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

1.1 Product identifier Product name	:	OKS 1149				
1.2 Relevant identified uses of t Use of the Sub- stance/Mixture	he s :	substance or mixt Lubricant	ure and uses advised against			
Recommended restrictions on use	:	Restricted to prof	essional users.			
1.3 Details of the supplier of the	e sat	fetv data sheet				
Company	:	OKS Spezialschr Ganghoferstr. 47 D-82216 Maisach Tel.: +49 8142 30 Fax.: +49 8142 3 info@oks-germar	n-Gernlinden 051 500 051 599			
E-mail address of person responsible for the SDS	:	mcm@oks-germa Material Complia				
National contact	:					
1.4 Emergency telephone numb	er					
	:		n Centre of Antipoison 50 (free 24/7 service)			
SECTION 2: Hazards identifie	cati	on				
2.1 Classification of the substar	nce	or mixture				
•	Classification (REGULATION (EC) No 1272/2008) Long-term (chronic) aquatic hazard, Cat- egory 3 H412: Harmful to aquatic life with long lasting ef- fects.					
2.2 Label elements						
Labelling (REGULATION (E Hazard statements	C) I :	lo 1272/2008) H412	Harmful to aquatic life with long lasting ef- fects.			



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Precautionary statements : **Prevention:** P273

Avoid release to the environment.

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

:

3.2 Mixtures

Chemical nature

silicone oil Thickening agent

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	specific concen- tration limit M-Factor Notes Acute toxicity estimate	Concentration (% w/w)
dilithium azelate	38900-29-7 254-184-4 01-2120119814-57- XXXX 01-2120119814-57- XXXX 01-2120119814-57- XXXX 01-2120119814-57- XXXX	Acute Tox.4; H302		>= 1 - < 10
dibutyl 1,4,5,6,7,7- hexachlorobicy- clo[2.2.1]hept-5-ene- 2,3-dicarboxylate	1770-80-5 217-192-9	Skin Irrit.2; H315 Eye Irrit.2; H319 STOT SE3; H335 Aquatic Acute1; H400		>= 1 - < 2,5



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		Aquatic Chronic1; H410		

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 respiration.
In case of skin contact	 Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. Get medical attention immediately if irritation develops and persists. Wash clothing before reuse. Thoroughly clean shoes before reuse.
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. If unconscious, place in recovery position and seek medical advice. Keep respiratory tract clear. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
4.2 Most important symptoms	and effects, both acute and delayed

Symptoms	: No information available.	
Risks	: None known.	

4.3 Indication of any immediate medical attention and special treatment needed

Treatment

: No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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



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			bon dioxide.	
	nsuitable extinguishing iedia	:	High volume water jet	
5.2 Sp	ecial hazards arising from	m the	e substance or mixture	
Hazardous combustion prod- ucts		I- :	Carbon oxides Halogenated compounds Metal oxides	
5.3 Ad	lvice for firefighters			
	pecial protective equipmen or firefighters	nt :	In the event of fire, wear self-conta Use personal protective equipment tion products may be a hazard to h	t. Exposure to decomposi-
Fu	urther information	:	Standard procedure for chemical fi Collect contaminated fire extinguis must not be discharged into drains	hing water separately. This

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Evacuate personnel to safe areas. Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Avoid breathing dust. 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.
		If the product contaminates rivers and lakes or drains inform
		respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Clean up promptly by sweeping or vacuum.
		Keep in suitable, closed containers for disposal.

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 contact with skin and eyes.



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		plication area. Wash hands and fa handling the produc Do not get in eyes o Do not get on skin o Do not ingest. Do not repack. These safety instruc- may still contain pro-	nd drinking should be prohibited in the ap ace before breaks and immediately after ct. or mouth or on skin. or clothing. uctions also apply to empty packaging wh	
Hygie	ene measures	: Wash face, hands a handling.	and any exposed skin thoroughly after	
7.2 Condi	tions for safe storag	e, including any incompa	atibilities	
	irements for storage and containers	use. Keep in a dry, which are opened n to prevent leakage.	ntainer. Keep container closed when not cool and well-ventilated place. Containe must be carefully resealed and kept uprig . Store in accordance with the particular s. Keep in properly labelled containers.	ers
-	fic end use(s) ific use(s)	: Specific instructions	s 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
dilithium azelate	Workers	Dermal	Long-term systemic effects	13,5 mg/kg bw/day
	Workers	Dermal	Long-term local ef- fects	0,172 mg/cm2

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

Substance name	Environmental Compartment	Value
dilithium azelate	Fresh water	0,023 mg/l
	Marine water	0,002 mg/l



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8.2 Exposure controls

Engineering measures

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.

Personal protective equipment	
Eye protection :	Safety glasses with side-shields
Hand protection Material : Break through time : Protective index :	Nitrile rubber > 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 374 derived from it.
Skin and body protection :	Choose body protection in relation to its type, to the concen- tration and amount of dangerous substances, and to the spe- cific work-place.
Respiratory protection :	Not required; except in case of aerosol formation.
Filter type :	Filter type A-P
Protective measures :	The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	solid
Colour	:	white
Odour	:	slight
Odour Threshold	:	No data available

Melting point/range : No data available



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Boili	ing point/boiling range	:	No data available	
Flan	nmability (solid, gas)	:	Combustible Solids	
	er explosion limit / Upper mability limit	:	No data available	
	er explosion limit / Lower mability limit	· :	No data available	
Flas	h point	:	> 320 °C	
Auto	o-ignition temperature	:	No data available	
Dec	omposition temperature	:	No data available	
рН		:	Not applicable substance/mixture is non-solub	ole (in water)
	osity /iscosity, dynamic	:	No data available	
١	iscosity, kinematic	:	Not applicable	
	ıbility(ies) Vater solubility	:	insoluble	
S	Solubility in other solvents	3 :	No data available	
	ition coefficient: n- nol/water	:	No data available	
Vap	our pressure	:	< 0,001 hPa (20 °C)	
Rela	ative density	:	1	
Den	sity	:	1,02 g/cm3 (20 °C)	
Bulk	density	:	No data available	
Rela	ative vapour density	:	No data available	
9.2 Othe	r information			
Exp	losives	:	Not explosive	
Oxic	dizing properties	:	No data available	
Self	-ignition	:	No data available	



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Evap	oration rate	: No data available	
·	mation point	: No data available	

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid	:	No conditions to be specially mentioned.
---------------------	---	--

10.5 Incompatible materials

Materials to avoid	:	No materials to be especially mentioned.
--------------------	---	--

10.6 Hazardous decomposition products

>150 °C small quantities of formaldehyde may be formed.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity		
Product:		
Acute oral toxicity	:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Remarks: This information is not available.
Acute dermal toxicity	:	Remarks: This information is not available.
Components:		
dilithium azelate:		
Acute oral toxicity	:	LD50 (Rat): > 300 mg/kg Method: OECD Test Guideline 420 GLP: yes



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Acute	e dermal toxicity		Rabbit): > 2.000 mg/kg ment: The substance or n	nixture has no acute dermal
	-		2.1]hept-5-ene-2,3-dica	boxylate:
Acute	oral toxicity	: LD50 O	ral (Rat): > 5.000 mg/kg	
Skin	corrosion/irritation			
Prod	uct:			
Rema	arks	: This info	ormation is not available.	
<u>Com</u>	oonents:			
dilith	ium azelate:			
	ssment		irritation	
Resu	lt	: No skin	irritation	
	-		2.1]hept-5-ene-2,3-dicar	boxylate:
Resu	lt	: Irritating	to skin.	
Serio	us eye damage/eye	irritation		
Prod	uct:			
Rema	arks	: This info	ormation is not available.	
<u>Com</u>	oonents:			
dilith	ium azelate:			
Speci		: Rabbit		
Asses	ssment It	: No eye : No eye	irritation	
			2.1]hept-5-ene-2,3-dicar	boxylate:
Resul Rema			to eyes. sistent irritation	
rtonie		. Non po		
Resp	iratory or skin sens	tisation		
Prod				
Rema	arks	: This info	ormation is not available.	
<u>Com</u>	oonents:			
dilith	ium azelate:			
	ssment		ot cause skin sensitisation	
Resu	It	: Does no	ot cause skin sensitisation	n.



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Germ cell mutagenicity		
<u>Product:</u> Genotoxicity in vitro	:	Remarks: No data available
Genotoxicity in vivo	:	Remarks: No data available
Carcinogenicity		
<u>Product:</u> Remarks	:	No data available
Reproductive toxicity		
<u>Product:</u> Effects on fertility	:	Remarks: No data available
Effects on foetal develop- ment	:	Remarks: No data available
STOT - single exposure		
Components:		
dilithium azelate:		
Assessment	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.
dibutyl 1,4,5,6,7,7-hexachlo	rob	icyclo[2.2.1]hept-5-ene-2,3-dicarboxylate:
Exposure routes	:	Inhalation
Assessment	:	May cause respiratory irritation.
STOT - repeated exposure		
Components:		
dilithium azelate:		
Assessment	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity		
Product:		
Remarks	:	This information is not available.



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Aspi	ration toxicity		
Prod	uct:		

This information is not available.

Components:

dilithium azelate:

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	The substance/mixture does not contain components consid- ered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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

Product:		
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	:	Remarks: No data available
Toxicity to algae/aquatic plants	:	Remarks: No data available
Toxicity to microorganisms	:	Remarks: No data available
Components:		
dilithium azelate: Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l



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			Exposure time: 96 h	
	city to daphnia and other atic invertebrates	r:	EC50 (Daphnia magna (Water fle Exposure time: 48 h	a)): > 100 mg/l
dibu	ıtyl 1,4,5,6,7,7-hexachlo	orob	icyclo[2.2.1]hept-5-ene-2,3-dicarl	boxylate:
Eco	toxicology Assessmen	t		
	te aquatic toxicity	:	Very toxic to aquatic life.	
Chro	onic aquatic toxicity	:	Very toxic to aquatic life with long	lasting effects.
12.2 Per	sistence and degradabi	ility		
Pro	duct:			
Biod	legradability	:	Remarks: No data available	
Phy: ity	sico-chemical removabil-	• :	Remarks: No data available	
12.3 Bio	accumulative potential			
Pro	duct:			
	accumulation	:	Remarks: This mixture contains n be persistent, bioaccumulating an This mixture contains no substand persistent and very bioaccumulati	nd toxic (PBT). ce considered to be very
<u>Con</u>	nponents:			
dilit	hium azelate:			
Bioa	accumulation	:	Bioconcentration factor (BCF): 3,0	0
	ition coefficient: n- nol/water	:	log Pow: -3,56	
12.4 Mot	pility in soil			
Pro	duct:			
Mob		:	Remarks: No data available	
	ribution among environ- tal compartments	:	Remarks: No data available	
12.5 Res	ults of PBT and vPvB a	isse	ssment	
<u>Pro</u>	duct:			
	essment	:	This substance/mixture contains in to be either persistent, bioaccume very persistent and very bioaccume	ulative and toxic (PBT), or



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0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components of ered to have endocrine disrupting properties according REACH Article 57(f) or Commission Delegated regulat (EU) 2017/2100 or Commission Regulation (EU) 2018, levels of 0.1% or higher.	g to tion
---	--------------

12.7 Other adverse effects

Product:

Additional ecological infor-	:	Harmful to aquatic life with long lasting effects.
mation		

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:
	Waste Code :	used product, unused product 12 01 12*, spent waxes and fats
		uncleaned packagings 15 01 10, packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number



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ADR		. Not regulated as a departous good	
RID		 Not regulated as a dangerous good Not regulated as a dangerous good 	
IMDC	-	 Not regulated as a dangerous good Not regulated as a dangerous good 	
IATA		Not regulated as a dangerous goodNot regulated as a dangerous good	
	broper shipping nam	. Not regulated as a dangerous good	
-			
ADR		: Not regulated as a dangerous good	
RID	_	: Not regulated as a dangerous good	
IMDO		: Not regulated as a dangerous good	
IATA		: Not regulated as a dangerous good	
14.3 Tran	sport hazard class(
ADR		: Not regulated as a dangerous good	
RID		: Not regulated as a dangerous good	
IMDO	3	: Not regulated as a dangerous good	
ΙΑΤΑ	۱.	: Not regulated as a dangerous good	
14.4 Pack	king group		
ADR		: Not regulated as a dangerous good	
RID		: Not regulated as a dangerous good	
IMDO	G	: Not regulated as a dangerous good	
ΙΑΤΑ	(Cargo)	: Not regulated as a dangerous good	
ΙΑΤΑ	(Passenger)	: Not regulated as a dangerous good	
14.5 Envi	ronmental hazards		
ADR		: Not regulated as a dangerous good	
RID		: Not regulated as a dangerous good	
IMDO	3	: Not regulated as a dangerous good	
-	cial precautions for a pplicable	er	
14.7 Mari	time transport in bu	according to IMO instruments	
Rem	arks	: Not applicable for product as supplied.	

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mix-ture

REACH - Restrictions on the manufacture, placing on	:	Not applicable
the market and use of certain dangerous substances,		
mixtures and articles (Annex XVII)		



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Conce	CH - Candidate List o ern for Authorisation SVHC)	f Substances of Very High (Article 59).	:	This product does not contain sub- stances of very high concern (Regu lation (EC) No 1907/2006 (REACH Article 57).
(Anne	CH - List of substance ex XIV) REACH-Annex XIV)	es subject to authorisation	:	Not applicable
plete	lation (EC) No 1005/ź the ozone layer 1005/2009)	2009 on substances that de-	:	Not applicable
	(recast)	1 on persistent organic pollu-	:	Not applicable
ment	and the Council cond ngerous chemicals	012 of the European Parlia- cerning the export and import	:	Not applicable
Parlia	ment and of the Cou -accident hazards inv	18/EU of the European : ncil on the control of volving dangerous sub-		Not applicable
Volati	le organic compound			4 November 2010 on industrial ution prevention and control)

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of H-Statements

H302 :	Harmful if swallowed.
H315 :	Causes skin irritation.
H319 :	Causes serious eye irritation.
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



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ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - 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; TECI -Thailand Existing Chemicals 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

H412

Aquatic Chronic 3

Classification procedure: Calculation method

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