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

1.1 Product identifier				
Product name	:	SH-100		
Article-No.	:	340465		
1.2 Relevant identified uses of t	he s	substance 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	e sat	fety data sheet		
Company	:	Klüber Lubrication NA LP 9010 CR 2120 Tyler, Texas 75707 Phone: (903) 534-8021 Fax: (903) 581-4376 32 Industrial Drive Londonderry, NH 03053 Phone: (603) 647-4104 Fax: (603) 647-4106		
E-mail address of person responsible for the SDS	:	mcm@us.kluber.com Material Compliance Management		
National contact	:			
1.4 Emergency telephone number				
Emergency telephone num- ber	:	+353 (1) 809 2166 (8.00 a.m. to 10.00 p.m., 7 days a week) National Poisons Information Centre		
		+353 (1) 809 2566 (24 hour service) Healthcare Professionals		
		+49 89 7876 700 (24/7 service)		

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.

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

1

3.2 Mixtures

Chemical nature

Synthetic hydrocarbon oil ester oil

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	specific concen- tration limit M-Factor Notes Acute toxicity	Concentration (% w/w)
			estimate	
Benzenamine, N- phenyl-, reaction products with 2,4,4-	68411-46-1 270-128-1	Aquatic Chronic3; H412		>= 1 - < 2.5
trimethylpentene	01-2119491299-23- XXXX			

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.
 If unconscious, place in recovery position and seek medical advice.
 Keep respiratory tract clear.
 If breathing is irregular or stopped, administer artificial respira-



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		tion.	
In case	of skin contact	 Remove contaminated clothing ical attention. In case of contact, immediatel Wash clothing before reuse. Thoroughly clean shoes before 	y flush skin with plenty of water.
In case	of eye contact	: Rinse immediately with plenty for at least 10 minutes. If eye irritation persists, consul	
If swalle	owed	 Move the victim to fresh air. If unconscious, place in recover advice. Keep respiratory tract clear. Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth 	

. symp μ

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 car- bon dioxide.		
Unsuitable extinguishing media	:	High volume water jet		
5.2 Special hazards arising from the substance or mixture				
Hazardous combustion prod- ucts	:	Carbon oxides Nitrogen oxides (NOx)		
5.3 Advice for firefighters				
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Exposure to decomposi- tion products may be a hazard to health.		
Further information	:	Standard procedure for chemical fires.		



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Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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. Ensure adequate ventilation. Refer to protective measures listed in sections 7 and 8.			
6.2 Environmental precautions				
Environmental precautions :	Do not allow contact with soil, surface or ground water. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.			
6.3 Methods and material for containment and cleaning up				

.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	:	Avoid inhalation of vapour or mist. Avoid contact with skin and eyes. 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. Do not ingest. Do not repack. Do not re-use empty containers. These safety instructions also apply to empty packaging which may still contain product residues. Keep container closed when not in use.
Hygiene measures	:	Wash face, hands and any exposed skin thoroughly after handling.



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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store in original container. Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with the particular national regulations. Keep in properly labelled containers.
7.3 Specific end use(s) Specific use(s)	:	Specific instructions for handling, not required.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

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

Substance name	End Use	Exposure routes	Potential health ef- fects	Value
Benzenamine, N- phenyl-, reaction products with 2,4,4- trimethylpentene	Workers	Inhalation	Long-term systemic effects	0.6 mg/m3
	Workers	Skin contact	Long-term systemic effects	0.08 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
Benzenamine, N-phenyl-, reac- tion products with 2,4,4- trimethylpentene	Fresh water	0.034 mg/l
	Marine water	0.003 mg/l
	Microbiological Activity in Sewage Treat- ment Systems	10 mg/l
	Fresh water sediment	0.446 mg/kg
	Marine sediment	0.045 mg/kg
	Soil	1.76 mg/kg

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



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Re	emarks	:	For prolonged or repeated contact use probreak through time depends amongst oth material, the thickness and the type of gla has to be measured for each case. The selected protective gloves have to satisfy the selected protective gloves have to satisfy the selected from it.	ner things on the ove and therefore atisfy the specifica-
Respi	ratory protection	:	Not required; except in case of aerosol for	ormation.
Filt	ter type	:	Filter type A-P	
Protec	ctive 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 to tration and amount of dangerous substan- cific work-place.	angerous substance type, to the concen-

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	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
Flash point	:	>= 240 °C Method: open cup
Auto-ignition temperature	:	> 400 °C



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		nposition temperature composition tempera- e	:	No data available	
	рН		:	Not applicable	
		cosity, dynamic	:	No data available	
	Vise	cosity, kinematic	:	100 mm2/s (40 °C)	
		lity(ies) ter solubility	:	insoluble	
	Sol	ubility in other solvents	s :	No data available	
		on coefficient: n- I/water	:	No data available	
	Vapou	r pressure	:	< 1.3 hPa (20 °C)	
	Relativ	e density	:	0.86 (20 °C) Reference substance: Water The value is calculated	
	Densit	у	:	0.86 g/cm3 (20 °C)	
	Bulk de	ensity	:	No data available	
	Relative vapour density		:	No data available	
9.2	Other i	nformation			
	Explos		:	Not explosive	
	Oxidizi	ng properties	:	No data available	
	Self-ig	nition	:	No data available	
	Evapo	ration rate	:	No data available	
	Sublim	ation point	:	No data available	

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.



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10.2 Cher	mical stability					
Stable under normal conditions.						
10.3 Poss	sibility of hazardous	reactions				
Haza	rdous reactions	: No dangerous reaction known un	der 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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

|--|

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:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity
Skin corrosion/irritation		
<u>Product:</u> Remarks	:	This information is not available.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene: Species : Rabbit



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A	amont		No akin irritation	
	sment	•	No skin irritation	
Metho		:	OECD Test Guideline 404	
Resul	t	:	No skin irritation	
Serio	us eye damage/eye	irritati	on	
Produ	uct:			
Rema			This information is not available.	
Reina	1172	•	This information is not available.	
Comp	oonents:			
Benze	enamine, N-phenyl-,	, reacti	on products with 2,4,4-trimethyl	pentene:
Speci		•	Rabbit	
	ssment	:	No eye irritation	
Metho		:	OECD Test Guideline 405	
Resul		:	No eye irritation	
iteaui	ı	•		
Resp	iratory or skin sens	itisatio	n	
Produ	<u>uct:</u>			
Rema	ırks	:	This information is not available.	
	<u>oonents:</u> enamine, N-phenyl-	, reacti	on products with 2,4,4-trimethyl	pentene:
Speci	es		Guinea pig	-
•	ssment	:	Did not cause sensitisation on lab	ooratory animals
Metho		:	OECD Test Guideline 406	bolatory animalo.
Resul		:	Did not cause sensitisation on lab	poratory animals.
Germ	cell mutagenicity			,
	• •			
<u>Produ</u>				
Geno	toxicity in vitro	:	Remarks: No data available	
Geno	toxicity in vivo	:	Remarks: No data available	
Carci	nogenicity			
Produ	<u>uct:</u>			
Rema		:	No data available	
Done	ductivo tovicity			
-	oductive toxicity			
<u>Produ</u>	uct:			
Effect	s on fertility	:	Remarks: No data available	
Effort	e on footal devalar		Romarka: Na data availabla	
ment	s on foetal develop-		Remarks: No data available	
ment				



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Repeated dose toxicity

Product:

Remarks

: This information is not available.

Aspiration toxicity

Product:

This information is not available.

11.2 Information on other hazards

Further information

Product:

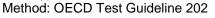
Remarks

: Information given is based on data on the components and the toxicology of similar products.

SECTION 12: Ecological information

12.1 Toxicity

۲.	TOXICITY		
	<u>Product:</u> Toxicity to fish	:	Remarks: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	Toxicity to daphnia and other aquatic invertebrates	:	·
	Toxicity to algae/aquatic plants	:	Remarks: No data available
	Toxicity to microorganisms	:	Remarks: No data available
	Components:		
	Benzenamine, N-phenyl-, rea	acti	on products with 2,4,4-trimethylpentene:
	Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 100 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203
	Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 51 mg/l Exposure time: 48 h Test Type: static test





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Toxic plants	ity to algae/aquatic s	:	EC50 (Desmodesmus subspicatus Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201	(green algae)): > 100 mg/l
12.2 Pers	istence and degradabi	lity		
<u>Prod</u> Biode	<u>uct:</u> egradability	:	Remarks: No data available	
Phys ity	ico-chemical removabil-	:	Remarks: No data available	
Com	ponents:			
	egradability	eact	ion products with 2,4,4-trimethylpe Test Type: aerobic Inoculum: activated sludge Result: Not rapidly biodegradable Biodegradation: 1 % Exposure time: 28 d Method: OECD Test Guideline 3011 GLP: yes	
12.3 Bioa	ccumulative potential			
<u>Prod</u> Bioac	<u>uct:</u> ccumulation	:	Remarks: This mixture contains no be persistent, bioaccumulating and This mixture contains no substance persistent and very bioaccumulating	toxic (PBT). considered to be very
Com	ponents:			
Partit	enamine, N-phenyl-, ro ion coefficient: n- iol/water	eact	ion products with 2,4,4-trimethylpe log Pow: > 5	entene:
12.4 Mobi	ility in soil			
Prod	uct:			
Mobil	lity	:	Remarks: No data available	
	bution among environ- al compartments	:	Remarks: No data available	
12.5 Resu	Ilts of PBT and vPvB a	isse	ssment	
Prod	uct:			
			11 / 15	a brand of FREUDENBERG

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As	sessment	: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher		
12.6 Endocrine disrupting properties No data available				
12.7 Ot	her adverse effects			
Pro	oduct:			
	ditional ecological infor- tion	: Harmful to aquatic life with long lasting effects.		

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Product	 The product should not be allowed to enter drains, water courses or the soil. Do not dispose of with domestic refuse. Dispose of as hazardous waste in compliance with local and national regulations. 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:

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good



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14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

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 - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Not applicable
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
Seveso III: Directive 2012/18/EU of the European : Parliament and of the Council on the control of major-accident hazards involving dangerous sub- stances.		Not applicable
5 1		4 November 2010 on industrial ution prevention and control)

15.2 Chemical safety assessment

This information is not available.



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SECTION 16: Other information

Full text of H-Statements

H412

Harmful 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 -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



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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.

