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



Klübersynth GEM 4-100 N (H)

Version	Revision Date:	Date of last issue: 2019-11-13	Print Date: 2021-
2.4	2021-04-13	Date of first issue: 2016-09-29	04-13

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	e s	ubstance or mixture and uses advised against	
Use of the Sub- stance/Mixture		Lubricating oil	
Recommended restrictions on use	:	Restricted to professional users.	
1.3 Details of the supplier of the s	saf	ety 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 responsible for the SDS	:	mcm@klueber.com Material Compliance Management	
National contact	:	Klüber Lubrication Nordic A/S Vasagatan 36 111 20 Stockholm Sweden Tel: +46 8 59098600 Fax: +46 8 59098601 klueber.se@se.klueber.com	
1.4 Emergency telephone numbe	r		
		112 - ask for poison information	

1

Emergency telephone num- ber	:	112 - ask for poison information
501		+49 89 7876 700 (24 hrs)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

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



Klübersynth GEM 4-100 N (H)

Version	Revision Date:	Date of last issue: 2019-11-13	Print Date: 2021-
2.4	2021-04-13	Date of first issue: 2016-09-29	04-13

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 01-2119456798-18- XXXX	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

For explanation of abbreviations see section 16.

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.



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



Klübersynth GEM 4-100 N (H)

Version 2.4	Revision Date: 2021-04-13		e of last issue: 2019-11-13 e of first issue: 2016-09-29	Print Date: 2021- 04-13
			If breathing is irregular or stopped, tion.	administer artificial respira
In ca	se of skin contact	:	Remove contaminated clothing. If in ical attention. In case of contact, immediately flus	
In ca	se of eye contact	:	Rinse immediately with plenty of wa for at least 10 minutes. If eye irritation persists, consult a sp	
lf swa	allowed	:	Move the victim to fresh air. Do NOT induce vomiting. Rinse mouth with water.	
		nd e	ffects, both acute and delayed	
Symp	otoms	:	No information available.	
Risks	6	:	None known.	
	ation of any immediate	meo	dical attention and special treatme No information available.	nt needed
Treat	inen	•		
SECTIO	N 5: Firefighting mea	sur	es	
5.1 Exting	guishing media			
Suita	ble extinguishing media	:	Use water spray, alcohol-resistant f bon dioxide.	ioam, dry chemical or car
Unsu medi	itable extinguishing a	:	High volume water jet	
5.2 Speci	al hazards arising from	n the	e substance or mixture	
Haza ucts	rdous combustion prod-	• :	Carbon oxides	
5.3 Advic	e for firefighters			
	ial protective equipment	t :	In the event of fire, wear self-contai	

for firefighters Use personal protective equipment. Exposure to decomposition products may be a hazard to health.

Further information : Standard procedure for chemical fires.



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



Klübersynth GEM 4-100 N (H)

Version	Revision Date:	Date of last issue: 2019-11-13	Print Date: 2021-
2.4	2021-04-13	Date of first issue: 2016-09-29	04-13

SECTION 6: Accidental release measures

6.1 Personal precautions, protectiv	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, ver- miculite) 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, inc	luding 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.
7.3 Specific end use(s) Specific use(s) :	Specific instructions for handling, not required.



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



Klübersynth GEM 4-100 N (H)

Version	Revision Date:	Date of last issue: 2019-11-13	Print Date: 2021-
2.4	2021-04-13	Date of first issue: 2016-09-29	04-13

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 ef- fects	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	0,000004 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

8.2 Exposure controls

Engineering measures		
none		
Personal protective equip	pment	
Eye protection	:	Safety glasses with side-shields
Hand protection Material Break through time Protective index	:	Nitrile rubber > 10 min Class 1



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



Klübersynth GEM 4-100 N (H)

Version 2.4	Revision Date: 2021-04-13	Date of last issue: 2019-11-13 Date of first issue: 2016-09-29	Print Date: 2021- 04-13
R	emarks	type of glove and therefore h case. The selected protective glove	material, the thickness and the
Resp	piratory protection	: Not required; except in case	of aerosol formation.
Filter	· type	: Filter type A-P	
Protective measures		to the concentration and amo at the specific workplace. Choose body protection in re	ment must be selected according ount of the dangerous substance elation to its type, to the concen- rous substances, and to the spe-

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
рН	:	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
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower	:	No data available



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



Klübersynth GEM 4-100 N (H)

Version 2.4	Revision Date: 2021-04-13		of last issue: 2019-11-13 of first issue: 2016-09-29	Print Date: 2021- 04-13
flam	mability limit			
Vapo	our pressure	:	< 0,001 hPa (20 °C)	
Rela	tive vapour density	:	No data available	
Rela	tive density	:	0,85 (20 °C) Reference substance: Water The value is calculated	
Dens	sity	:	0,85 g/cm3 (20 °C)	
Bulk	density	:	No data available	
	bility(ies) /ater solubility	:	insoluble	
S	olubility in other solvents	s :	No data available	
	tion coefficient: n- nol/water	:	No data available	
Auto	-ignition temperature	:	No data available	
Deco	omposition temperature	:	No data available	
	osity ïscosity, dynamic	:	No data available	
V	iscosity, kinematic	:	100 mm2/s (40 °C)	
Expl	osive properties	:	Not explosive	
Oxid	Oxidizing properties		No data available	
9.2 Other	rinformation			
Subl	imation point	:	No data available	
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



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



Klübersynth GEM 4-100 N (H)

Version 2.4	Revision Date: 2021-04-13	2 0.10	of last issue: 2019-11-13 of first issue: 2016-09-29	Print Date: 2021- 04-13	
Haza	rdous reactions	:	No dangerous reaction known und	er conditions of normal use.	
	litions to avoid litions to avoid	:	No conditions to be specially ment	ioned.	
	mpatible materials rials to avoid	:	No materials to be especially ment	ioned.	
10.6 Haza	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
Skin corrosion/irritation		
Product:		
Remarks	:	This information is not available.
Components:		
amines, C10-14-tert-alkyl:		
Assessment	:	Causes burns.



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



rsion 1	Revision Date: 2021-04-13		e of last issue: 2019-11-13 e of first issue: 2016-09-29	Print Date: 2021- 04-13
Resul	t	:	Causes burns.	
Serio	us eye damage/eye	e irritati	on	
Produ	uct:			
Rema		:	This information is not available.	
<u>Com</u>	oonents:			
amine	es, C10-14-tert-alky	/l:		
Speci	es	:	Rabbit	
Asses	ssment	:	Risk of serious damage to eyes.	
Metho		:	OECD Test Guideline 405	
Resul	t	:	Irreversible effects on the eye	
Resp	iratory or skin sens	sitisatio	n	
Produ				
Rema	arks	:	This information is not available.	
<u>Comp</u>	oonents:			
amine	es, C10-14-tert-alky	/l:		
Speci	es	:	Guinea pig	
	ssment	:	The product is a skin sensitiser, sub-	category 1A.
Metho		:	OECD Test Guideline 406	
Resul	t	:	Probability or evidence of high skin se mans	ensitisation rate in hu-
Germ	cell mutagenicity			
<u>Produ</u>	uct:			
Geno	toxicity in vitro	:	Remarks: No data available	
Geno	toxicity in vivo	:	Remarks: No data available	
<u>Comp</u>	oonents:			
amine	es, C10-14-tert-alky	/l:		
	toxicity in vitro	:	Test Type: In vitro mammalian cell ge	ene mutation test
	, <u>-</u>	-	Test system: Chinese hamster ovary	
			Method: OECD Test Guideline 476	
			Result: negative	
			Tast Type: Ames tast	
			Test Type: Ames test Test system: Salmonella typhimurium	1
				•
			Method: OECD Test Guideline 471	



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



/ersion 4	Revision Date: 2021-04-13		e of last issue: 2019-11-13 e of first issue: 2016-09-29	Print Date: 2021- 04-13
Geno	Genotoxicity in vivo		Test Type: Chromosome aberration Species: Mouse Application Route: Oral Method: OECD Test Guideline 474 Result: negative	
Germ sessn	cell mutagenicity- As- nent	:	Animal testing did not show any m	utagenic effects.
Carci	nogenicity			
Produ	uct:			
Rema	arks	:	No data available	
Repro	oductive toxicity			
<u>Produ</u>	uct:			
Effect	s on fertility	:	Remarks: No data available	
Effect ment	s on foetal develop-	:	Remarks: No data available	
<u>Comp</u>	oonents:			
	es, C10-14-tert-alkyl: is on foetal develop-	:	Species: Rat Method: OECD Test Guideline 414 Result: No effects on fertility and e ment were detected.	
Repro sessn	oductive toxicity - As- nent	:	Animal testing did not show any ef Animal testing did not show any ef ment.	
STOT	- single exposure			
<u>Com</u>	oonents:			
	es, C10-14-tert-alkyl: ssment	:	May cause respiratory irritation.	
STOT	- repeated exposure			
Comp	oonents:			
	es, C10-14-tert-alkyl: ssment	:	The substance or mixture is not cla organ toxicant, repeated exposure	



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



ersion 4	Revision Date: 2021-04-13	Date of last issue: 2019-11-13 Date of first issue: 2016-09-29	Print Date: 2021- 04-13
Repe	eated dose toxicity		
Prod	uct:		
Rema	arks	: This information is not available.	
Com	ponents:		
amin	es, C10-14-tert-alky	I:	
Spec	ies	: Rat	
NOAI		: 19 mg/kg	
	cation Route	: Inhalation	
	atmosphere	: vapour	
Meth	00	: OECD Test Guideline 412	
Spec	ies	: Rat	
NOAI	EL	: 20 mg/kg	
	cation Route	: Skin contact	
Meth	od	: OECD Test Guideline 410	
Aspi	ration toxicity		
Prod	uct:		
This i	information is not ava	ilable.	
Com	ponents:		
amin	es, C10-14-tert-alky	l:	
No as	spiration toxicity class	ification	
Furth	ner information		
Prod	uct:		
Rema	arks	: Information given is based on data of	on the components and
		the toxicology of similar products.	
	N 12: Ecological ir	formation	
.1 Toxio	city		
<u>Prod</u>	uct:		
	tity to fish	: Remarks: No data available	
10/10	ary to non	. Itemanto. No uala availabie	

	·	Remarks. No uata available
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data available
Toxicity to algae/aquatic plants	:	Remarks: No data available



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



FREUDENBERG

Versic 2.4		Revision Date: 2021-04-13	Date	e of last issue: 2019-11-13 e of first issue: 2016-09-29	Print Date: 2021- 04-13
Т	Toxicity	y to microorganisms	:	Remarks: No data available	
<u>c</u>	Compo	onents:			
а	amines	s, C10-14-tert-alkyl:			
Т	Foxicity	y to fish	:	LC50 (Oncorhynchus mykiss (rainb Exposure time: 96 h Method: OECD Test Guideline 203	ow trout)): 1,3 mg/l
		y to daphnia and other invertebrates	:	EC50 (Daphnia magna (Water flea) Exposure time: 48 h	ı): 2,5 mg/l
	Toxicity plants	y to algae/aquatic	:	EC50 (Selenastrum capricornutum Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201	(green algae)): 0,44 mg/l
	M-Fact city)	or (Acute aquatic tox-	:	1	
	Foxicity city)	y to fish (Chronic tox-	:	NOEC: 0,078 mg/l Exposure time: 96 d Species: Oncorhynchus mykiss (rai Method: OECD Test Guideline 210	nbow trout)
	M-Fact oxicity	or (Chronic aquatic)	:	1	
12.2 F	Persis	tence and degradabi	lity		
P	Produc	ct:			
B	Biodeg	radability	:	Remarks: No data available	
-	⊃hysico ty	o-chemical removabil-	:	Remarks: No data available	
<u>c</u>	Compo	onents:			
а	amines	s, C10-14-tert-alkyl:			
B	Biodeg	radability	:	Inoculum: activated sludge Concentration: 4 mg/l Result: Not rapidly biodegradable Biodegradation: 21,8 % Exposure time: 28 d Method: OECD Test Guideline 301	D
12.3 E	Bioaco	cumulative potential			
	Produ Bioacc	<u>et:</u> umulation	:	Remarks: This mixture contains no	substance considered to
				12 / 17	a brand of



Contaminated packaging

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



Klübersynth GEM 4-100 N (H)

Version 2.4	Revision Date: 2021-04-13	Date of last issue: 2019-11-13Print Date:Date of first issue: 2016-09-2904-13	2021-		
		be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be persistent and very bioaccumulating (vPvB).	very		
<u>Con</u>	nponents:				
ami	nes, C10-14-tert-alkyl:				
	ition coefficient: n- nol/water	: log Pow: 2,9 (20 °C)			
12.4 Mol	pility in soil				
Pro	duct:				
Mob	bility	: Remarks: No data available			
	ribution among environ- tal compartments	: Remarks: No data available			
12.5 Res	ults of PBT and vPvB a	sessment			
Pro	duct:				
Ass	essment	: This substance/mixture contains no components cons to be either persistent, bioaccumulative and toxic (PB very persistent and very bioaccumulative (vPvB) at lev 0.1% or higher	T), or		
12.6 Oth	er adverse effects				
Pro	duct:				
End tial	ocrine disrupting poten-	 The substance/mixture does not contain components ered to have endocrine disrupting properties accordin REACH Article 57(f) or Commission Delegated regula (EU) 2017/2100 or Commission Regulation (EU) 2018 levels of 0.1% or higher. 	g to ation		
Add mati	itional ecological infor- ion	: No information on ecology is available.			
SECTIO	SECTION 13: Disposal considerations				
	ste treatment methods	The product abould not be allowed to enter desire we	tor		
Proc	JUCI	: The product should not be allowed to enter drains, wa courses or the soil.	ilei		
		Waste codes should be assigned by the user based o application for which the product was used.	on the		

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



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



Klübersynth GEM 4-100 N (H)

Version 2.4	Revision Date: 2021-04-13	Date of last issue: 2019-11-13 Date of first issue: 2016-09-29	Print Date: 2021- 04-13		
		the unused product. Dispose of waste product or us local regulations.	Dispose of waste product or used containers according to		
		The following Waste Codes are	e only suggestions:		
Waste Code		 unused product 13 02 06*, synthetic engine, gear and lubricating oils 			
		uncleaned packagings 15 01 10, packaging containing by hazardous substances	g residues of or contaminated		

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
ΙΑΤΑ	:	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
ΙΑΤΑ	:	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
IMDG	:	Not regulated as a dangerous good
ΙΑΤΑ	:	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



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



Klübersynth GEM 4-100 N (H)

Version 2.4	Revision Date: 2021-04-13	Date of last issue: 2019-11-13Print Date: 2021-Date of first issue: 2016-09-2904-13		
	Passenger)	 Not regulated as a dangerous good Not regulated as a dangerous good 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 sub- stances of very high concern (Regu- lation (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 deplete 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 Parlia- ment 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, preparations and articles (Annex XVII)	:	Not applicable

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 %

Other regulations:

Hygiene limits (AFS 2018:1), provisions - Occupational Safety and Health Administration's provisions on hygiene limits and general advice on the application of the provisions.



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



Klübersynth GEM 4-100 N (H)

Version	Revision Date:	Date of last issue: 2019-11-13	Print Date: 2021-
2.4	2021-04-13	Date of first issue: 2016-09-29	04-13

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 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-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS -



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



Klübersynth GEM 4-100 N (H)

Version	Revision Date:	Date of last issue: 2019-11-13	Print Date: 2021-
2.4	2021-04-13	Date of first issue: 2016-09-29	04-13

Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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.

