

Trotec Laser GmbH
4600 Wels

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

1.1 Product identifier

TroLase Reverse

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

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

Human health dangers Risk of mechanical irritation.
Thermal processing can lead to release of irritating gases and vapors.
Heating may cause a fire.

Other hazards none

SECTION 3: Composition / Information on ingredients

Product-type:

The product is an article.

Comment on component parts

The product consists of the following components: carrier foil, light blocker, metallized and pigmented lacquer coating.
No dangerous components.

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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 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 with 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

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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 alkalis.
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.

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

Respiratory protection Respiratory protection in the case of thermal processing.
Short term: filter apparatus, combination filter A-P2.

Thermal hazards See SECTION 7.

**Delimitation and monitoring of the
environmental exposition** Comply with applicable environmental regulations limiting discharge to air, water and soil.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	solid in different forms
Color	various
Odor	characteristic
Odor threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	No information available.
Flash point [°C]	not applicable
Flammability [°C]	not flammable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidizing properties	no
Vapor pressure/gas pressure [kPa]	not applicable
Density [g/ml]	No information available.
Bulk density [kg/m ³]	not applicable
Solubility in water	insoluble
Partition coefficient [n-octanol/water]	No information available.
Viscosity	not applicable
Relative vapor 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.

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10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Serious eye damage/irritation	Based on the information available, the classification criteria have not been fulfilled.
Skin corrosion/irritation	Based on the information available, the classification criteria have not been fulfilled.
Respiratory or skin sensitisation	Based on the information available, the classification criteria have not been fulfilled.
Specific target organ toxicity — single exposure	Based on the information available, the classification criteria have not been fulfilled.
Specific target organ toxicity — repeated exposure	Based on the information available, the classification criteria have not been fulfilled.
Mutagenicity	Based on the information available, the classification criteria have not been fulfilled.
Reproduction toxicity	Based on the information available, the classification criteria have not been fulfilled.
Carcinogenicity	Based on the information available, the classification criteria have not been fulfilled.
Aspiration hazard	Based on the information available, the classification criteria have not been fulfilled.
General remarks	Risk of mechanical irritation. May cause irritation of eye (vapors/fumes). May cause respiratory tract irritation (vapors/fumes). Toxicological data of complete product are not available.

SECTION 12: Ecological information

12.1 Toxicity

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	Can be separated out mechanically in purification plants.
Biological degradability	No information available.

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.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

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.

RCRA Hazard Class (40 CFR 261)

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.

SECTION 14: Transport

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

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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

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

US Regulations

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).

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), 3,3-Dichlorobenzidine (CAS 91-94-1), Ethyl Acrylate (CAS 140-88-5), Lead (CAS 7439-92-1), Nickel (CAS 7440-02-0), Selenium Sulfide (CAS 7446-34-6), Toluene diisocyanate (CAS 26471-62-5).", which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

- TSCA All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.

- 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 DOT-Classification, ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2019)

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Abbreviations and acronyms:

ACGIH = American Conference of Governmental Industrial Hygienists;
 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;
 CERCLA = Comprehensive Environmental Response, Compensation and Liability Act;
 CFR = Code of Federal Regulations;
 CPR = Controlled Products Regulations;
 DMEL = Derived Minimum Effect Level;
 DNEL = Derived No Effect Level;
 DOT = Department of Transportation;
 EC50 = Median effective concentration;
 EPA = Environmental Protection Agency;
 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;
 IARC = International Agency of Research on Cancer;
 IATA = International Air Transport Association;
 TSCA = Toxic Substance Control Act;
 HMIS = Hazardous Materials Identification System;
 NFPA = National Fire Protection Association;
 NIOSH = National Institute for Occupational Safety and Health;
 OSHA = Occupational Safety and Health Administration;
 LC50 = Lethal concentration, 50%;
 LD50 = Median lethal dose, 50%;
 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;
 SARA = Superfund Amendments and Reauthorization Act;
 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;

16.2 Ratings

HMIS Ratings

HEALTH	0	0 - Minimal Hazard
FLAMMABILITY	1	1 - Slight Hazard
PHYSICAL HAZARD	0	0 - Minimal Hazard
PERSONAL PROTECTION	X	X - Personal protection rating to be supplied by user depending on use conditions

NFPA Ratings

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

Modified position none

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