SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier
Product name: TRANSCOPY LIQUID
Cat. No. 40900090, 40900092
CAS-No.: 141-78-6
EC No.: 205-500-4
REACH Reg. No.: 01-2119475103-46-xxxx
Container size: 40 ml

Relevant identified uses of the substance or mixture and uses advised against
Application: Replication system for materialographic surfaces.
Uses advised against: No specific uses advised against are identified. (*)

Details of the supplier of the safety data sheet
Supplier: Struers ApS
Pederstrupvej 84
DK-2750 Ballerup
Tel:+45 44 600 800

Responsible for material safety data sheet authoring: Responsible for material safety data sheet authoring: DHI
Any questions to the contents of this material safety data sheet should be sent to: struers@struers.dk

Emergency telephone number
National Capital Poison Center: 1-800-222-1222
Infotrac: 1-800-535-5053
Struers US: 1-440-871-0071

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture
OSHA 2012:
- Flammable Liquid Category 2
- Eye irritant Category 2A
- Category 3 Target organ toxicant - Single Exposure (narcotic effects)
SAFETY DATA SHEET

Product name: TRANSCOPY LIQUID
Revision Date: 2020-01-30
Document No.: M0001

Label elements

Danger
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/container in accordance with local regulations.
P233 Keep container tightly closed. 
P240 Ground/bond container and receiving equipment. 
P241 Use explosion-proof electrical, ventilating and lighting equipment. 
P242 Use only non-sparking tools. 
P243 Take precautionary measures against static discharge. 
P261 Avoid breathing gas, fume, vapours or spray. 
P264 Wash contaminated skin thoroughly after handling. 
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. 
P312 Call a poison center/doctor if you feel unwell. 
P337 + P313 If eye irritation persists: Get medical advice/attention. 
P370 + P378 In case of fire: Use alcohol resistant foam, carbon dioxide or dry powder to extinguish. 
P403 + P233 Store in a well-ventilated place. Keep container tightly closed. 
P405 Store locked up.

Other hazards
The product is highly flammable, and explosive vapors/air mixtures may be formed even at normal room temperatures. Organic solvents may be absorbed into the body by inhalation and ingestion and cause permanent damage to the nervous system, including the brain.
PBT/vPvB: No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
SAFETY DATA SHEET

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

Inhalation: Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions.

Skin contact: Remove contaminated clothes and rinse skin thoroughly with water.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring along these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions. Do not induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat symptomatically.
SECTION 5: FIREFIGHTING MEASURES

**Extinguishing media**

Extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

**Special hazards arising from the substance or mixture**

Specific hazards: Vapors are heavier than air and may travel along the floor and in the bottom of containers. Vapors may be ignited by a spark, a hot surface or an ember.

**Advice for firefighters**

Protective equipment for firefighters:

Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel: Do not smoke or use open fire, or other sources of ignition. Avoid inhalation of vapors and contact with skin and eyes. For personal protection, see section 8.

For emergency responders: No specific recommendations. For personal protection, see section 8.

**Environmental precautions**

Environmental precautions: Do not discharge into drains, water courses or onto the ground.

**Methods and material for containment and cleaning up**

Spill Cleanup Methods: Absorb spillage with non-combustible, absorbent material.

**Reference to other sections**

References: For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling**

Safe handling advice: Avoid inhalation of vapors and contact with skin and eyes. Observe good chemical hygiene practices.

Technical measures: Do not smoke or use open fire or other sources of ignition. Take precautionary measures against static discharges.

Technical precautions: Mechanical ventilation may be required. Provide easy access to water supply and eye wash facilities.

**Conditions for safe storage, including any incompatibilities**


Storage conditions: Store in tightly closed original container in a dry, cool and well-ventilated place. Avoid contact with oxidizing agents.

**Specific end use(s)**

Specific use(s): No information available.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical name</th>
<th>As</th>
<th>Exposure limits</th>
<th>Type</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>141-78-6</td>
<td>Ethyl acetate</td>
<td>-</td>
<td>400 ppm</td>
<td>1400 mg/m³</td>
<td>TWA</td>
<td>-</td>
</tr>
<tr>
<td>141-78-6</td>
<td>Ethyl acetate</td>
<td>-</td>
<td>400 ppm</td>
<td>TWA</td>
<td>-</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

Exposure controls

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. An eye wash bottle must be available at the work site.

Personal protection: Personal protection equipment should be chosen according to the ANSI standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment: In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment. Use respiratory equipment with gas filter, type A2.

Hand protection: Wear protective gloves. Polyethylene gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Breakthrough time: >480 min (*)

Eye protection: Wear face shield if there is risk of splashes.

Skin protection: Wear apron or protective clothing in case of splashes.

Hygiene measures: Wash hands after handling.

Environmental Exposure Controls: Not available.
### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form:</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Color:</strong></td>
<td>Colorless</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>odor of alcohol</td>
</tr>
<tr>
<td><strong>Odor threshold:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>pH:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Melting point:</strong></td>
<td>-117.4°F</td>
</tr>
<tr>
<td><strong>Boiling point:</strong></td>
<td>170.6°F</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>24.8°F</td>
</tr>
<tr>
<td><strong>Evaporation rate:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas):</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td>2.1-11.5 vol%</td>
</tr>
<tr>
<td><strong>Vapor pressure:</strong></td>
<td>93 hPa (68°F)</td>
</tr>
<tr>
<td><strong>Vapor density:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Relative density:</strong></td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>partly soluble in water</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>0.73 (68°F)</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature (°F):</strong></td>
<td>860°F</td>
</tr>
<tr>
<td><strong>Decomposition temperature (°F):</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td>Dynamic viscosity: 0.44 mPa*s (68°F)</td>
</tr>
<tr>
<td><strong>Explosive properties:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Oxidizing properties:</strong></td>
<td>Not available</td>
</tr>
</tbody>
</table>

**Other information**

**Other data:** Volatile Organic Compound (VOC): 902 g/l (calculated)
SECTION 10: STABILITY AND REACTIVITY

Reactivity
Reactivity: No data available.

Chemical stability
Stability: Stable under normal temperature conditions.

Possibility of hazardous reactions
Hazardous Reactions: No data available.

Conditions to avoid
Conditions/materials to avoid: Avoid heat, flames and other sources of ignition.

Incompatible materials
Incompatible materials: Strong oxidizing substances.

Hazardous decomposition products
Hazardous decomposition products: No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute Toxicity (Oral): Based on available data, the classification criteria are not met.
Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.
Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.
Skin Corrosion/Irritation: Based on available data, the classification criteria are not met.
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitization: Based on available data, the classification criteria are not met.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
National Toxicology Program (NTP): No.
I.A.R.C. Monographs: No.
OSHA: No.
Reproductive Toxicity: Based on available data, the classification criteria are not met.
STOT - Single exposure: May cause drowsiness or dizziness.
STOT - Repeated exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.
Inhalation: Vapors and spray mist may irritate throat and respiratory system and cause coughing. In high concentrations, vapors are narcotic and may cause headache, fatigue, dizziness and nausea.
Skin contact: Prolonged contact may cause redness, irritation and dry skin.
Ingestion: May irritate and cause malaise.
Specific effects: Prolonged or frequent inhalation of vapors in high concentrations may cause permanent damage to the nervous system, including the brain.
SECTION 12: ECOLOGICAL INFORMATION

Toxicity
Ecotoxicity: The environmental hazard of the product is considered to be limited.

Persistence and degradability
Degradability: The degradability of the product has not been stated.

Bioaccumulative potential
Bioaccumulative potential: Partition coefficient (n-octanol/water): 0.73 (68°F)

Mobility in soil
Mobility: No data available.

Results of PBT and vPvB assessment
PBT/vPvB: No information available.

Other adverse effects
Other adverse effects: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Waste from residues: Dispose of waste and residues in accordance with local authority requirements.
RCRA: Waste number: U112
Contaminated packaging: Dispose of waste and residues in accordance with local authority requirements.
SECTION 14: TRANSPORT INFORMATION

The product is covered by international regulation on the transport of dangerous goods (IMDG, IATA).

**UN number**

UN-No: 1173

**UN proper shipping name**

Proper Shipping Name: ETHYL ACETATE

Additional IMDG information:

EmS: F-E, S-D

MFAG: 1

**Transport hazard class(es)**

Class: 3

**Packing group**

PG: II

**Environmental hazards**

Marine pollutant: No.

Environmentally Hazardous substance: No.

**Special precautions for user**

Special precautions: None known.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Transport in bulk: Not relevant.
SECTION 15: REGULATORY INFORMATION

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

**Special provisions:**
State and local regulation may apply.

TSCA: Listed.

NFPA Rating: Health:1 Fire:3 Reactivity:0 Other:-

SARA Section 302: No.
SARA Section 304: Yes.
SARA Section 313: No.
SARA (311/312) Hazard categories: Yes.

**National regulation:**
The following lists have been checked:
Threshold Limit Values (2019), ACGIH, by the American Conference on Governmental Industrial Hygienists.
NIOSH Pocket Guide to Chemical Hazards.
The Code of Federal Regulation, Title 40, part 261.33. Identification and listing of hazardous waste.
SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 1, 8.
The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

[Signature]

Allan Vorup

Abbreviations and acronyms used in the safety data sheet:
PBT = Persistent, Bioaccumulative and Toxic.
vPvB = very Persistent and very Bioaccumulative.

Additional information: Classification according to HCS 2012:
Calculation method.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark.