

Trotec Laser GmbH

4600 Wels

Date printed 30.03.2016, Revision 30.03.2016

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Anodised Aluminium****1.2 Relevant identified uses of the substance or mixture and uses advised against****1.2.1 Relevant uses**

See product information.

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency telephone number

Company +43 (0)72 42 239-7777

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

No classification.

2.2 Label elements

This product is an article and therefore it does not require labelling according to EC directives [REACH/CLP].

2.3 Other hazards**Physico-chemical hazards**

This product does not present a fire or explosion hazard in the supplied form.
 Small chips, fine shavings and dust produced by the process may catch fire immediately.
 Dust can form an explosive mixture with air.

Human health dangers

Frequent persistent contact with the skin can cause dermatitis.
 May cause irritation of respiratory organs (powder or dust).
 Risk of mechanical irritation by dust particles (eyes, skin).
 Molten Material may cause severe burns.
 Thermal processing can lead to release of irritating gases and vapors.
 At processing temperature, irritation of eyes, skin and respiratory tract is possible.

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SECTION 3: Composition / Information on ingredients**Product-type:**

The product is an article.

Range [%]	Substance
> 85	Aluminum CAS: 7429-90-5, EINECS/ELINCS: 231-072-3, EU-INDEX: 013-002-00-1
< 6,4	Magnesium CAS: 7439-95-4, EINECS/ELINCS: 231-104-6, EU-INDEX: 012-001-00-3
< 2,8	Zinc metal (massive) CAS: 7440-66-6, EINECS/ELINCS: 231-175-3
< 1,9	Manganese CAS: 7439-96-5, EINECS/ELINCS: 231-105-1
< 1,5	Silicon CAS: 7440-21-3, EINECS/ELINCS: 231-130-8
< 1,1	Iron CAS: 7439-89-6, EINECS/ELINCS: 231-096-4
< 1,1	Chromium CAS: 7440-47-3, EINECS/ELINCS: 231-157-5
0 - 0,25	Nickel powder CAS: 7440-02-0, EINECS/ELINCS: 231-111-4, EU-INDEX: 028-002-01-4 GHS/CLP: Carc. 2: H351 - STOT RE 1: H372 - Skin Sens. 1: H317 - Aquatic Chronic 3: H412
0 - 0,02	Lead CAS: 7439-92-1, EINECS/ELINCS: 231-100-4 GHS/CLP: Repr. 1A: H360Df - Acute Tox. 4: H302 H332 - STOT RE 2: H373 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410

Comment on component parts

The product is an Alloy
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures**4.1 Description of first aid measures****General information**

In the event of symptoms seek medical treatment.

Inhalation

Ensure supply of fresh air.
After inhalation of vapours of product which can set free by thermal processing:
Remove the victim into fresh air and keep him calm.
In the event of symptoms seek medical treatment.

Skin contact

In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.
In case of burning: After contact with molten product cool quickly with cold water or sterile salt solution and protect with gauze.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

not applicable

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.

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SECTION 5: Fire-fighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguisher typ D.
 Metal fire-ex powder.
 Sand.
 Cement.

Extinguishing media that must not be used

Water.

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:

Metal oxides.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Wear full protective suit.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

Wear suitable protective equipment. For personal protection see SECTION 8.

Use breathing apparatus if exposed to vapours.

Use breathing apparatus if exposed to dust.

6.2 Environmental precautions

No special measures necessary.

6.3 Methods and material for containment and cleaning up

Take up mechanically.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Use only in well-ventilated areas.

During thermal processing vacuuming at processing machines is necessary.

The normal safety precautions for handling of molten, heated products must be observed.

During mechanical processing vacuuming at processing machines is necessary.

Avoid the formation and deposition of dust.

Keep away from all sources of ignition - Refrain from smoking. Avoid production of dust.

Dust can form an explosive mixture with air.

Use explosion-proofed equipment/fittings and non-sparkling tools.

Take precautionary measures against static discharges.

Wash hands before breaks and after work.

Do not eat, drink, smoke or take drugs at work.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash before reuse.

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7.2 Conditions for safe storage, including any incompatibilities

Do not store with alkalis.
 Do not store together with acids.
 Do not store together with oxidizing agents.
 Store in a dry place.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Nickel powder
CAS: 7440-02-0, EINECS/ELINCS: 231-111-4, EU-INDEX: 028-002-01-4
Long-term exposure: 0,5 mg/m ³ , Sk
Aluminum
CAS: 7429-90-5, EINECS/ELINCS: 231-072-3, EU-INDEX: 013-002-00-1
Long-term exposure: 10 mg/m ³ , inhalable dust (respirable dust: 4 mg/m ³)
Manganese
CAS: 7439-96-5, EINECS/ELINCS: 231-105-1
Long-term exposure: 1 mg/m ³
Silicon
CAS: 7440-21-3, EINECS/ELINCS: 231-130-8
Long-term exposure: 10 mg/m ³ , inhalable dust; respirable dust: TWA=4 mg/m ³
Chromium
CAS: 7440-47-3, EINECS/ELINCS: 231-157-5
Long-term exposure: 0,5 mg/m ³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Chromium
CAS: 7440-47-3, EINECS/ELINCS: 231-157-5
Eight hours: 2 mg/m ³

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8.2 Exposure controls

Additional advice on system design	Dust or vapours caused by fabrication and machining: use explosion-proof ventilation systems of sufficient capacity that are designed for handling suspended matter in order to satisfy the limit values set out in SECTION 8, Exposure guidelines. Use suitable discharges or exhaust ventilation if heat treatment is intended. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances. Protection adapted to the manipulation of the fused product (danger of burning).
Eye protection	In the case of thermal processing: Tightly fitting goggles. (EN 166:2001) In the event of dust formation: Tightly fitting goggles. (EN 166:2001)
Hand protection	Gloves (heat-resistant). Impermeable gloves. The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Protective clothing.
Other	Avoid contact with eyes and skin. Do not inhale smokes formed during heat treatment.
Respiratory protection	Respiratory protection in the case of thermal processing. Respiratory protection in the case of dust formation. Short term: filter apparatus, filter P2. (DIN EN 143) Short term: filter apparatus, filter P3. (DIN EN 143)
Thermal hazards	yes
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Form	Metal plates
Color	silver
Odor	odourless
Odour threshold	No information available.
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	Not highly flammable.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not applicable
Density [g/ml]	2,64 - 2,72
Bulk density [kg/m³]	not applicable
Solubility in water	insoluble
Partition coefficient [n-octanol/water]	not applicable
Viscosity	not applicable
Relative vapour density determined in air	not applicable
Evaporation speed	not applicable
Melting point [°C]	565,6 - 660
Autoignition temperature [°C]	not self-igniting
Decomposition temperature [°C]	No information available.

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9.2 Other information

none

SECTION 10: Stability and reactivity**10.1 Reactivity**

Accumulation of fine dust may entail the risk of a dust explosion in the presence of air (only in circumstances of an uncontrolled release of dust from the product).

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with strong acids and alkalies.
 Reactions with halogenated compounds.
 Reactions with strong oxidizing agents.
 Reactions with water, with formation of hydrogen.

10.4 Conditions to avoid

Dust formation.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

For thermal decomposition to high temperature are formed irritating smoke.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Substance
Nickel powder, CAS: 7440-02-0
LD50, oral, Rat: > 9000 mg/kg.

Serious eye damage/irritation	Based on the available information, the classification criteria are not fulfilled.
Skin corrosion/irritation	Based on the available information, the classification criteria are not fulfilled.
Respiratory or skin sensitisation	Based on the available information, the classification criteria are not fulfilled.
Specific target organ toxicity — single exposure	Based on the available information, the classification criteria are not fulfilled.
Specific target organ toxicity — repeated exposure	Based on the available information, the classification criteria are not fulfilled.
Mutagenicity	Based on the available information, the classification criteria are not fulfilled.
Reproduction toxicity	Based on the available information, the classification criteria are not fulfilled.
Carcinogenicity	Based on the available information, the classification criteria are not fulfilled.
Aspiration hazard	Based on the available information, the classification criteria are not fulfilled.
General remarks	Risk of mechanical irritation. May cause irritation of eye (vapours/fumes). May cause respiratory tract irritation (vapours/fumes). Frequent persistent contact with the skin can cause dermatitis. Frequent and permanent skin contact can cause skin reaction (sensitization). Toxicological data of complete product are not available.

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SECTION 12: Ecological information**12.1 Toxicity**

Substance
Nickel powder, CAS: 7440-02-0
LC50, (96h), Danio rerio: > 100 mg/l.
EC50, (48h), Bacteria: 250 mg/l.
EC50, (48h), Daphnia magna: > 100 mg/l.
IC50, (72h), Selenastrum capricornutum: 100 mg/l.

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	not applicable
Biological degradability	The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

The product is insoluble in water.
Ecotoxicological data are not available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

For recycling, consult manufacturer.

Waste no. (recommended)170402
120103**Contaminated packaging**

Uncontaminated packaging may be taken for recycling.
Contaminated packing should be disposed of as product waste.

Waste no. (recommended)150102
150101

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SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.4 Packing group

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

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14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EEC-REGULATIONS 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC; (EU) 2015/830

TRANSPORT-REGULATIONS DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2016).

NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4

- Observe employment restrictions for people none

- VOC (1999/13/CE) 0 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information**16.1 Hazard statements (SECTION 03)**

H410 Very toxic to aquatic life with long lasting effects.
 H400 Very toxic to aquatic life.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H302+H332 Harmful if swallowed or if inhaled.
 H360Df May damage the unborn child. Suspected of damaging fertility.
 H412 Harmful to aquatic life with long lasting effects.
 H317 May cause an allergic skin reaction.
 H372 Causes damage to lung through prolonged or repeated exposure if inhaled.
 H351 Suspected of causing cancer.

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16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging
 DMEL = Derived Minimum Effect Level
 DNEL = Derived No Effect Level
 EC50 = Median effective concentration
 ECB = European Chemicals Bureau
 EEC = European Economic Community
 EINECS = European Inventory of Existing Commercial Chemical Substances
 ELINCS = European List of Notified Chemical Substances
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50 = Inhibition concentration, 50%
 IMDG = International Maritime Code for Dangerous Goods
 IUCLID = International Uniform Chemical Information Database
 LC50 = Lethal concentration, 50%
 LD50 = Median lethal dose
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships
 PBT = Persistent, Bioaccumulative and Toxic substance
 PNEC = Predicted No-Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
 TLV@/TWA = Threshold limit value – time-weighted average
 TLV@STEL = Threshold limit value – short-time exposure limit
 VOC = Volatile Organic Compounds
 vPvB = very Persistent and very Bioaccumulative

16.3 Other information**Classification procedure****Modified position**

none



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