on use

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



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

1.1 Product identifier		
Product name	:	Klübersynth GEM 4-32 NH
Article-No.	:	012296
1.2 Relevant identified uses of t	the s	substance or mixture and uses advised against
Use of the Sub- stance/Mixture	:	Lubricating oil
Recommended restrictions	:	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 responsible for the SDS	:	mcm@klueber.com Material Compliance Management
National contact	:	Klüber Lubrication Deutschland Geisenhausenerstraße 7 81379 München Deutschland Tel.: +49 89 7876 0 Fax: +49 89 7876 565 customer.service.de@klueber.com www.klueber.com

1.4 Emergency telephone number

Emergency telephone num-	: +49 89 7876 700 (24 hrs))
ber		

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) Not a hazardous substance or mixture.



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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, 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

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration limits M-Factor Notes	Concentration (% w/w)
amines, C12-14-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.



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			If breathing is irregular or stopped, a tion.	administer artificial respira-
In ca	se of skin contact	:	Remove contaminated clothing. If in ical attention. In case of contact, immediately flush	
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.	
4.2 Most	important symptoms a	nd e	effects, both acute and delayed	
	ptoms	:	No information available.	
Risks	6	:	None known.	
	ation of any immediate	meo	dical attention and special treatment No information available.	nt needed
		-		
SECTIO	N 5: Firefighting mea	sur	es	
5.1 Exting	guishing media			
	ble extinguishing media	:	Use water spray, alcohol-resistant f bon dioxide.	oam, dry chemical or car-
Unsu medi	iitable extinguishing a	:	High volume water jet	
5.2 Speci	al hazards arising fron	ո the	e substance or mixture	
Spec fighti	ific hazards during fire- ng	:	Fire may cause evolution of: Carbon oxides	
5.3 Advic	e for firefighters			
Spec	cial protective equipment refighters	:	In the event of fire, wear self-contain Use personal protective equipment. tion products may be a hazard to be	Exposure to decomposi-

Further information : Standard procedure for chemical fires.



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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 conta	inment 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 plication area. Wash hands and face before breaks ar handling the product.				
Hygiene measures :	Wash face, hands and any exposed sk handling.	in thoroughly after			
7.2 Conditions for safe storage, including any incompatibilities					
Requirements for storage : areas and containers	Store in original container. Keep contai use. Keep in a dry, cool and well-ventile which are opened must be carefully res to prevent leakage. Store in accordance national regulations. Keep in properly la	ated place. Containers sealed and kept upright e with the particular			
Storage class (TRGS 510) :	10, Combustible liquids				
7.3 Specific end use(s)					
Specific use(s) :	Specific instructions for handling, not re	quired.			
	4 / 47	a brand of			



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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, C12-14-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, C12-14-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 equipn	nent	
Eye protection	:	Safety glasses with side-shields
Hand protection Material	:	Nitrile rubber



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	Break through time Protective index	-	> 10 min 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 specifica tions of Regulation (EU) 2016/425 and the standard EN 37 derived from it.	
Respiratory protection		:	Not required; except in case of aerosol formation.	
Filter type		:	Filter type A-P	
Pr	otective measures	:	The type of protective equipment must be to the concentration and amount of the da at the specific workplace. Choose body protection in relation to its t tration and amount of dangerous substan- cific work-place.	angerous substance ype, to the concen-

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	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	>= 200 °C Method: ISO 2592, open cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper	:	No data available



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flammab	ility limit			
	Lower explosion limit / Lower flammability limit		No data available	
Vapour p	oressure	:	< 0,001 hPa (20 °C)	
Relative	vapour density	:	No data available	
Density		:	0,85 g/cm3 (20 °C)	
Bulk der	sity	:	No data available	
Solubility Wate	/(ies) r solubility	:	insoluble	
Solut	Solubility in other solvents		No data available	
	Partition coefficient: n- octanol/water		No data available	
Auto-ign	ition temperature	:	No data available	
Decomp	osition temperature	:	No data available	
Viscosity Visco	, sity, dynamic	:	No data available	
Visco	sity, kinematic	:	32 mm2/s (40 °C)	
Explosiv	Explosive properties		Not explosive	
Oxidizin	Oxidizing properties		No data available	
9.2 Other inf	ormation			
Sublimat	tion point	:	No data available	
Self-ignit	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



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Haza	rdous reactions	: No dangerous reaction known u	under conditions of normal use.	
	litions to avoid litions to avoid	: No conditions to be specially m	entioned.	
	mpatible materials rials to avoid	: No materials to be especially m	entioned.	
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, 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 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.



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Resu	Result		Causes burns.			
Serio	ous eye damage/eye	e irritati	on			
Prod	luct:					
Rem		:	This information is not available.			
<u>Com</u>	ponents:					
amin	nes, C12-14-tert-alky	yl:				
Spec	ies	:	Rabbit			
	ssment	:	Risk of serious damage to eyes.			
Meth		:	OECD Test Guideline 405			
Resu	ılt	:	: Irreversible effects on the eye			
Resp	piratory or skin sen	sitisatio	n			
Prod						
Rem	arks	:	This information is not available.			
<u>Com</u>	ponents:					
amin	nes, C12-14-tert-alky	yl:				
Spec	cies	:	Guinea pig			
•	ssment	:	The product is a skin sensitiser, sub	o-category 1A.		
Meth	od	:	OECD Test Guideline 406			
Resu	ılt	:	Probability or evidence of high skin mans	sensitisation rate in hu-		
Gern	n cell mutagenicity					
Prod	luct:					
Geno	otoxicity in vitro	:	Remarks: No data available			
Geno	otoxicity in vivo	:	Remarks: No data available			
<u>Com</u>	ponents:					
amin	nes, C12-14-tert-alky	yl:				
Geno	otoxicity in vitro	:	Test Type: In vitro mammalian cell	gene mutation test		
	,	-	Test system: Chinese hamster ovar			
			Method: OECD Test Guideline 476			
			Result: negative			
			Test Type: Ames test			
			Test system: Salmonella typhimuriu Method: OECD Test Guideline 471	ATTT		
			Result: negative			



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Genoto	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 m	utagenic effects.
Carcin	ogenicity			
Produ	<u>ct:</u>			
Remar	ks	:	No data available	
Repro	ductive toxicity			
Produ	<u>ct:</u>			
Effects	s on fertility	:	Remarks: No data available	
Effects ment	Effects on foetal develop- ment		Remarks: No data available	
<u>Comp</u>	onents:			
amine	s, C12-14-tert-alkyl:			
Effects ment	s on foetal develop-	:	Species: Rat Method: OECD Test Guideline 414 Result: No effects on fertility and ement were detected.	
•	Reproductive toxicity - As- sessment		Animal testing did not show any eff Animal testing did not show any eff ment.	
STOT	- single exposure			
<u>Comp</u>	onents:			
	amines, C12-14-tert-alkyl: Assessment		May cause respiratory irritation.	
STOT	- repeated exposure			
<u>Comp</u>	onents:			
amine Assess	s, C12-14-tert-alkyl: sment	:	The substance or mixture is not cla organ toxicant, repeated exposure.	



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riube	rsynth Geivi 4-3						
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Rep	eated dose toxicity						
Pro	duct:						
	narks	: This information is not available.					
Con	nponents:						
ami	nes, C12-14-tert-alkyl:						
Spe		: Rat					
NOA		: 19 mg/kg					
	lication Route t atmosphere	: Inhalation : vapour					
Met		: OECD Test Guideline 412					
Spe	cies	: Rat					
NOA		: 20 mg/kg					
App Metl	lication Route hod	Skin contactOECD Test Guideline 410					
Asp	iration toxicity						
Pro	duct:						
This	information is not avail	able.					
<u>Con</u>	nponents:						
ami	nes, C12-14-tert-alkyl:						
No a	aspiration toxicity classi	ication					
Furt	her information						
<u>Pr</u> o	duct:						
Rem	narks	: Information given is based on data on the toxicology of similar products.	the components and				
SECTIO	SECTION 12: Ecological information						
12.1 Tox	icity						
Pro	duct:						
	city 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



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	Toxicit	y to microorganisms	:	Remarks: No data available		
	<u>Comp</u>	onents:				
	amine	s, C12-14-tert-alkyl:				
	Toxicit	y to fish	:	LC50 (Oncorhynchus mykiss (rainb Exposure time: 96 h Method: OECD Test Guideline 203	ow trout)): 1,3 mg/l	
		ty to daphnia and other cinvertebrates	· :	EC50 (Daphnia magna (Water flea) Exposure time: 48 h): 2,5 mg/l	
	Toxicit 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-Fac icity)	tor (Acute aquatic tox-	:	1		
	Toxicit icity)	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-Fac toxicity	tor (Chronic aquatic /)	:	1		
12.2	Persis	stence and degradabi	lity			
	<u>Produ</u>	ct:				
	Biodeg	gradability	:	Remarks: No data available		
	Physic ity	co-chemical removabil-	:	Remarks: No data available		
	<u>Comp</u>	onents:				
	amine	s, C12-14-tert-alkyl:				
	Biodeç	gradability	:	Inoculum: activated sludge Concentration: 4 mg/l Result: Not rapidly biodegradable Biodegradation: 21,8 % Exposure time: 28 d Method: OECD Test Guideline 3011	D	
12.3	12.3 Bioaccumulative potential					
	<u>Produ</u>	<u>ct:</u>				
	Bioaco	cumulation	:	Remarks: This mixture contains no	substance considered to	
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		be persistent, bioaccumulating and toxic (PB This mixture contains no substance consider persistent and very bioaccumulating (vPvB).	
<u>Com</u>	ponents:		
Partit	tion coefficient: n- nol/water	: log Pow: 2,9 (20 °C)	
12.4 Mob	ility in soil		
<u>Prod</u> Mobi		: Remarks: No data available	
	ibution among environ- al compartments	: Remarks: No data available	
12.5 Resu	ults of PBT and vPvB	sessment	
Prod	luct:		
Asse	ssment	: This substance/mixture contains no compon- to be either persistent, bioaccumulative and very persistent and very bioaccumulative (vF 0.1% or higher	toxic (PBT), or
12.6 Othe	er adverse effects		
<u>Prod</u> Addit matic	tional ecological infor-	: No information on ecology is available.	
	N 13: Disposal cons te treatment methods	erations	

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:

The following Waste Codes are only suggestions:



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Waste	e Code	 unused product 13 02 06*, synthetic engine, gear and uncleaned packagings 15 01 10, packaging containing reside by hazardous substances 	C C

SECTION 14: Transport information

14.1 UN number					
ADR	:	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			
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			
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			
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			
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 CodeRemarks: Not applicable for product as supplied.



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SECTION 15: Regulatory information

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

REACH - Candidate List of Su Concern for Authorisation (Art		:	This product does not contain sub- stances of very high concern (Regu- lation (EC) No 1907/2006 (REACH),			
REACH - List of substances subject to authorisation (Annex XIV)				Article 57). Not applicable		
Regulation (EC) No 1005/200 plete the ozone layer	9 0	n substances that de-	:	Not applicable		
Regulation (EU) 2019/1021 or tants (recast)	n pe	ersistent organic pollu-	:	Not applicable		
Regulation (EC) No 649/2012 ment and the Council concern of dangerous chemicals		:	Not applicable			
the market and use of certain	REACH - Restrictions on the manufacture, placing on : Not applicable the market and use of certain dangerous substances, 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						
Water contaminating class (Germany)	:	WGK 1 slightly hazard Classification according				
TA Luft List (Germany)	:	Total dust: others: 0,24 %				
		Inorganic substances i Not applicable Inorganic substances i Not applicable Organic Substances: portion Class 1: 0,1 % others: 99,66 %		owdered form: apour or gaseous form:		
		Carcinogenic substance Not applicable Mutagenic: Not applicable Toxic to reproduction: Not applicable	ces:			
Volatile organic compounds	:			4 November 2010 on industrial ution prevention and control)		



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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 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; AICS - Australian Inventory of Chemical Substances; 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



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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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