SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

TroLase
TroLase Metallic
TroLase Metallic Plus
TroLase Thins
TroLase Foil

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

1.2.1 Relevant uses
Laser engraved article

1.2.2 Uses advised against
None known.

1.3 Details of the supplier of the safety data sheet

Company: Trotec Laser GmbH
Linzer Str. 156
4600 Wels / AUSTRIA
Phone +43 (0)72 42 239-7777
Fax +43 (0) 72 42 239-7380
Homepage www.troteclaser.com
E-mail trotec@troteclaser.com

Address enquiries to:
- Technical information: trotec@troteclaser.com
- Safety Data Sheet: sdb@chemiebuero.de

1.4 Emergency telephone number

Company: +43 (0)72 42 239-7777

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

No classification.

2.2 Label elements

This product is defined as an "article" based on OSHA definition of an article (c). Therefore, this product is exempt from requirements of the hazard communication standard, 29 CFR1910.1200 (HCS 2012), hence a Safety-Data-Sheet is not required in accordance to HCS2012 (b)(6) and the sheets are supplied as a service. This Safety-Data-Sheet contains valuable information critical to the safe handling and proper use of the product.

2.3 Other hazards

Other hazards: none

SECTION 3: Composition / Information on ingredients

Product-type:
The product is an article.

Comment on component parts:
Metallized and pigmented lacquer coating
No dangerous components.
SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In the event of symptoms seek medical treatment.

Inhalation

No special measures necessary.
After inhalation of vapours of product which can set be free by thermal processing:
Remove the victim into fresh air and keep him calm.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
In case of burning: After contact with molten product cool quickly with cold water or sterile salt solution and protect with gauze.
Get medical advice.

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.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Carbon monoxide (CO)
Carbon dioxide (CO2)

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Dispose of absorbed material in accordance with the regulations.

6.4 Reference to other sections

See SECTION 8+13
SECTION 7: Handling and storage

7.1 Precautions for safe handling

During mechanical processing vacuuming at processing machines is necessary.
During thermal processing vacuuming at processing machines is necessary.
The normal safety precautions for handling of molten, heated products must be observed.
The product is combustible.
Take precautionary measures against static discharges.
Wash hands before breaks and after work.
Do not eat, drink, smoke or take drugs at work.

7.2 Conditions for safe storage, including any incompatibilities

Do not store together with acids and alkalies.
Do not store together with oxidizing agents.
Keep in a well-ventilated place.
Keep in a cool place. Store in a dry place.
Protect from heat/overheating and from sun.

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 (US)

not applicable

8.2 Exposure controls

Additional advice on system design

Ensure adequate ventilation on workstation.
Use suitable discharges or exhaust ventilation if heat treatment is intended.
Protection adapted to the manipulation of the fused product (danger of burning).

Eye protection

Not required under normal conditions.

Hand protection

Suitable protective gloves.

Skin protection

Not required under normal conditions.

Other

Avoid contact with eyes and skin.
Do not inhale vapours.

Respiratory protection

Respiratory protection in the case of thermal processing.
Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)

Thermal hazards

See SECTION 7.

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: solid in different forms
Color: various
Odor: characteristic
Odour threshold: not applicable
pH-value: not applicable
pH-value [1%]: not applicable
Boiling point [°C]: No information available.
Flash point [°C]: not applicable
Flammability (solid, gas) [°C]: not flammable
Lower explosion limit: not applicable
Upper explosion limit: not applicable
Oxidising properties: no
Vapour pressure/gas pressure [kPa]: not applicable
Density [g/ml]: No information available.
Bulk density [kg/m³]: not applicable
Solubility in water: insoluble
Partition coefficient [n-octanol/water]: No information available.
Viscosity: not applicable
Relative vapour density determined in air: not applicable
Evaporation speed: not applicable
Melting point [°C]: No information available.
Autoignition temperature [°C]: No information available.
Decomposition temperature [°C]: No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

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 oxidizing agents.

10.4 Conditions to avoid

Strong heating.
Avoid temperatures above 300 °C / 572 °F.

10.5 Incompatible materials

See SECTION 10.3.
10.6 Hazardous decomposition products

No dangerous reactions known if used as directed.
In the case of heating following (decomposition) products may occure:
Carbon oxides, Acrylates, Methacrylates, Hazardous organic compounds.
Toxic gases/vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/irritation</td>
<td>Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td>Specific target organ toxicity — single exposure</td>
<td>Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td>Specific target organ toxicity — repeated exposure</td>
<td>Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td>Reproduction toxicity</td>
<td>Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td>General remarks</td>
<td>Risk of mechanical irritation. May cause irritation of eye (vapours/fumes). May cause respiratory tract irritation (vapours/fumes). Toxicological data of complete product are not available.</td>
</tr>
</tbody>
</table>

12.1 Persistence and degradability

<table>
<thead>
<tr>
<th>Environment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behaviour in environment compartments</td>
<td>No information available.</td>
</tr>
<tr>
<td>Behaviour in sewage plant</td>
<td>Can be separated out mechanically in purification plants.</td>
</tr>
<tr>
<td>Biological degradability</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

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

RCRA Hazard Class (40CFR 261): Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.

Product
Disposal in an incineration plant in accordance with the regulations of the local authorities.

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

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

DOT Road Shipment Information (49 CFR) 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”

DOT Road Shipment Information (49 CFR) 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

DOT Road Shipment Information (49 CFR) 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

DOT Road Shipment Information (49 CFR) not applicable
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

DOT Road Shipment Information (49 CFR)  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

National regulations

29 CFR 1910.1200-HCS 2012, OSHA-PEL, ACGIH-TLV, NTP, IARC, SARA Title III, NFPA, TSCA, California - Prop. 65

- SARA, 302  not applicable
- SARA, 311  not applicable
- SARA, 313  not applicable
- CA Proposition 65

WARNING: This product can expose you to chemicals including "2-propenoic acid, ethyl ester (CAS 140-88-5)”, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov/furniture.

This product may contain trace levels of a component or components known to the state of California to cause birth defects or other reproductive harm: Toluene (CAS 108-88-3), Mercury (CAS 7439-97-6).

This product may contain trace levels of components known to the state of California to cause cancer: Aniline (CAS 62-53-3), Antimony (3+)Trioxide (CAS 1309-64-4), Arsenic (CAS 7440-38-2), Cadmium (CAS 7440-43-9), Selenium Sulfide (CAS 7446-34-6), 3,3-Dichlorobenzidine (CAS 91-94-1), Ethyl Acrylate (CAS 140-88-5), Lead (CAS 7439-92-1), Nickel (CAS 7440-02-0), Toluene diisocyanate (CAS 26471-62-5).

- TSCA  not applicable
- FDA  not applicable

American Conference of Governmental Industrial Hygienists - ACGIH  not applicable
International Agency for Research on Cancer IARC  not applicable
National Toxicology Program - NTP  not applicable
HAP-VOC  not applicable

Transport-regulations

SECTION 16: Other information

16.1 Ratings

HMIS Ratings

<table>
<thead>
<tr>
<th></th>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
<th>PERSONAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYSICAL HAZARD</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERSONAL PROTECTION</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 - Minimal Hazard
1 - Slight Hazard
X - Personal protection rating to be supplied by user depending on use conditions

NFPA Ratings

<table>
<thead>
<tr>
<th></th>
<th>TOP</th>
<th>LEFT</th>
<th>RIGHT</th>
<th>BOTTOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>FLAMMABILITY</td>
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</tr>
<tr>
<td>PHYSICAL HAZARD</td>
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<td>0</td>
<td></td>
</tr>
<tr>
<td>PERSONAL PROTECTION</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOP, FLAMMABILITY: 1 - Slight Hazard
LEFT, HEALTH: 0 - Minimal Hazard
RIGHT, REACTIVITY: 0 - Minimal Hazard
BOTTOM, SPECIAL NOTICE: -

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
- ATE = acute toxicity estimate
- 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
- LC0 = lethal concentration, 0%
- LOAEL = lowest-observed-adverse-effect level
- MARPOL = International Convention for the Prevention of Marine Pollution from Ships
- NOAEL = No Observed Adverse Effect Level
- NOEC = No Observed Effect Concentration
- PBT = Persistent, Bioaccumulative and Toxic substance
- PNEC = Predicted No-Effect Concentration
- REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
- STP = Sewage Treatment Plant
- 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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