according to Regulation (EC) No. 1907/2006 - FI



Klübersynth GEM 4-100 N (H)

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

1.1 Product identifier

Product name : Klübersynth GEM 4-100 N (H)

Article-No. : 012377

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

Use of the Sub- : Lubricating oil

stance/Mixture

Recommended restrictions

on use

Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company : Klüber Lubrication München

Geisenhausenerstr. 7 81379 München Deutschland

Tel: +49 (0) 89 7876 0 Fax: +49 (0) 89 7876 333 info@klueber.com

E-mail address of person : mcm@klueber.com

responsible for the SDS Material Compliance Management

National contact : Klüber Lubrication Nordic A/S

c/o Azets Insight Oy Elielinaukio 5 B 00100 Helsinki

Finland

Tel: +358 207 497 970 Fax: +358 207 497 970 klueber.fi@fi.klueber.com

1.4 Emergency telephone number

Emergency telephone num: :

09-471 977 Myrkytystietokeskus (24 h) tai 112

ber

0049 (0) 897876-700 (24hrs)



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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Additional Labelling

EUH210 Safety data sheet available on request.

EUH208 Contains amines, C10-14-tert-alkyl. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Synthetic hydrocarbon oil

ester oil

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration limits M-Factor Notes	Concentration (% w/w)
amines, C10-14-tert- alkyl	701-175-2	Acute Tox.4; H302 Acute Tox.2; H330 Acute Tox.3; H311 Skin Corr.1B;	M-Factor: 1/1	>= 0,025 - < 0,1
	01-2119456798-18- XXXX	H314 Eye Dam.1; H318 Skin Sens.1A; H317 STOT SE3; H335 Aquatic Acute1; H400 Aquatic Chronic1; H410		

For explanation of abbreviations see section 16.



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SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled Remove person to fresh air. If signs/symptoms continue, get

medical attention.

Keep patient warm and at rest.

If breathing is irregular or stopped, administer artificial respira-

In case of skin contact Remove contaminated clothing. If irritation develops, get med-

ical attention.

In case of contact, immediately flush skin with plenty of water.

Rinse immediately with plenty of water, also under the eyelids, In case of eye contact

for at least 10 minutes.

If eye irritation persists, consult a specialist.

If swallowed Move the victim to fresh air.

> Do NOT induce vomiting. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed

: No information available. **Symptoms**

Risks None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or car-

bon dioxide.

Unsuitable extinguishing

media

High volume water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion prod: Carbon oxides

ucts

5.3 Advice for firefighters

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Exposure to decomposi-

tion products may be a hazard to health.

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Further information : Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.

Use personal protective equipment.

Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Try to prevent the material from entering drains or water

courses.

Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages

cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible ab-

sorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local

/ national regulations (see section 13).

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the ap-

plication area.

Wash hands and face before breaks and immediately after

handling the product.

Hygiene measures : Wash face, hands and any exposed skin thoroughly after

handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in original container. Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with the particular national regulations. Keep in properly labelled containers.



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7.3 Specific end use(s)

Specific use(s) : Specific instructions for handling, not required.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
diisotridecyl adipate	Workers	Inhalation	Long-term systemic effects	24 mg/m3
	Workers	Skin contact	Long-term systemic effects	3,4 mg/kg bw/day
amines, C10-14-tert- alkyl	Workers	Inhalation	Long-term systemic effects	12,5 mg/m3
	Workers	Inhalation	Long-term local ef- fects	12,1 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
diisotridecyl adipate	Fresh water	0,00004 mg/l
	Intermittent use/release	1 mg/l
	Marine water	0,00004 mg/l
	Intermittent use/release	1 mg/l
	Sewage treatment plant	48 mg/l
	Fresh water sediment	40 mg/kg dry weight (d.w.)
	Marine sediment	40 mg/kg dry weight (d.w.)
	Soil	1 mg/kg dry weight (d.w.)
amines, C10-14-tert-alkyl	Fresh water	0,001 mg/l
	Marine water	0,0001 mg/l
	Intermittent use/release	0,004 mg/l
	Sewage treatment plant	0,635 mg/l
	Fresh water sediment	2,14 mg/l
	Marine sediment	0,214 mg/l
	Soil	0,428 mg/l
	Oral	4,71 mg/l

8.2 Exposure controls

Engineering measures

none

Personal protective equipment

Eye protection : Safety glasses with side-shields



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Hand protection

Material : Nitrile rubber
Break through time : > 10 min
Protective index : Class 1

Remarks : Wear protective gloves. The break through time depends

amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each

case.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374

derived from it.

Respiratory protection : Not required; except in case of aerosol formation.

Filter type : Filter type A-P

Protective measures : The type of protective equipment must be selected according

to the concentration and amount of the dangerous substance

at the specific workplace.

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the spe-

cific work-place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : yellow

Odour : characteristic

Odour Threshold : No data available

pH : Not applicable

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : > 200 °C

Method: open cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

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Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : < 0,001 hPa (20 °C)

Relative vapour density : No data available

Relative density : 0,85 (20 °C)

Reference substance: Water The value is calculated

Density : 0,85 g/cm3

(20 °C)

Bulk density : No data available

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 100 mm2/s (40 °C)

Explosive properties : Not explosive

Oxidizing properties : No data available

9.2 Other information

Sublimation point : No data available

Self-ignition : No data available

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SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No conditions to be specially mentioned.

10.5 Incompatible materials

Materials to avoid : No materials to be especially mentioned.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Remarks: This information is not available.

Acute inhalation toxicity : Remarks: This information is not available.

Acute dermal toxicity : Remarks: This information is not available.

Components:

amines, C10-14-tert-alkyl:

Acute oral toxicity : LD50 (Rat): 612 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 1,19 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): 251 mg/kg

Method: OECD Test Guideline 402



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Skin corrosion/irritation

Product:

Remarks : This information is not available.

Components:

amines, C10-14-tert-alkyl:

Assessment : Causes burns. Result : Causes burns.

Serious eye damage/eye irritation

Product:

Remarks : This information is not available.

Components:

amines, C10-14-tert-alkyl:

Species : Rabbit

Assessment : Risk of serious damage to eyes.

Method : OECD Test Guideline 405

Result : Irreversible effects on the eye

Respiratory or skin sensitisation

Product:

Remarks : This information is not available.

Components:

amines, C10-14-tert-alkyl:

Species : Guinea pig

Assessment : The product is a skin sensitiser, sub-category 1A.

Method : OECD Test Guideline 406

Result : Probability or evidence of high skin sensitisation rate in hu-

mans

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

amines, C10-14-tert-alkyl:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

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Test system: Chinese hamster ovary cells

Method: OECD Test Guideline 476

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium Method: OECD Test Guideline 471

Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration test in vitro

Species: Mouse

Application Route: Oral

Method: OECD Test Guideline 474

Result: negative

Germ cell mutagenicity- As-

sessment

Animal testing did not show any mutagenic effects.

Carcinogenicity

Product:

Remarks : No data available

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal develop-

ment

Remarks: No data available

Components:

amines, C10-14-tert-alkyl:

Effects on foetal develop-

ment

Species: Rat

Method: OECD Test Guideline 414

Result: No effects on fertility and early embryonic develop-

ment were detected.

Reproductive toxicity - As-

sessment

Animal testing did not show any effects on fertility.

Animal testing did not show any effects on foetal develop-

ment.

STOT - single exposure

Components:

amines, C10-14-tert-alkyl:

Assessment : May cause respiratory irritation.

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STOT - repeated exposure

Components:

amines, C10-14-tert-alkyl:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

Repeated dose toxicity

Product:

Remarks : This information is not available.

Components:

amines, C10-14-tert-alkyl:

Species : Rat
NOAEL : 19 mg/kg
Application Route : Inhalation
Test atmosphere : vapour

Method : OECD Test Guideline 412

Species : Rat
NOAEL : 20 mg/kg
Application Route : Skin contact

Method : OECD Test Guideline 410

Aspiration toxicity

Product:

This information is not available.

Components:

amines, C10-14-tert-alkyl:

No aspiration toxicity classification

Further information

Product:

Remarks : Information given is based on data on the components and

the toxicology of similar products.

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SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish Remarks: No data available

Toxicity to daphnia and other :

aquatic invertebrates

Remarks: No data available

Toxicity to algae/aquatic

plants

Remarks: No data available

Toxicity to microorganisms

Remarks: No data available

Components:

amines, C10-14-tert-alkyl:

LC50 (Oncorhynchus mykiss (rainbow trout)): 1,3 mg/l Toxicity to fish

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 2,5 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EC50 (Selenastrum capricornutum (green algae)): 0,44 mg/l

Exposure time: 72 h

Test Type: Growth inhibition

Method: OECD Test Guideline 201

M-Factor (Acute aquatic tox-

icity)

Toxicity to fish (Chronic tox-

icity)

NOEC: 0,078 mg/l Exposure time: 96 d

Species: Oncorhynchus mykiss (rainbow trout)

Method: OECD Test Guideline 210

M-Factor (Chronic aquatic

toxicity)

1

12.2 Persistence and degradability

Product:

Biodegradability Remarks: No data available

Physico-chemical removabil- : Remarks: No data available



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Components:

amines, C10-14-tert-alkyl:

Biodegradability : Inoculum: activated sludge

Concentration: 4 mg/l

Result: Not rapidly biodegradable

Biodegradation: 21,8 % Exposure time: 28 d

Method: OECD Test Guideline 301D

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: This mixture contains no substance considered to

be persistent, bioaccumulating and toxic (PBT).

This mixture contains no substance considered to be very

persistent and very bioaccumulating (vPvB).

Components:

amines, C10-14-tert-alkyl:

Partition coefficient: n-

octanol/water

: log Pow: 2,9 (20 °C)

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environ-

mental compartments

: Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher..

12.6 Other adverse effects

Product:

Endocrine disrupting poten-

tial

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to

REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

Additional ecological infor- : No information on ecology is available.

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mation

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water

courses or the soil.

Waste codes should be assigned by the user based on the

application for which the product was used.

Contaminated packaging : Packaging that is not properly emptied must be disposed of as

the unused product.

Dispose of waste product or used containers according to

local regulations.

The following Waste Codes are only suggestions:

Waste Code : unused product

13 02 06*, synthetic engine, gear and lubricating oils

uncleaned packagings

15 01 10, packaging containing residues of or contaminated

by hazardous substances

SECTION 14: Transport information

14.1 UN number

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR : Not regulated as a dangerous good RID : Not regulated as a dangerous good



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IMDG Not regulated as a dangerous good **IATA** Not regulated as a dangerous good

14.4 Packing group

ADR Not regulated as a dangerous good **RID** Not regulated as a dangerous good **IMDG** Not regulated as a dangerous good IATA (Cargo) Not regulated as a dangerous good IATA (Passenger) Not regulated as a dangerous good

14.5 Environmental hazards

ADR Not regulated as a dangerous good **RID** Not regulated as a dangerous good **IMDG** Not regulated as a dangerous good IATA (Passenger) Not regulated as a dangerous good IATA (Cargo) Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH),

Article 57).

REACH - List of substances subject to authorisation

(Annex XIV)

Not applicable

Regulation (EC) No 1005/2009 on substances that de-

plete the ozone layer

Not applicable

Regulation (EU) 2019/1021 on persistent organic pollu-

tants (recast)

Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import

of dangerous chemicals

Not applicable

REACH - Restrictions on the manufacture, placing on

the market and use of certain dangerous substances,

Not applicable



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preparations and articles (Annex XVII)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial

emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 0,14 %

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of H-Statements

H302 : Harmful if swallowed. H311 : Toxic in contact with skin.

H314 : Causes severe skin burns and eye damage.

H317 : May cause an allergic skin reaction.
H318 : Causes serious eve damage.

H330 : Fatal if inhaled.

H335 : May cause respiratory irritation.

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways: ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road: AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP -Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL -International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Speci-



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fied; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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