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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 : Lubricating oil

Substance/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 Yağlama Ürünleri San. Ve Tic. A.Ş.

Çerkezköy Organize Sanayi Bölgesi, Karaağaç Mah. 10. Sok. No: 7 Kapaklı / Tekirdağ / Türkiye Posta Kodu: PK 56,59500 Tel: +90-282-7581530

Tel: +90-282-7581530 Fax: +90-282-7582935 Email: kltr@tr.klueber.com

1.4 Emergency telephone number

Emergency telephone

number

0049 (0) 897876-700 (24hrs)

Ulusal Zehir Danışma Merkezi (UZDM): 114



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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification T.R. SEA No 28848

Not a hazardous substance or mixture.

2.2 Label elements

Labelling T.R. SEA No 28848

Not a hazardous substance or mixture.

Additional Labelling:

EUH210 Safety data sheet available on request.

EUH208 Contains Amines, C12-14-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

Hazardous components

Chemical name	CAS-No. EC-No.	Classification	Concentration limits M-Factor	Concentration (% w/w)
	Index-No.		Notes	
Amines, C12-14-tert- alkyl	68955-53-3 273-279-1	Acute Tox.4; H302 Acute Tox.2; H330 Acute Tox.3; H311 Skin Corr.1B; H314 Eye Dam.1; H318 Skin Sens.1A; H317 STOT SE3; H335 Aquatic Acute1; H400 Aquatic Chronic1; H410	M-Factor: 1/1	>= 0,025 - < 0,1



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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

respiration.

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

medical attention.

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

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

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

Symptoms : No information available.

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

carbon dioxide.

Unsuitable extinguishing

media

: High volume water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion

products

: Carbon oxides

5.3 Advice for firefighters

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.

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for firefighters Use personal protective equipment. Exposure to

decomposition products may be a hazard to health.

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

absorbent 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

application 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



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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.

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):

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 effects	12,1 mg/m3

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
diisotridecyl adipate	Fresh water	0,00004 mg/l
	Intermittent use/release	1 mg/l
	Marine water	0,000004 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



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8.2 Exposure controls

Engineering measures

none

Personal protective equipment

Eye protection : Safety glasses with side-shields

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.

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 specific 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



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Flash point : > 200 °C

Method: open cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

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

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Self-ignition : No data available

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, C12-14-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



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Method: OECD Test Guideline 403

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

Method: OECD Test Guideline 402

Skin corrosion/irritation

Product:

Remarks : This information is not available.

Components:

Amines, C12-14-tert-alkyl:

Assessment : Causes burns. Result : Causes burns.

Serious eye damage/eye irritation

Product:

Remarks : This information is not available.

Components:

Amines, C12-14-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, C12-14-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

humans

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available



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Remarks: No data available Genotoxicity in vivo

Components:

Amines, C12-14-tert-alkyl:

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

> 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-

Assessment

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 development

Remarks: No data available

Components:

Amines, C12-14-tert-alkyl:

Effects on foetal Species: Rat

Method: OECD Test Guideline 414 development

Result: No effects on fertility and early embryonic

development were detected.

Reproductive toxicity -

Assessment

Animal testing did not show any effects on fertility.

Animal testing did not show any effects on foetal

development.

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STOT - single exposure

Components:

Amines, C12-14-tert-alkyl:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Components:

Amines, C12-14-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, C12-14-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, C12-14-tert-alkyl:

No aspiration toxicity classification

Further information

Product:



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Remarks Information given is based on data on the components and

the toxicology of similar products.

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, C12-14-tert-alkyl:

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

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

toxicity)

: 1

Toxicity to fish (Chronic

toxicity)

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



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12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical

removability

Remarks: No data available

Components:

Amines, C12-14-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, C12-14-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 : Re

environmental 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...



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12.6 Other adverse effects

Product:

Additional ecological

information

: No information on ecology is available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

courses or the soil.

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)



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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

14.4 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

Regulation on Persistent Organic Pollutants (Number : Not applicable 30595)

KKDIK (30105 (Bis)) - Restrictions on the manufacture, : Not applicable placing on the market and use of certain dangerous substances, mixtures and articles (Annex 17)

Regulation on prevention of major industrial accidents. Reg number 30702 Not applicable

Other regulations:



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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 eye 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 Specified; 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-



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Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

SDS Author

Ethem Yiğit Sertifika No.: GBF01.21.06 22.12.2018

Tel.: +90 282 736 9016 Email: mcm@tr.klueber.com

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