Storage in dry conditions.

7.3 Specific end uses

No further relevant information available.

8 Exposure controls and personal protection

8.1 Control parameters

The relevant national limit specifications should be observed at workplace. **Limits of airborne substances in the place of work: Short- term Exposure Limit and Time weighted Average in accordance with SUVA (Switzerland).**

Substance	CAS-Nº.	Type	Value
Cobalt	7440-48-4	VME	0.05 mg/m^3
Chromium	7440-47-3	VME	0.50 mg/m^3
Silicon	7440-21-3	VME	3.00 mg/m^3
Aluminium	7429-90-5	VME	3.00 mg/m^3
Phosphorous	7723-14-0	VME	0.02 mg/m^3
		VLE	0.02 mg/m^3

Biological Limit Values in Workplace (BAT-Wert) in accordance with SUVA.

Substance	CAS-Nº.	Type	Value	Analysis
Cobalt	7440-48-4	VBT	30 µg/l	Urine
Aluminium	7429-90-5	VBT	50 µg/g créatinine	Urine

Additional Occupational Exposure Limit Values for possible hazards during processing:

General dust limit (A - alveolar fraction, E - respirable fraction)	
SUVA (Switzerland) TRGS 900 (Germany)	(A) 3 mg/m³, (E) 10 mg/m³

8.2 Exposure controls

Personal protective equipment:

- **Respiratory protection:**
  Use a suitable industrial gas mask when work-place-limits are exceeded.
- **Eye protection:**
  For processing the alloys the use of safety glasses is recommended as required by the various operations, so for example safety classes with side protection, closed safety classes/goggles or face shields.
- **Hand protection:**
  Follow the standard workplace hygiene recommendations. Gloves against particulate/cuts. If necessary use disposable gloves, protection against particulate, under work gloves, protection against cuts, for example leather gloves, against mechanical risks.
- **Body protection:**
  Wear suitable protective clothing, depending upon how the product are further processed.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State:	Solid matter.
Form:	Various shapes.
Colour:	Grey
Odour:	Odorless.
Odour threshold:	Not applicable.
Melting point / melting range:	1450 - 1480 ºC
Boiling point / boiling range:	Not applicable.
Flash point:	Not applicable.
Explosive properties:	Not explosive.
Density at 20°C:	8.05 g/cm^3.
Solubility in / miscibility with water:	Insoluble.
Vapour pressure:	Not applicable.
Vapour density:	Not applicable.

Viscosity:	Not applicable.

9.2 Other information:

Not applicable

10 Stability and reactivity

10.1 Reactivity

Not applicable

10.2 Chemical stability

The material under normal conditions is stable.

10.3 Possibility of hazardous reactions

No dangerous reactions known.

10.4 Conditions to avoid

Avoid dust/ small particles formation.

10.5 Incompatible materials

Strong acids, alkalis and oxidizing agents.

10.6 Hazardous decomposition products

No dangerous decomposition known.

11 Toxicological information

11.1 Information on likely routes of exposure

Occupational exposure to the substance or mixture may do not cause health hazard effects if handled properly.

Inhalation:	No irritant effects
Skin Contact:	No irritant effects
Eye contact:	No irritant effects
Ingestion:	No irritant effects

11.2 Information of toxicological effects

Acute toxicity:	No irritant effects
Skin corrosion/irritation:	No irritant effects
Serious damage/eye irritation:	No irritant effects
Ingestion:	No irritant effects
Respiratory sensitisation:	No irritant effects
Skin sensitisation:	No irritant effects
Germ cell mutagenicity:	No irritant effects
Reproductive toxicity:	No irritant effects
Carcinogenicity:	No irritant effects
Other information:	No irritant effects

12 Ecological information

12.1 Aquatic toxicity

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Results of PBT and vPvB assessment

No further relevant information available.

12.6 Other adverse effects

No further relevant information available.

13 Disposal considerations

13.1 Waste treatment methods

Residual waste:	For scrap consult Lamineries MATTHEY.
Contaminated packaging:	Since emptied containers may retain product residue, follow label warnings even after container is emptied.
Disposal methods/information:	Metal scrap is a valuable raw material and easy to recycle for reuse. Disposal recommendations are based on material as supplied. Waste disposal key (for non-contaminated waste): 12 01 01: ferrous metal filings and turnings 16 01 17: ferrous metal

14 Transport information

14.1 UN-Number

ADR, AND, IMDG, IATA Void

14.2 UN proper shipping name

ADR, AND, IMDG, IATA Void

14.3 Transport hazard class(es)

ADR, AND, IMDG, IATA Class Void

14.4 Packing group

ADR, IMDG, IATA Void

14.5 Environmental hazards

ADR, IMDG, IATA Void

14.6 Special precautions for user

ADR, ADN, IMDG, IATA, RID Void

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

Not regulated as dangerous goods.

15 Regulatory information

Chemical safety assessment : Void

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed

Water hazard class: Generally not hazardous for water.

Other regulations, limitations an prohibitive regulations:

Substances of very high concern (SVHC) according to REACH, Article 57	
-	-

16 Other information

The information on this Material Data Sheet (MSDS) is believed to be correct by the time of the date issued. All data used were from sources considered to be technically reliable and the information is believed to be correct. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.

To avoid any misunderstandings or incorrect assumptions by the receiver of the safety information, it should be made clear that the supplied information is actually a voluntary Product information Sheet closely following the guidelines of the Guidance on the compilation of Safety data Sheets - Regulation (EU) 2020/878. of December 2020 (REACH/SDS).