



OKS 3521

Version 1.1

Revision Date 22.03.2017

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1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : OKS 3521

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Lubricant
Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

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Ganghoferstr. 47
D-82216 Maisach-Gernlinden
Tel.: +49 8142 3051 500
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Responsible/issuing person

National contact :

1.4 Emergency telephone number

+49 8142 3051 517

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Chronic aquatic toxicity, Category 3	H412: Harmful to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)

Extremely flammable	R12: Extremely flammable.
Dangerous for the environment	R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :





OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

Signal word	:	Danger	
Hazard statements	:	H222 H229 H412	Extremely flammable aerosol. Pressurised container: May burst if heated. Harmful to aquatic life with long lasting effects.
Precautionary statements	:	Prevention: P210 P211 P251 P273 Storage: P410 + P412	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid release to the environment. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

2.3 Other hazards

3. Composition/information on ingredients

3.2 Mixtures

Chemical nature	:	Active substance with propellant ester oil Synthetic hydrocarbon oil
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Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
tris(methylphenyl) phosphate	1330-78-5 215-548-8	Xn; R62 N; R50/53	Repr. 2; H361 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0,25 - < 1
Substances with a workplace exposure limit :				
butane	106-97-8 203-448-7 601-004-00-0	F+; R12	Flam. Gas 1; H220 Press. Gas Compr. Gas; H280	>= 10 - < 20
propane	74-98-6 200-827-9 601-003-00-5	F+; R12 F+; R12	Flam. Gas 1; H220 Press. Gas Compr. Gas; H280	>= 10 - < 20

For the full text of the R-phrases mentioned in this Section, see Section 16.



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1 Description of first aid measures

- If inhaled : Obtain medical attention.
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.
Get medical attention immediately if irritation develops and persists.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
Wash off immediately with plenty of water.
- 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.
Keep respiratory tract clear.
Do NOT induce vomiting.
Obtain medical attention.
Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Inhalation may provoke the following symptoms:
Unconsciousness
Dizziness
Drowsiness
Headache
Nausea
Tiredness

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

5. Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : ABC powder
- Unsuitable extinguishing media : High volume water jet



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Fire may cause evolution of:
Carbon oxides
- : Fire Hazard
Do not let product enter drains.
Contains gas under pressure; may explode if heated.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
In the case of respirable dust and/or fumes, use self-contained breathing apparatus.
Exposure to decomposition products may be a hazard to health.
- Further information : Standard procedure for chemical fires.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Cool containers/tanks with water spray.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Evacuate personnel to safe areas.
Ensure adequate ventilation.
Remove all sources of ignition.
Do not breathe vapours or spray mist.
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 materials for containment and cleaning up

- Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) 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.

6.4 Reference to other sections

For personal protection see section 8.



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

7. Handling and storage

7.1 Precautions for safe 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 application area.
Wash hands and face before breaks and immediately after handling the product.
Do not get in eyes or mouth or on skin.
Do not get on skin or clothing.
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 expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : 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.

German storage class : 2B Aerosol cans and lighters

7.3 Specific end use(s)

: Consult the technical guidelines for the use of this substance/mixture.

8. Exposure controls/personal protection

8.1 Control parameters

Components	CAS-No.	Value type	Control parameters	Update	Basis
butane	106-97-8	AGW	1.000 ppm 2.400 mg/m ³	2006-01-01	DE TRGS 900
Further information:	DFG: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).				

SAFETY DATA SHEET

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



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

propane	74-98-6	AGW	1.000 ppm 1.800 mg/m ³	2006-01-01	DE TRGS 900
Further information:	DFG: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).				

DNEL

tris(methylphenyl) phosphate : End Use: Workers
Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 0,47 mg/m³

End Use: Workers
Exposure routes: Inhalation
Potential health effects: Acute systemic effects
Value: 1,11 mg/m³

End Use: Workers
Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 3,3 mg/kg bw/day

End Use: Workers
Exposure routes: Skin contact
Potential health effects: Acute systemic effects
Value: 74 mg/kg bw/day

End Use: Workers
Exposure routes: Skin contact
Potential health effects: Acute local effects
Value: 16 mg/kg bw/day

PNEC

tris(methylphenyl) phosphate : Fresh water
Value: 0,000146 mg/l

Marine water
Value: < 0,000015 mg/l

Intermittent use/release
Value: 100 mg/l

Fresh water sediment
Value: 0,404 mg/kg

Marine sediment
Value: 0,00404 mg/kg

Soil
Value: 0,052 mg/kg



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

8.2 Exposure controls

Engineering measures

Use only in an area equipped with explosion proof exhaust ventilation.
Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
Short term only
Filter type A-P
- Hand protection : Wear protective gloves.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
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.
In case of contact through splashing:
: butyl-rubber
Protective index Class 1
- Eye protection : Safety glasses with side-shields conforming to EN166
- Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.
- 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 concentration and amount of dangerous substances, and to the specific work-place.

Environmental exposure controls

- General advice : 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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : aerosol
Colour : yellow
Odour : characteristic



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

Odour Threshold	: No data available
pH	: No data available
Melting point/range	: No data available
Boiling point/boiling range	: < 35 °C
Flash point	: -80,00 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: Extremely flammable aerosol.
Lower explosion limit	: 1,5 %(V)
Upper explosion limit	: 10,9 %(V)
Vapour pressure	: <= 1.100 hPa, 20 °C
Relative vapour density	: No data available
Density	: 0,89 g/cm ³ , 20 °C
Water solubility	: immiscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: No data available

9.2 Other information

Sublimation point	: No data available
Bulk density	: No data available

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 : Heat, flames and sparks.



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : No decomposition if stored and applied as directed.

11. Toxicological information

11.1 Information on toxicological effects

Product

Acute oral toxicity : This information is not available.
Acute inhalation toxicity : Inhalation may provoke the following symptoms:, Respiratory disorder
Acute dermal toxicity : This information is not available.
Skin corrosion/irritation : This information is not available.
Serious eye damage/eye irritation : Contact with eyes may cause irritation.
Respiratory or skin sensitisation : This information is not available.
Germ cell mutagenicity
Genotoxicity in vitro : No data available
Genotoxicity in vivo : No data available
Carcinogenicity : No data available
Reproductive toxicity : No data available
Teratogenicity : No data available
Repeated dose toxicity : This information is not available.
Aspiration toxicity : This information is not available.
Further information : Information given is based on data on the components and the toxicology of similar products.

Components:

tris(methylphenyl) phosphate :

Acute oral toxicity : LD50: > 20.000 mg/kg, Rat
Acute inhalation toxicity : LC50: 11,1 mg/l, 4 h, Rat, dust/mist, The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity : LD50: > 10.000 mg/kg, Rabbit
Skin corrosion/irritation : Rabbit, Result: No skin irritation, Classification: No skin irritation
Serious eye damage/eye irritation : Rabbit, Result: No eye irritation, Classification: No eye irritation
Respiratory or skin : Result: Does not cause skin sensitisation., Classification:



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

sensitisation	Does not cause skin sensitisation.
STOT - single exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration toxicity	: No aspiration toxicity classification
butane :	
Serious eye damage/eye irritation	: Contact with eyes may cause irritation.
Further information	: Information given is based on data on the components and the toxicology of similar products.

12. Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Toxicity to daphnia and other aquatic invertebrates	:	No data available
Toxicity to algae	:	No data available
Toxicity to bacteria	:	No data available

Components:

tris(methylphenyl) phosphate :

Toxicity to fish	:	LC50: 0,6 mg/l, 96 h, Oncorhynchus mykiss (rainbow trout), static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50: 0,146 mg/l, 48 h, Daphnia magna (Water flea), static test
M-Factor	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,01 mg/l, 28 d, Jordanella floridae (flagfish), semi-static test

12.2 Persistence and degradability

Product:

Biodegradability :



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

Physico-chemical
removability : No data available
: No data available

12.3 Bioaccumulative potential

Product:

Bioaccumulation : 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).

12.4 Mobility in soil

Product:

Mobility : No data available
Distribution among : No data available
environmental compartments

12.5 Results of PBT and vPvB assessment

Product:

Assessment : 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.

Components:

tris(methylphenyl) phosphate :

Assessment : Non-classified PBT substance, Non-classified vPvB substance

12.6 Other adverse effects

Product:

Additional ecological : Harmful to aquatic life with long lasting effects.
information

13. Disposal considerations

13.1 Waste treatment methods

Product : In accordance 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 : Offer empty spray cans to an established disposal company.
Pressurized container: Do not pierce or burn, even after use.

14. Transport information

14.1 UN number

ADR : 1950
IMDG : 1950
IATA : 1950



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

14.2 Proper shipping name

ADR : AEROSOLS
IMDG : AEROSOLS
IATA : AEROSOLS, FLAMMABLE

14.3 Transport hazard class

ADR : 2
IMDG : 2.1
IATA : 2.1

14.4 Packing group

ADR
:
Classification Code : 5F
Labels : 2.1
Tunnel restriction code : (D)
IMDG
Labels : 2.1
EmS Number : F-D, S-U
IATA
Packing instruction (cargo aircraft) : 203
Labels : 2.1

14.5 Environmental hazards

ADR
Environmentally hazardous : no
IMDG
Marine pollutant : no
IATA
Environmentally hazardous : no

14.6 Special precautions for user

No special precautions required.

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

Remarks : Not applicable for product as supplied.

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 substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Major Accident Hazard Legislation : 96/82/EC Update:
Extremely flammable
8
Quantity 1: 10 t
Quantity 2: 50 t

SAFETY DATA SHEET

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



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)	: Volatile organic compounds (VOC) content: 30 % VOC content excluding water
Water contaminating class (Germany)	: WGK 1: slightly water endangering
TA Luft List (Germany)	: Total dust: Portion other substances: 0,7 % Inorganic substances in powdered form: Not applicable Inorganic substances in vapour or gaseous form: Not applicable Organic Substances: portion Class 1: 0,7 % ; Portion other substances: 54,5 % Carcinogenic substances: Not applicable Mutagenic: Not applicable Toxic to reproduction: Not applicable

15.2 Chemical safety assessment

This information is not available.

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R12	Extremely flammable.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.

Full text of H-Statements referred to under sections 2 and 3.

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further information

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SAFETY DATA SHEET

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



OKS 3521

Version 1.1

Revision Date 22.03.2017

Print Date 15.05.2017

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