

Klübersynth GEM 4-32 NH

| Version | Revision Date: | Date of last issue: 2019-11-12 | Print Date: |
|---------|----------------|---------------------------------|-------------|
| 2.6 | 2020-07-07 | Date of first issue: 2015-01-14 | 2020-07-07 |

1. PRODUCT AND COMPANY IDENTIFICATION

| Product name | : | Klübersynth GEM 4-32 NH |
|--|------|---|
| Article-No. | : | 012296 |
| Other names | : | None |
| Recommended use of the ch | em | ical and restrictions on use |
| Recommended use | : | Lubricating oil |
| Restrictions on use | : | Restricted to professional users. |
| Manufacturer or supplier's de | etai | ils |
| 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 responsible for the SDS | : | mcm@klueber.com Material Compliance Management |
| National contact | : | Klüber Lubrication China Limited Room 1012 Shatin Galleria 18-24 Shan Mei Street, Fotan, Shatin, N.T. Hong Kong China Phone: +852 26920191 Email: info@cn.klueber.com www.klueber.com.cn |
| Emergency telephone number | : | +886 2 8793 3212 |
| | | +49 89 7876 700 (24 hours) |
| | | |

2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.





| Version | Revision Date: | Date of last issue: 2019-11-12 | Print Date: |
|---------|----------------|---------------------------------|-------------|
| 2.6 | 2020-07-07 | Date of first issue: 2015-01-14 | 2020-07-07 |

GHS label elements

Not a hazardous substance or mixture.

Other hazards which do not result in classification

None known.

4.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Substance / Mixture | : | Mixture |
|---|-------|--|
| Chemical nature | : | Synthetic hydrocarbon oil ester oil |
| Hazardous components No hazardous ingredients | | |
| . FIRST AID MEASURES | | |
| First aid measures for diffe | erent | exposure routes |
| 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- tion. |
| 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. |
| 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. |
| Most important symptoms and effects, both acute and delayed | : | No information available. None known. |

5. FIREFIGHTING MEASURES

Notes to physician

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

: No information available.





Klübersynth GEM 4-32 NH

| niu | bersy | nth Geivi 4-32 NH | | | |
|-------------|---------------------------|---|-----|--|---------------------------|
| Vers 2.6 | sion | Revision Date: 2020-07-07 | | e of last issue: 2019-11-12 e of first issue: 2015-01-14 | Print Date: 2020-07-07 |
| | | | | | |
| | | | | bon dioxide. | |
| | Unsuit media | able extinguishing | : | High volume water jet | |
| | Specifi fighting | ic hazards during fire- g | : | Fire may cause evolution of: Carbon oxides | |
| | Specifi ods | ic extinguishing meth- | : | Standard procedure for chemical fires. | |
| | | al protective equipment fighters | : | In the event of fire, wear self-contained Use personal protective equipment. Exposure to decomposition products management. health. | |
| 6. A | CCIDE | NTAL RELEASE MEA | SUF | RES | |
| | tive eq | nal precautions, protec- uipment and emer- procedures | - : | Evacuate personnel to safe areas. Use personal protective equipment. Refer to protective measures listed in s | ections 7 and 8. |
| | 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. | |
| | | ds and materials for nment and cleaning up | : | Contain spillage, and then collect with r sorbent material, (e.g. sand, earth, diate miculite) and place in container for disp / national regulations (see section 13). | omaceous earth, ver- |
| 7. H | ANDLI | NG AND STORAGE | | | |
| | Handl | ina | | | |
| | | e on safe handling | : | For personal protection see section 8. Smoking, eating and drinking should be plication area. Wash hands and face before breaks an handling the product. | |
| | Storag | ge | | | |
| | - | ions for safe storage | : | Store in original container. | |

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.





Klübersynth GEM 4-32 NH

| Version | Revision Date: | Date of last issue: 2019-11-12 | Print Date: |
|---------|----------------|---------------------------------|-------------|
| 2.6 | 2020-07-07 | Date of first issue: 2015-01-14 | 2020-07-07 |

Store in accordance with the particular national regulations. Keep in properly labelled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| Components with workplac | e c | ontrol parameters |
|-----------------------------|------|---|
| Contains no substances with | occ | upational exposure limit values. |
| Engineering measures | : | none |
| Personal protective equipm | nent | t i i i i i i i i i i i i i i i i i i i |
| Respiratory protection | : | Not required; except in case of aerosol formation. |
| Filter type | : | Filter type A-P |
| 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. |
| Eye protection | : | Safety glasses with side-shields |
| 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 concen- tration and amount of dangerous substances, and to the spe- cific work-place. |
| Hygiene measures | : | Wash face, hands and any exposed skin thoroughly after handling. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Appearance | : | liquid |
|-----------------|---|-------------------|
| Colour | : | yellow |
| Odour | : | characteristic |
| Odour Threshold | : | No data available |





Klübersynth GEM 4-32 NH

| Vers 2.6 | sion | Revision Date: 2020-07-07 | | of last issue: 2019-11-12 of first issue: 2015-01-14 | Print Date: 2020-07-07 |
|-------------|---------------|--|-----|---|------------------------|
| | | | | | |
| | рН | | : | No data available | |
| | Melting | g point/range | : | No data available | |
| | Boiling | point/boiling range | : | No data available | |
| | Flash p | point | : | >= 200 °C | |
| | | | | Method: ISO 2592, open cup | |
| | Evapo | ration rate | : | No data available | |
| | Flamm | ability (solid, gas) | : | Not applicable | |
| | Self-ig | nition | : | No data available | |
| | | explosion limit / Upper ability limit | : | No data available | |
| | | explosion limit / Lower ability limit | : | No data available | |
| | Vapou | r pressure | : | < 0.001 hPa (20 °C) | |
| | Relativ | e vapour density | : | No data available | |
| | Densit | У | : | 0.85 g/cm3 (20 °C) | |
| | Bulk d | ensity | : | No data available | |
| | | ity(ies) ter solubility | : | insoluble | |
| | Sol | ubility in other solvents | 6 : | No data available | |
| | | on coefficient: n- I/water | : | No data available | |
| | Auto-iç | gnition temperature | : | No data available | |
| | Decom | position temperature | : | No data available | |
| | Viscos Vis | ity cosity, dynamic | : | No data available | |
| | Vis | cosity, kinematic | : | 32 mm2/s (40 °C) | |
| | Explos | ive properties | : | Not explosive | |
| | Oxidizi | ng properties | : | No data available | |





Klübersynth GEM 4-32 NH

| Versi 2.6 | ion | | | e of last issue: 2019-11-12 e of first issue: 2015-01-14 | Print Date: 2020-07-07 |
|--------------|----------------------|---------------------------|-------|---|---------------------------|
| : | Sublin | nation point | : | No data available | |
| 10. S | TABI | | (| | |
| | Reacti | ivity | : | No hazards to be specially mentioned | d. |
| | Chem | ical stability | : | Stable under normal conditions. | |
| | Possit tions | bility of hazardous reac- | : | No dangerous reaction known under | conditions of normal use |
| | Condi | tions to avoid | : | No conditions to be specially mention | ned. |
| | Incom | patible materials | : | No materials to be especially mention | ned. |
| | Hazar produc | dous decomposition cts | : | No decomposition if stored and applic | ed as directed. |
| 11. T | OXIC | OLOGICAL INFORMA | ΓΙΟΝ | l | |
| | Sympt | toms of Overexposure | : | No information available. | |
| | Acute | toxicity | | | |
| | Produ | ict: | | | |
| | Acute | oral toxicity | : | Remarks: This information is not avail | lable. |
| | Acute | inhalation toxicity | : | Remarks: This information is not avail | lable. |
| | Acute | dermal toxicity | : | Remarks: This information is not avail | lable. |
| : | Skin c | corrosion/irritation | | | |
| | Produ | ict: | | | |
| | Rema | rks | : | This information is not available. | |
| : | Seriou | us eye damage/eye irr | itati | on | |
| | Produ Rema | | : | This information is not available. | |
| | Respi | ratory or skin sensitis | atio | n | |
| | Produ Rema | | : | This information is not available. | |





Klübersynth GEM 4-32 NH

| rsion | Revision Date: 2020-07-07 | | e of last issue: 2019-11-12 e of first issue: 2015-01-14 | Print Date: 2020-07-07 |
|------------------------|--|-------|--|---------------------------|
| Chro | nic toxicity | | | |
| Germ | cell mutagenicity | | | |
| Produ | uct: | | | |
| Geno | toxicity in vitro | : | Remarks: No data available | |
| Geno | toxicity in vivo | : | Remarks: No data available | |
| Carci | nogenicity | | | |
| Prod | uct: | | | |
| Rema | arks | : | No data available | |
| Repro | oductive toxicity | | | |
| Prod | | | | |
| Effect | ts on fertility | | Remarks: No data available | |
| Effect ment | ts on foetal develop- | : | Remarks: No data available | |
| Repe | ated dose toxicity | | | |
| <u>Prod</u> Rema | | : | This information is not available. | |
| Aspir | ration toxicity | | | |
| <u>Produ</u> This i | uct: nformation is not avail | able. | | |
| Furth | er information | | | |
| Prod | | | | |
| Rema | arks | : | Information given is based on data the toxicology of similar products. | a on the components and |
| ECOL | OGICAL INFORMATI | ON | | |
| Ecoto | oxicity | | | |
| Produ | uct: | | | |
| Toxic | ity to fish | : | Remarks: No data available | |
| Toxic | ity to daphnia and oth | er : | | |

a brand of
FREUDENBERG



Klübersynth GEM 4-32 NH

| lubersyr | | | | |
|--------------------|-------------------------------------|------|---|--|
| ersion .6 | Revision Date: 2020-07-07 | | e of last issue: 2019-11-12 e of first issue: 2015-01-14 | Print Date: 2020-07-07 |
| | | | | |
| aquatic | invertebrates | | Remarks: No data available | |
| Toxicity | to algae | : | | |
| | | | Remarks: No data available | |
| Toxicity | to microorganisms | : | Remarks: No data available | |
| Persist | ence and degradabi | lity | | |
| Produc | <u>et:</u> | | | |
| Biodegr | radability | : | Remarks: No data available | |
| Physicc ity | o-chemical removabil- | : | Remarks: No data available | |
| Bioacc | umulative potential | | | |
| Produc | <u>:t:</u> | | | |
| Bioaccu | umulation | : | Remarks: This mixture contains n be persistent, bioaccumulating an This mixture contains no substand persistent and very bioaccumulati | d toxic (PBT). ce considered to be very |
| Mobilit | y in soil | | | |
| Produc | <u>:t:</u> | | | |
| Mobility | , | : | Remarks: No data available | |
| | tion among environ- compartments | : | Remarks: No data available | |
| Other a | dverse effects | | | |
| <u>Produc</u> | et: | | | |
| Additior mation | nal ecological infor- | : | No information on ecology is avail | able. |
| 3. DISPOS | AL CONSIDERATIO | NS | | |
| Dispos | al methods | | | |
| Waste f | from residues | : | The product should not be allowed | d to enter drains, water |

| 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. |
|------------------------|---|--|
|------------------------|---|--|



courses or the soil.



| Version | Revision Date: | Date of last issue: 2019-11-12 | Print Date: |
|---------|----------------|---------------------------------|-------------|
| 2.6 | 2020-07-07 | Date of first issue: 2015-01-14 | 2020-07-07 |

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Special precautions for user

Not applicable

15. REGULATORY INFORMATION

National regulatory information

Regulations on Occupational Safety and Health Facilities Standards for the Storage, Cleanup, Handling and Disposal of Industrial Waste

16. OTHER INFORMATION

| Responsible Department | : | Klüber Lubrication München Geisenhausenerstr. 7 81379 München Deutschland Tel: +49 (0) 89 7876 0 Fax: +49 (0) 89 7876 333 info@klueber.com |
|------------------------|---|--|
| Prepared by | : | mcm@klueber.com Material Compliance Management |
| Revision Date | : | 2020-07-07 |
| Date format | : | yyyy/mm/dd |

Full text of other abbreviations





| Version | Revision Date: | Date of last issue: 2019-11-12 | Print Date: 2020-07-07 |
|---------|----------------|---------------------------------|------------------------|
| 2.6 | 2020-07-07 | Date of first issue: 2015-01-14 | |

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

This safety data sheet applies only to products as originally packed and labelled. The information contained therein may not be reproduced or modified without our express written permission. Any forwarding of this document is only permitted to the extent required by law. Any further, in particular public, dissemination of the safety data sheet (e.g. as a document for download from the Internet) is not permitted without our express written consent. We provide our customers with amended safety data sheets as prescribed by law. The customer is responsible for passing on safety data sheets and any amendments contained therein to its own customers, employees and other users of the product. We provide no guarantee that safety data sheets received by users from third parties are up-to-date. All information and instructions in this safety data sheet have been compiled to the best of our knowledge and are based on the information available to us on the day of publication. The information provided is intended to describe the product in relation to the required safety measures; it is neither an assurance of characteristics nor a guarantee of the product's suitability for particular applications and does not justify any contractual legal relationship. The existence of a safety data sheet for a particular jurisdiction does not necessarily mean that import or use within that jurisdiction is legally permitted. If you have any questions, please contact your responsible sales contact or authorized trading partner.





| Version | Revision Date: | Date of last issue: 2019-11-12 | Print Date: |
|---------|----------------|---------------------------------|-------------|
| 2.6 | 2020-07-07 | Date of first issue: 2015-01-14 | 2020-07-07 |

