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1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	OKS 2711
Chemical nature	:	Active substance with propellant
Manufacturer or supplier's de	eta	ils
Company name of supplier	:	OKS Spezialschmierstoffe GmbH Ganghoferstr. 47 D-82216 Maisach-Gernlinden Tel.: +49 8142 3051 500 Fax.: +49 8142 3051 599 info@oks-germany.com
E-mail address of person responsible for the SDS	:	mcm@oks-germany.com Material Compliance Management
National contact	:	
Emergency telephone number	:	+86 532 8388 9090 (NRCC, only for hazardous chemicals) +86 21 69225521
Recommended use of the ch	em	ical and restrictions on use
Recommended use	:	Auxiliary
Restrictions on use	:	Restricted to professional users.

2. HAZARDS IDENTIFICATION

Emergency Overv	ew	
Appearance	: aerosol	
Colour	: colourless	
Odour	: characteristic	
Extremely flammab	e aerosol. Pressurised container: May burst if heated.	
GHS Classification		
Aerosols	: Category 1	

GHS label elements



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Haza	ard pictograms	
Sign	al word	: Danger
Haza	ard statements	: H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated.
Prec	autionary stateme	 Prevention: P210 Keep away from heat/ sparks/ open flames/ hot surface No smoking. P211 Do not spray on an open flame or other ignition source P251 Do not pierce or burn, even after use. Storage:
		P410 + P412 Protect from sunlight. Do not expose to temper tures exceeding 50 °C/ 122 °F.
•	sical and chemic emely flammable a	al hazards aerosol.Pressurised container: May burst if heated.
	th hazards classified based or	n available information.
	ronmental hazar	ds n available information.
	er hazards which e known.	do not result in classification

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Butane	106-97-8	>= 70 -< 90
propane	74-98-6	>= 20 -< 30
Isobutane	75-28-5	>= 1 -< 10

4. FIRST AID MEASURES

If inhaled

: Remove person to fresh air. If signs/symptoms continue, get



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		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 tion.
In ca	se of skin contact	 Remove contaminated clothing. If irritation develops, get medical attention. Wash off with soap and plenty of water. Wash clothing before reuse. Thoroughly clean shoes before reuse.
In ca	se of eye contact	 Rinse immediately with plenty of water, also under the eyelid for at least 10 minutes. If eye irritation persists, consult a specialist.
lf swa	allowed	: Move the victim to fresh air. Keep respiratory tract clear. Do NOT induce vomiting. Rinse mouth with water.
	important sympton effects, both acute a yed	
Note	s to physician	: Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	ABC powder
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire- fighting	:	Fire Hazard Do not let product enter drains. Contains gas under pressure; may explode if heated. Beware of vapours accumulating to form explosive concentra- tions. Vapours can accumulate in low areas.
Hazardous combustion prod- ucts	:	Carbon oxides



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	Spec ods	ific extinguishing m	neth- :	Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool containers/tanks with water spray.
	Spec	ial protective equip	ment :	In the event of fire, wear self-contained breathing apparatus.

Special protective equipment:In the event of fire, wear self-contained breathing apparatusfor firefightersUse personal protective equipment.Exposure to decomposition products may be a hazard to
health.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- tive equipment and emer- gency procedures	:	Evacuate personnel to safe areas. Ensure adequate ventilation. Remove all sources of ignition. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Try to prevent the material from entering drains or water courses. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and 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). Keep in suitable, closed containers for disposal. Non-sparking tools should be used.
Prevention of secondary hazards	:	Only qualified personnel equipped with suitable protective equipment may intervene.

7. HANDLING AND STORAGE

Handling

Advice on safe handling	 Do not use in areas without adequate ventilation. Do not breathe vapours or spray mist. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin and eyes. For personal protection see section 8. Keep away from fire, sparks and heated surfaces. Smoking, eating and drinking should be prohibited in the ap-



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			plication area. Wash hands and face before breaks and immediately after handling the product. Do not ingest. Do not use sparking tools. These safety instructions also apply to empty packaging which may still contain product residues. Pressurized container: protect from sunlight and do not ex- pose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.
Avoi	dance of contact	:	Oxidizing agents
Stor Conc	age ditions for safe sto	rage :	BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Store in accordance with the particular national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

	-					
Components	CAS-No.	Value type	Control parame-	Basis		
		(Form of	ters / Permissible			
		exposure)	concentration			
Butane	106-97-8	STEL	1,000 ppm	ACGIH		
				(2018-03-20)		
Isobutane	75-28-5	STEL	1,000 ppm	ACGIH		
				(2018-03-20)		
Engineering measures	ventilation.	n a place equipp	with explosion proof ed with local exhaust			
Personal protective equipment	nt					
Respiratory protection	ventilation is	provided or expo	ess adequate local e sure assessment der ommended exposure	monstrates		
Filter type	: Recommend	Recommended Filter type:				
	Organic g	as and low boilin	g vapour type			
Eye/face protection : Safety glasses with side-shields						

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Break through time	:	Nitrile rubber > 10 min Class 1
Remarks	:	For prolonged or repeated contact use 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.
Protective measures	:	The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Choose body protection in relation to its type, to the concen- tration and amount of dangerous substances, and to the spe- cific work-place.
Hygiene measures	:	Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	aerosol
Colour	:	colourless
Odour	:	characteristic
Odour Threshold	:	No data available
рН	:	Not applicable substance/mixture is non-soluble (in water)
Melting point/range	:	No data available
Boiling point/boiling range	:	-161 °C (1,013 hPa)
Flash point	:	D° O
		Method: Abel-Pensky



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Evaporation rate		No data available
Flammability (solid, gas)		Extremely flammable aerosol.
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	9.4 %(V)
Lower explosion limit / Lower flammability limit	:	1.4 %(V)
Vapour pressure	:	8,327 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	0.561 (20 °C) Reference substance: Water The value is calculated
Density	:	0.56 g/cm3 (20 °C)
Bulk density	:	No data available
Solubility(ies) Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n- octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	< 20.5 mm2/s (40 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	No data available
Sublimation point	:	No data available
Metal corrosion rate	:	Not corrosive to metals



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10. STABILITY AND REACTIVITY

Reactivity	:	No hazards to be specially mentioned.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reac- tions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

Acute toxicity		
Product:		
Acute oral toxicity	:	Remarks: This information is not available.
Acute inhalation toxicity	:	Symptoms: Inhalation may provoke the following symptoms:, Respiratory disorder
Acute dermal toxicity	:	Remarks: This information is not available.
<u>Components:</u> Butane: Acute inhalation toxicity	:	LC50 (Rat): 658 mg/l Exposure time: 4 h
lashutana		Test atmosphere: gas
Isobutane: Acute inhalation toxicity	:	LC50 (Rat): 658 mg/l Exposure time: 4 h Test atmosphere: gas



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Skin corrosion/irritation		
<u>Product:</u> Remarks	:	This information is not available.
Serious eye damage/eye irr	itati	ion
<u>Product:</u> Remarks	:	Contact with eyes may cause irritation.
Respiratory or skin sensitis	atic	on
<u>Product:</u> Remarks	:	This information is not available.
Germ cell mutagenicity		
Product: Genotoxicity in vitro	:	Remarks: No data available
Genotoxicity in vivo	:	Remarks: No data available
Carcinogenicity		
<u>Product:</u> Remarks	:	No data available
Reproductive toxicity		
Product: Effects on fertility	:	Remarks: No data available
Effects on foetal develop- ment	:	Remarks: No data available
Repeated dose toxicity		
Product:		



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Remarks	:	This information is not available.
Aspiration toxicity		
<u>Product:</u> This information is n	ot available.	
Further information	1	

Product:

Remarks

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

12. ECOLOGICAL INFORMATION

Ecotoxicity		
Product:		
Toxicity 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
Toxicity to microorganisms	:	Remarks: No data available
Persistence and degradabili	ty	
Product:		
Biodegradability	:	Remarks: No data available

Physico-chemical removabil-	:	Remarks: No data available
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Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).
Components:		
Butane:		

Partition coefficient: n-	:	log Pow: 2.89
octanol/water		Method: OECD Test Guideline 107

propane:

Partition coefficient: n-	:	log Pow: 2.36
octanol/water		

Isobutane:

Partition coefficient: n-	:	log Pow: 2.88
octanol/water		Method: OECD Test Guideline 107

Mobility in soil

Product:

mation

Mobility	:	Remarks: No data available
Distribution among environ- mental compartments	:	Remarks: No data available
Other adverse effects		
Product:		
Additional ecological infor-	:	No information on ecology is available.

13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Do not dispose of with domestic refuse. Dispose of as hazardous waste in compliance with local and national regulations.



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Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product. Offer empty spray cans to an established disposal company. Pressurized container: Do not pierce or burn, even after use.

14. TRANSPORT INFORMATION

International Regulations		
UNRTDG UN number Proper shipping name Class Packing group Labels	:	UN 1950 AEROSOLS 2.1 Not assigned by regulation 2.1
IATA-DGR UN/ID No. Proper shipping name Class Packing group Labels Packing instruction (cargo aircraft) Packing instruction (passen- ger aircraft)		UN 1950 Aerosols, flammable 2.1 Not assigned by regulation Flammable Gas 203 203
IMDG-Code UN number Proper shipping name	:	UN 1950 AEROSOLS
Class Packing group Labels EmS Code Marine pollutant		2.1 Not assigned by regulation 2.1 F-D, S-U no
Transport in bulk according	to	Annex II of MARPOL 73/78 and th

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

Not applicable for product as supplied.

National Regulations

GB 6944/12268		
UN number	:	UN 1950
Proper shipping name	:	AEROSOLS
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	2.1



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Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals	i
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Hazardous Chemicals for Priority Management under	:	Not applicable
SAWS		

China Severely Restricted Toxic Chemicals for Import : Not applicable and Export

Catalogue of Hazardous Chemicals

: Listed

Product name	Status	Reference number
OKS 2711	Listed	2828

List of ingredients	CAS-No.	Status	Reference number
Butane	106-97-8	Listed	2778
propane	74-98-6	Listed	139
Isobutane	75-28-5	Listed	2707

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)No. / CodeChemical name / CategoryW3AerosolsThreshold quantity150 t

The components of this product are reported in the following inventories:IECSC:On the inventory, or in compliance with the inventory

16. OTHER INFORMATION



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Date format

: yyyy/mm/dd

:

Full text of other abbreviations

ACGIH

: USA. ACGIH Threshold Limit Values (TLV)

Short-term exposure limit

ACGIH / STEL

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods: TECI - Thailand Existing Chemicals Inventory: TSCA - Toxic Substances Control Act (United States): UN - United Nations: UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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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.

