SAFETY DATA SHEET

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

1.1. **Product identifier:**
Thermo Liquid

Article number: 106310

Chemical description: 1,2,3-Propanetriol
CAS number: 56-81-5
EC number: 200-289-5
Registration number: Exception from the registration according to Annex II No. 9 of Regulation (EC) No 987/2008 amending Regulation (EC) No 1907/2006 on the registration, evaluation, authorization and restriction of chemical substances (REACH) with regard to Annexes IV and V.

1.2. **Relevant identified uses of the substance and uses advised against:**
Polymerization liquid for professional use.

1.3. **Details of the supplier of the safety data sheet:**

Information about the manufacturer:
Invicon Chemical Solutions GmbH
Schweizerstrasse 96
A-6830 Rankweil
Tel: +43-(0)5522-45301
E-mail: office@invicon.at

1.3.1. Responsible person: -
E-mail: office@invicon.at

1.4. **Emergency telephone number:** +43-(0)5522-45301 (during business hours)

SECTION 2: HAZARDS IDENTIFICATION

2.1. **Classification of the substance or mixture:**

Classification according to Regulation (EC) No 1272/2008 (CLP):

Not considered as hazardous substance.

Hazard statement: No hazard statements.

2.2. **Label elements:**

Chemical description: 1,2,3-Propanetriol
CAS number: 56-81-5
EC number: 200-289-5

Hazard statement: No hazard statements.

Precautionary statements: No precautionary statements.

2.3. **Other hazards:**
No other known specific hazards for human or environment.
Results of PBT and vPvB assessment: Not applicable.
Endocrine disrupting property: Not an endocrine disruptor.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. **Substances:**

Chemical description: 1,2,3-Propanetriol
INCI name: Glycerin
CAS number: 56-81-5
EC number: 200-289-5

SECTION 4: FIRST AID MEASURES

4.1. **Description of first aid measures:**

General information: No special measures are required.

INGESTION:

Measures:

- Rinse mouth and drink plenty of water.
- If symptoms persist, obtain medical help.

INHALATION:

Measures:

- Remove to fresh air.
- Obtain medical help.

SKIN CONTACT:

Measures:

- Generally, the product does not irritate the skin.
- Wash immediately with water and soap and flush thoroughly.

EYE CONTACT:

Measures:

- In case of contact with eyes flush immediately with plenty of flowing water holding eyelids apart.
- If symptoms persist, obtain medical help.

4.2. **Most important symptoms and effects, both acute and delayed:**

No acute and delayed symptoms and effects known.

4.3. **Indication of any immediate medical attention and special treatment needed:**

No special treatment needed; treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. **Extinguishing media:**

5.1.1. **Suitable extinguishing media:**

Carbon dioxide, dry powder, alcohol-resistant foam, water spray.

5.1.2. **Unsuitable extinguishing media:**

Full water jet.
Do not use full water jet on the burning product, because it can disperse and spread fire.

5.2. **Special hazards arising from the substance or mixture:**

Flammable. Vapors heavier than air cause coughing. In case of intense heating, the formation of explosive mixtures is possible. At elevated temperatures there is a risk of exothermic polymerisation (> 200 °C). Acrolein can be formed at temperatures above 280 °C.
In case of fire smoke and other combustion products may be formed, their inhalation can cause serious health damage.

5.3. **Advice for firefighters:**

Wear full protective clothing and self-contained breathing apparatus.
Cool the affected containers with water spray.
Avoid contact with oxidizing agents.
Avoid breathing dust/fume/gas/mist/vapor/spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. **Personal precautions, protective equipment and emergency procedures:**

6.1.1. **For non-emergency personnel:**
Allow only well-trained experts wearing suitable protective clothing to abide in the field of accident.

6.1.2. **For emergency responders:**
Use suitable protective equipment (Section 8).
Do not inhale vapors/aerosols.
Do not touch or walk through the spilled oil.

6.2. **Environmental precautions:**
Product and the resulting waste must be treated according to the applicable environmental regulations. Do not allow product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

6.3. **Methods and material for containment and cleaning up:**
Collect with inert absorbent material (e.g. sand, diatomite, acid binder or universal binding agent).
Stop leaks if possible.
No hazardous substances are released.

6.4. **Reference to other sections:**
For further and detailed information see section 7, 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. **Precautions for safe handling:**
Observe conventional hygiene precautions.
When using do not eat, drink, smoke or take drugs.
Protect from heat and direct sunlight.
The usual precautions for handling chemicals should be observed.
Keep in the original container or an approved alternative container made of compatible material.
Technical measures:
When handling heavy containers, safety shoes and suitable tools must be used.
Precautions against fire and explosion:
Keep away from heat, sparks and flames.
Avoid contact with oxidizing agents.

7.2. **Conditions for safe storage, including any incompatibilities:**
Technical measures and storage condition
During storage, the applicable regulations for the storage of water-polluting substances according to the water hazard class must be observed (e.g. WHG, AwSV, fire-fighting water retention guidelines, etc.).
Store only in the original container.
Store at room temperature.
Always keep container closed to protect against moisture penetration.
Keep away from oxidizing agents.
Protect from heat and direct sunlight.
Keep container tightly sealed.
Do not store in unlabelled containers.
Maximum storage temperature: Do not store above 55 °C.
Incompatible materials: See Section 10.5.
Packaging material: No specific instructions available.

7.3. **Specific end use(s):**
No specific instructions available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. **Control parameters:**

Occupational exposure limit values (Commission Directive (EC) No 2000/39 of 8 June 2000):
The substance is not regulated with exposure limit value.

DNEL values		Oral exposure		Dermal exposure		Inhalative exposure	
		Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)
Consumer	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	no data	no data	no data
Worker	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	no data	no data	no data

PNEC values		
Compartment	Value	Note(s)
Freshwater	no data	no notes
Marine water	no data	no notes
Freshwater sediment	no data	no notes
Marine water sediment	no data	no notes
Sewage treatment plant (STP)	no data	no notes
Intermittent release	no data	no notes
Secondary poisoning	no data	no notes
Soil	no data	no notes

8.2. **Exposure controls:**

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1. **Appropriate engineering controls:**

In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin.

8.2.2. **Individual protection measures, such as personal protective equipment:**

The usual precautionary measures for handling chemicals should be followed.
Wash hands and/or face before eating, drinking, smoking, using the toilet and at the end of work.
Wash contaminated clothing before re-use.
Wear non-slipping safety shoes.
The information regarding personal protective equipment is only for informative purposes. A complete risk assessment is required before the use of the product for the determination of the appropriate personal protective equipment, taking local circumstances into account.

1. **Eye/face protection:** Protective goggles are recommended during refilling (EN ISO 16321-1:2022; EN 166).
2. **Skin protection:**
    a. **Hand protection:** Not required.
    b. **Other:** No specific prescription.
3. **Respiratory protection:** Respiratory protection is required if vapours/aerosols are released.
4. **Thermal hazard:** No thermal hazards known.

8.2.3. **Environmental exposure controls:**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. **Information on basic physical and chemical properties:**

	Parameter	Value / Test method / Remarks
1.	Physical state	viscous liquid
2.	Colour	colourless
3.	Odour, odour threshold	odourless
4.	Melting point/freezing point	ca. 18 °C
5.	Boiling point or initial boiling point and boiling range	ca. 290 °C
6.	Flammability	no data*
7.	Lower and upper explosion limit	no data*

8.	Flash point	ca. 175 °C
9.	Auto-ignition temperature	no data*
10.	Decomposition temperature	no data*
11.	pH	neutral
12.	Kinematic viscosity	no data*
13.	Solubility in water in other solvents	completely miscible no data*
14.	Partition coefficient n-octanol/water (log value)	no data*
15.	Vapour pressure	no data*
16.	Density and/or relative density	ca. 1.26 g/cm³ (20 °C)
17.	Relative vapour density	no data*
18.	Particle characteristics	no data*

9.2. **Other information:**

9.2.1. **Information with regard to physical hazard classes:**
Explosive properties: The product is not explosive.
Ignition temperature: > 400 °C

9.2.2. **Other safety characteristics:**
Dynamic viscosity: 990-1400 mPas (at 20 °C).

*: The manufacturer did not carry out any tests on this parameter for the product or the results of the tests are not available at the time of publication of the data sheet, or the property is not applicable for the product.

SECTION 10: STABILITY AND REACTIVITY

10.1. **Reactivity:**
No reactivity known.

10.2. **Chemical stability:**
Stable at ambient temperature.

10.3. **Possibility of hazardous reactions:**
Reactive with oxidizing agents.
The reaction with strongly dehydrating agents (sulphuric acid) produces acrolein (toxic, irritating).

10.4. **Conditions to avoid:**
Temperatures > 200 °C (polymerisation, product decomposes).

10.5. **Incompatible materials:**
No incompatible materials known.

10.6. **Hazardous decomposition products:**
Acrolein can form at very high temperatures (> 280 °C).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. **Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
Acute toxicity: Based on the available data, the classification criteria are not met.
Skin corrosion/irritation: Based on the available data, the classification criteria are not met.
Serious eye damage/irritation: Based on the available data, the classification criteria are not met.
Respiratory or skin sensitisation: Based on the available data, the classification criteria are not met.
Germ cell mutagenicity: Based on the available data, the classification criteria are not met.
Carcinogenicity: Based on the available data, the classification criteria are not met.
Reproductive toxicity: Based on the available data, the classification criteria are not met.
STOT-single exposure: Based on the available data, the classification criteria are not met.
STOT-repeated exposure: Based on the available data, the classification criteria are not met.
Aspiration hazard: Based on the available data, the classification criteria are not met.

11.1.1. **Summaries of the information derived from the test conducted:**
No data available.

11.1.2. **Relevant toxicological properties:**
Acute toxicity:
LD/LC50 values relevant for classification:
LD50 (oral, rat): > 12600 mg/kg
LD50 (dermal; rabbit): > 18700 mg/kg

Primary irritant effect:
- Skin corrosion/irritation: Slight irritation is possible (literature data).
- Serious eye damage/eye irritation: Slight irritation is possible (literature data).
- Inhalation: Slightly irritating due to drying of the mucosa.

Respiratory or skin sensitisation:
No sensitizing effects known.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):
The available data show no evidence of carcinogenic, mutagenic or teratogenic effects.
- Germ cell mutagenicity Ames test: No mutagenic effect.

11.1.3. Information on likely routes of exposure:
Ingestion, inhalation, skin and eye contact.

11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:
After the ingestion of larger quantities: Vomiting, stomach pain, headache, diarrhea, dizziness.

11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:
Based on our experiences and the available information, in case of proper use and handling, no adverse effects on health can be expected.

11.1.6. Interactive effects:
No data available.

11.1.7. Absence of specific data:
No information.

11.2. Information on other hazards:

Endocrine disrupting properties:
Endocrine disrupting property: Not an endocrine disruptor.

Other information:
RTECS number: MA 8050000
EC food additive number: E422

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:
The substance is not classified as dangerous for the environment.
Acute toxicity to fish:
LC50 (96 hours) > 1000 mg/l
LC50 (24 hours) > 5000 mg/l (literature data, based on the pure substance)
Acute toxicity to bacteria:
EC50 (72 hours): > 10000 mg/l (literature data)
EC5 (16 hours): > 10000 mg/l (literature data, based on the pure substance)
Toxicity to Algae:
EC50 (48 hours): > 2900 mg/l (literature data)
IC5 (7 days): > 10000 mg/l (literature data, based on the pure substance)

12.2. Persistence and degradability:
The product is biodegradable.

12.3. Bioaccumulative potential:
No data available.

12.4. Mobility in soil:
No data available.

12.5. Results of PBT and vPvB assessment:
Not applicable.

12.6. Endocrine disrupting properties:
Endocrine disrupting property: Not an endocrine disruptor.

12.7. Other adverse effects:
Do not enter into ground/surface water or into sewers.
Drinking water can be endangered if large amounts enter the soil or the water cycle.
Water hazard class (WGK, German regulation, self-classification): 1 - slightly hazardous for water

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. **Waste treatment methods:**
Disposal according to the local regulations.

13.1.1. **Information regarding the disposal of the product:**
Recommendation:
Disposal according to the local regulations.
Hand over to the hazardous waste collector or transfer to a collection point for hazardous substances.
Can be incinerated in waste incineration plants.
List of Waste Code:
13 08 99 oil wastes not otherwise specified

13.1.2. **Information regarding the disposal of the packaging:**
Recommendation:
Dispose of according to applicable legislation.
Only give completely empty containers to an approved waste disposal company.
Recommended cleaning agent:
Water, with the addition of cleaning and/or neutralizing agents if necessary.

13.1.3. **Physical/chemical properties that may affect waste treatment options shall be specified:**
No data available.

13.1.4. **Sewage disposal:**
No data available.

13.1.5. **Special precautions for any recommended waste treatment:**
No data available.

SECTION 14: TRANSPORT INFORMATION

ADR; ADN; IMDG; IATA:
Not subject to the conventions of carriage of dangerous goods.

14.1. **UN number or ID number:**
No UN Number.

14.2. **UN proper shipping name:**
No proper shipping name.

14.3. **Transport hazard class(es):**
No transport hazard classes.

14.4. **Packing group:**
No packing group.

14.5. **Environmental hazards:**
Not applicable.

14.6. **Special precautions for user:**
No further relevant information available.

14.7. **Maritime transport in bulk according to IMO instruments:**
Not applicable.

SECTION 15: REGULATORY INFORMATION

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

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive (EC) No 1999/45 and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive (EEC) No 76/769 and Commission Directives (EEC) No 91/155, (EEC) No 93/67, (EC) No 93/105 and (EC) No 2000/21

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives (EEC) No 67/548 and (EC) No 1999/45, and amending Regulation (EC) No 1907/2006

COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

15.2. **Chemical safety assessment:** A chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Information regarding the revision of the safety data sheet:
The safety data sheet has been revised according to Regulation (EU) 2020/878 (Section 1-16).
The hazard classification of the substance did not change compared to the previous version.

This safety data sheet supersedes all previous versions according to Annex II of Regulation (EC) No 1907/2006.

Literature references / data sources:
Previous version of the safety data sheet (30. 10. 2020, version 1)
Safety data sheet issued by the manufacturer (11. 11. 2022, version 1, IT)

Relevant hazard statements (code and full text) of Sections 2 and 3: No relevant statements.

Training advice: None data available.

Full text of the abbreviations in the safety data sheet:
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE: Acute Toxicity Estimate.
AOX: Adsorbable organic halides.
BCF: Bioconcentration factor.
BOD: Biological Oxygen Demand.
CAS number: Chemical Abstract Service number.
CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
CMR effects: Carcinogenic, mutagenic, reprotoxic effects.
COD: Chemical Oxygen Demand.
CSA: Chemical safety assessment.
CSR: Chemical safety report.
DNEL: Derived-No-Effect-Level.
ECHA: European Chemical Agency.
EC: European Community.
EC number: EINECS and ELINCS numbers (see also EINECS and ELINCS).
EEC: European Economic Community.
EEA: European Economic Area (EU + Iceland, Liechtenstein and Norway).
EINECS: European Inventory of Existing Commercial Chemical Substances.
ELINCS: European List of Notified Chemical Substances.
EN: European Norm.
EU: European Union.
EuPCS: European Product Categorisation System.
EWC: European Waste Catalogue (replaced by LoW – see below).
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
IATA: International Air Transport Association.
ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
IMO: International Maritime Organization.
IMSBC: International Maritime Solid Bulk Cargoes.
IUCLID: International Uniform Chemical Information Database.
IUPAC: International Union of Pure and Applied Chemistry.
Kow: n-Octanol - Water Partition Coefficient.
LC50: Lethal concentration resulting in 50 % mortality.
LD50: Lethal dose resulting in 50 % mortality (median lethal dose).
LoW: List of Waste.
LOEC: Lowest Observed Effect Concentration.
LOEL: Lowest Observed Effect Level.
NOEC: No Observed Effect Concentration.

NOEL: No Observed Effect Level.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
OECD: Organization for Economic Cooperation and Development.
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, bioaccumulative and toxic.
PNEC: Predicted No Effect Concentration.
QSAR: Quantitative Structure Activity Relationship.
REACH: Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.
SCBA: Use self-contained breathing apparatus.
SDS: Safety Data Sheet.
STOT: Specific Target Organ Toxicity.
SVHC: Substances of Very High Concern.
UN: United Nations.
UVCB: Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials.
VOC: Volatile Organic Compound.
vPvB: Very Persistent, Very Bioaccumulative.

This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations.
The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information.
The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required.
Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product.
It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.

Safety data sheet was prepared by:
MSDS-Europe
International branch of ToxInfo Kft.

Professional help regarding the explanation of the safety data sheet:
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