

Lenz Elektronik GmbH
35398 Giessen

Date printed 04.02.2026, Revision 03.02.2026

Version 1.0

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

1.1 Product identifier

Lenz Liquid

Registration number	01-2119456810-40-XXXX
IUPAC	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
EINECS/ELINCS	920-901-0

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

1.2.1 Relevant uses

Steam generation in smoke generators for the model railway

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company	Lenz Elektronik GmbH Vogelsang 14 35398 Giessen / GERMANY Phone + 049 6403 900 10 Fax +49 (0) 6403 900 155 Homepage www.lenz-elektronik.de E-mail info@lenz-elektronik.de
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Address enquiries to

Technical information	info@lenz-elektronik.de
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Safety Data Sheet	sdb@chemiebuero.de (No dispatch of safety data sheets) Safety data sheets are available from the supplier.
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1.4 Emergency telephone number

Advisory body	145 (24h)
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SECTION 2: Hazards identification

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

Asp. Tox. 1: H304 May be fatal if swallowed and enters airways.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms



Signal word

DANGER

Contains:

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics EINECS: 920-901-0

Hazard statements

H304 May be fatal if swallowed and enters airways.

Precautionary statements

P102 Keep out of reach of children.
P260 Do not breathe vapours.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor / ...
P331 Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of water / soap.
P501 Dispose of contents/container in accordance with local/national regulation.

Special labelling

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

Human health dangers

Contains no ingredients with endocrine-disrupting properties.

Environmental hazards

Does not contain any PBT or vPvB substances.

Other hazards

Further hazards were not determined with the current level of knowledge.

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SECTION 3: Composition / Information on ingredients

3.1 Substances

The product is a substance.

Range [%]	Substance
100	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
	EINECS/ELINCS: 920-901-0, Reg-No.: 01-2119456810-40-XXXX
	GHS: Asp. Tox. 1: H304 - EUH066

Comment on component parts

For full text of H-statements: see SECTION 16.

3.2 Mixtures

not applicable

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove contaminated soaked clothing immediately and dispose of safely.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
In the event of symptoms seek medical treatment.

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

Rinse out mouth and give plenty of water to drink.
Beware of vomiting. Risk of aspiration.
Seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

Headache
Nausea, vomiting.

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), not combusted hydrocarbons

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.
Ensure adequate ventilation.
Keep away from all sources of ignition.

6.2 Environmental precautions

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

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6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 7+8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with eyes and skin. Use personal protective equipment.
Keep away from sources of ignition - refrain from smoking.
Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Provide solvent-resistant and impermeable floor.
Do not store together with food and animal food/diet.
Protect from heat/overheating and from sun.
Recommended storage temperature: 5-25 °C (41-77 °F).

Storage class

LK 10/12

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 (CH)

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
EINECS/ELINCS: 920-901-0, Reg-No.: 01-2119456810-40-XXXX
Long-term exposure: 100 ppm, 525 mg/m ³ , OSHA

DNEL

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
There are no DNEL values established for the substance.

PNEC

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
There are no PNEC values established for the substance.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	0,7 mm; Butyl rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Solvent-resistant protective clothing (EN 340)
Other	Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols.
Respiratory protection	Respiratory protection mask in the event of high concentrations. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	clear
Odor	characteristic
Odour threshold	not determined
pH-value	not determined
pH-value [1%]	not determined
Boiling point or initial boiling point and boiling range [°C]	189 - 206
Flash point [°C]	67
Flammability	no
Lower explosion limit	0,6 Vol%
Upper explosion limit	6 Vol%
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	0,04
Density [g/cm³]	0,76 (15 °C / 59,0 °F)
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water [g/L]	immiscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	log Pow: 1,99 – ≤7,22
Kinematic viscosity	1,77 mm²/s (20 °C)
Relative vapour density	< 1
Melting point [°C]	< - 114
Auto-ignition temperature [°C]	> 201
Decomposition temperature [°C]	not determined
Particle characteristics	not applicable

9.2 Other information

Temperature class (ATEX): T3

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Forms explosive mixtures with air on intense heating.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Reactions with strong oxidizing agents, strong acids and alkalis.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

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SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
LD50, oral, Rat, > 5000 mg/kg, OECD 401

Acute dermal toxicity

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
LD50, dermal, Rabbit, > 5000 mg/kg, OECD 402

Acute inhalational toxicity

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
LC50, inhalativ (mist), Rat, > 5600 mg/m ³ /4h, OECD 403
LC50, inhalation (vapour), Rat, > 4951 mg/m ³ /4h, OECD 403, no adverse effect observed

Serious eye damage/irritation

Based on the available information, the classification criteria are not fulfilled.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
Rabbit, in vivo, OECD 405, non-irritating

Skin corrosion/irritation

Based on the available information, the classification criteria are not fulfilled.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
Rabbit, in vivo, OECD 404, non-irritating

Respiratory or skin sensitisation

Based on the available information, the classification criteria are not fulfilled.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
inhalative, non-sensitizing
dermal, Guinea pig, OECD 406, non-sensitizing

Specific target organ toxicity — single exposure

Based on the available information, the classification criteria are not fulfilled.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
no adverse effect observed

Specific target organ toxicity — repeated exposure

Based on the available information, the classification criteria are not fulfilled.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
NOAEL, oral, Rat, 1000 mg/kg bw/day, no adverse effect observed
NOAEC, inhalative, Rat, 10.4 mg/L, no adverse effect observed

Mutagenicity

Based on the available information, the classification criteria are not fulfilled.
Based on the available information, the classification criteria are not fulfilled.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
in vitro, negative
in vivo, negative

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Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

- **Fertility** No information available.

- **Development**

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
OECD 414, no adverse effect observed (by analogy with similar substances)

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
OECD 453, no adverse effect observed

Aspiration hazard May be fatal if swallowed and enters airways.
Based on the available information, the classification criteria are fulfilled.
On basis of test data

General remarks

Toxicological data of complete product are not available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties Contains no ingredients with endocrine-disrupting properties.

11.2.2 Other information none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
EL0, (48h), Daphnia magna, 1000 mg/L
EL0, (72h), Pseudokirchneriella subcapitata, 1000 mg/L
NOELR, (72h), Pseudokirchneriella subcapitata, 1000 mg/L
NOELR, (21d), Daphnia magna, 1 mg/L
LL0, (96h), Oncorhynchus mykiss, 1000 mg/L

12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability The product is partially biodegradable.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
(28d), 31,3 %, Inherently biologically degradable

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
Koc, 51,29 - 354 813,39
log Koc, 1,71 - 5,95

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12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment.

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

Dispose of as hazardous waste.

Waste no. (recommended)

070104*

Contaminated packaging

Contaminated packing should be disposed of as product waste.

Waste no. (recommended)

150110* packaging containing residues of or contaminated by hazardous substances

VeVa Code

070104 S

SECTION 14: Transport information

14.1 UN number or ID 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"

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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

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 Maritime transport in bulk according to IMO instruments

not applicable

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SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 2024/573; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances $\geq 0.1\%$ that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances $\geq 0.1\%$ that are restricted.
TRANSPORT-REGULATIONS	ADR (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2026, 67th Edition)
NATIONAL REGULATIONS (CH):	Chemicals Ordinance - ChemO; Chemical Risk Reduction Ordinance (ORRChem); Ordinance on Protection against Major Accidents - MAO; Ordinance on Movement of Waste - OMW; Ordinance of the FDHA on aerosol dispensers
- VOC-part [%]	90 %
Regulation on Protection against Major Accidents (StFV):	without limit
- Observe employment restrictions for people	The Youth Employment Protection Ordinance and the EVD Ordinance on Hazardous Work for Young People define chemical substances with which young people up to the age of 18 may only come into contact with or be exposed to during their work if the Federal Office for Vocational Education and Training (BBT) or the State Secretariat for Economic Affairs (SECO) has granted an exemption. The Maternity Protection Ordinance defines chemical substances with which pregnant women and breastfeeding mothers may only come into contact or be exposed at work if a risk assessment by a specialist confirms that, in the context of the activities and the protective measures taken, the exposure will not lead to any harm to mother and child.
- VOC (2010/75/CE)	90 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H304 May be fatal if swallowed and enters airways.
H304 May be fatal if swallowed and enters airways.

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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
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
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
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
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
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

Asp. Tox. 1: H304 May be fatal if swallowed and enters airways. (Calculation method)

Modified position

none

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