

Attachment B.3

- MDSG Gleitmo K1
- MDSG Gleitmo K2
- MDSG Gleitmo K3





Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Printed 04.08.2012
revision 01.08.2012 (GB) Version 1.6
gleitmo SFL 9680 K1
A01-05650

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

Product identifier

Name of product gleitmo SFL 9680 K1

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

Recommended intended purpose(s)

Solid film lubricant

Details of the supplier of the safety data sheet

Manufacturer/distributor

FUCHS LUBRITECH GMBH
Werner-Heisenberg-Straße 1, D-67661 Kaiserslautern/Germany
Phone +49 (0) 6301 3206 - 0, Fax +49 (0) 6301 3206 - 940
E-Mail reach@fuchs-lubritech.de
Internet www.fuchs-lubritech.com

Advice

Product Safety Management
Phone +49 (0) 6301 3206 - 0
Fax +49 (0) 6301 3206 - 940

Emergency telephone number

Emergency advice

+49 (0)171 / 4632154

No information available.

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to 67/548/EEC or 1999/45/EC

R10
Xn; R20/21
Xi; R38
Xn; R65
R67

R-phrases

10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
38 Irritating to skin.
65 Harmful: may cause lung damage if swallowed.
67 Vapours may cause drowsiness and dizziness.

Label elements

Labelling according to 67/548/EEC or 1999/45/EC

Remarks for labelling

The product is classified and labelled in accordance with EC directives/German regulations on dangerous substances.
Classification done on the basis of calculation methods of substance directive (67/548 / EEC).

Xn Harmful



R-phrases

10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
38 Irritating to skin.
65 Harmful: may cause lung damage if swallowed.
67 Vapours may cause drowsiness and dizziness.

S-phrases

36/37 Wear suitable protective clothing and gloves.
62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Hazardous ingredients for labeling

Mixture of hydrocarbons, de-aromatized

Other hazards



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Information pertaining to special dangers for human and environment
Application may cause development of explosive / inflammable vapour-air-mixtures

SECTION 3: Composition/ information on ingredients

Mixtures

Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to 67/548/EEC
64742-48-9	265-150-3	Mixture of hydrocarbons, de-aromatized	50 - 80	Xn; R10-65-66-67
1330-20-7	215-535-7	xylene	15 - 20	R10; Xn R20/21; Xi R38

Additional advice

none at appropriate handling and storage

SECTION 4: First aid measures

Description of first aid measures

General information

Remove contaminated soaked clothing immediately, don't leave to dry.

In case of inhalation

Ensure of fresh air.

In the event of symptoms refer for medical treatment.

In case of skin contact

In case of contact with skin wash off immediately with soap and water.

Don't use organic solvents

Consult a doctor if skin irritation persists.

In case of eye contact

In case of contact with eyes rinse with plenty of water carefully. In the event of persistent symptoms seek medical treatment.

In case of ingestion

Do not induce vomiting.

Call for a doctor immediately.

Most important symptoms and effects, both acute and delayed

Physician's information / possible symptoms

Unconsciousness

Headache

Nausea

Confusion

Dizziness

Physician's information / possible dangers

Aspiration hazard when vomiting after swallow up

CNS disfunctions

Indication of any immediate medical attention and special treatment needed

Treatment (Advice to doctor)

Cream skin to avoid dermatitis

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Foam

Dry fire-extinguishing substance

Dry powder

Water spray jet

Extinguishing media which must not be used for safety reasons

Full water jet

Special hazards arising from the substance or mixture

Fire gas of organic material has to be classed invariably as respiratory poison.

Advice for firefighters

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Additional information

Cool endangered containers with water spray jet.

Collect contaminated firefighting water separately, must not be discharged into the drains.



SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Remove persons to safety.
Keep away sources of ignition.
High risk of slipping due to leakage/spillage of product.

Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Alert appropriate regulatory bodies.
Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).
Fill in appropriate and accurately labelled containers; close properly!
After taking up the material dispose according to regulation.

Additional Information

Informations for disposal see chapter 13.

Reference to other sections

No information available.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Provide good room ventilation even at ground level (vapours are heavier than air).
Take the usual precautions when handling with chemicals.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking
Vapours can form an explosive mixture with air.
Take precautionary measures against static discharges.
Don't heat up to temperatures at close range to flash point

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Provide solvent-resistant and impermeable floor.
Prevent penetration into the ground.

Advice on storage compatibility

Do not store together with oxidising and self-inflammable materials.

Further information on storage conditions

Keep container tightly closed, store at cool and aired place, open and handle carefully.
Protect from direct solar radiation.
Recommended storage temperature: room temperature.

Storage group 3A

Fire class B

Specific end use(s)

No information available.

! SECTION 8: Exposure controls/personal protection

Control parameters

Indicative occupational exposure limit values (91/322/EEC, 2000/39/EC, 2006/15/EC or 2009/161/EU)

CAS No	Name	Code	[mg/m ³]	[ppm]	Remark
1330-20-7	xylylene, mixed isomers, pure	8 hours Short-term	221 442	50 100	skin

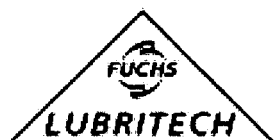
Additional advice

As basis for this information served the valid references.

Exposure controls

Respiratory protection

Not required at determined application



! Hand protection

As the product is a preparation of several substances, the actual resistance of the materials used for gloves cannot be scientifically calculated; it is therefore mandatory to check this before using the product.

The break through time depends on the mechanical stress imposed and must therefore be checked individually.

Gloves (solvent-resistant)
nitrile gloves

Eye protection

tightly fitting goggles

Skin protection

Usual working clothes for chemical industries

General protective measures

Avoid contact with eyes and skin
Do not inhale gases/vapours/aerosols.

Hygiene measures

Cloths contaminated with product should not be kept in trouser pockets.
At work do not eat, drink, smoke or take drugs.
Follow general rules of industrial hygiene for safe handling of chemical products
Keep separated from food and feed.
Wash hands and skin before breaks and after work.
Use barrier skin cream.

Additional advice on system design

Care for good room ventilation, exhaust system at workshop place if necessary



SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Form liquid	Colour colourless	Odour like petrol (gasoline)
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Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value in delivery state					not applicable
boiling range	135 - 165 °C				concerning solvent
melting range	< -40 °C				concerning solvent
Flash point	ca. 27 °C				
Ignition temperature	240 °C			DIN 51794	information concern solvent
Autoignition	250 - 287 °C				Information refers to main component.
Lower explosion limit	0,6 Vol-%				information concern solvent
Upper explosion limit	6,5 Vol-%				information concern solvent
Vapour pressure	8 hPa	20 °C			concerning solvent
Density	0,78 g/cm ³	15 °C		DIN 51757	
Solubility in water					more or less insoluble
Solubility/other					soluble in solvent naphtha

Explosive properties

In and after use danger of production of inflammable compounds

Other information

No information available.





SECTION 10: Stability and reactivity

Reactivity

No information available.

Chemical stability

No information available.

Possibility of hazardous reactions

No information available.

Conditions to avoid

Heating, unshielded flame, ignition source, electrostatic charge

Incompatible materials

Materials to avoid

Reactions with strong oxidising agents.

Hazardous decomposition products

No hazardous decomposition products known.

Thermal decomposition

Remark No decomposition if used as directed.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	> 15000 mg/kg	rat		Information concerns to main component.
LD50 acute dermal	> 3000 mg/kg			Information concern to main component.
Irritability skin	irritant			
Irritability eye	may have irritating effect			if splash reaches eye
Skin sensitization	No sensitizing effect known			

Experiences made from practice

Has a degreasing effect on the skin.
Inhalation causes headache/nausea.
High concentrations may cause tiredness and dizziness.

Additional information

No toxic dates available.
The declarations of toxicology refer to main component.
The product was classified on the basis of the calculation procedure of the directive 67/548/EEC (conventional method).

SECTION 12: Ecological information

Toxicity

Ecotoxicological effects

Value	Species	Method	Validation
Fish			not determined

Persistence and degradability

Biological

degradability Information on biodegradation processes is available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment



No information available.

Other adverse effects

Behaviour in sewage plant

Product gets duly not into waste water before it is not treated according to the local regulations.
Product swims on (waste-) water surface

General regulation

Ecological dates are not available.
Do not allow uncontrolled leakage of product into the environment.

SECTION 13: Disposal considerations

Waste treatment methods

Recommendations for the product

Disposal according to local authority prescriptions

Recommendations for packaging

Packaging that cannot be cleaned should be disposed of like the product.
Dispose one-trip container according to local authority prescriptions
Empty containers completely; remaining material may represent explosion risk.

General information

Ultimately responsible for correct classification is the waste producer, as the EWC names different codes for different origins of same waste

SECTION 14: Transport information

Land and inland navigation transport ADR/RID

UN 3295 HYDROCARBONS, LIQUID, N.O.S. (Mixture of hydrocarbons, de-aromatized), 3, II, (D/E), Special provisions 640D, Classification code: F1

Marine transport IMDG

UN 3295 HYDROCARBONS, LIQUID, N.O.S. (Mixture of hydrocarbons, de-aromatized), 3, II

Air transport ICAO/IATA-DGR

UN 3295 Hydrocarbons, liquid, n.o.s. (Mixture of hydrocarbons, de-aromatized), 3, II

Special precautions for user

No information available.

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

No information available.

SECTION 15: Regulatory information

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

VOC standard

VOC content ca.80 %

National regulations

Other regulations, restrictions and prohibition regulations

ZH 1/319 "Data Sheet: Solvents (M 017)"

Water hazard class

2 Mixture-WGK according to VwVwS (GER)
preliminary

Decree for case of interference/ remarks

Anhang I, Nr. 6

Chemical Safety Assessment

No information available.

SECTION 16: Other information

Training advice

Use information in this MSDS

Recommended uses and restrictions

usage only according to instructions for use and observance of warning notes
National and local regulations concerning chemicals shall be observed.

Further information

Substantial changes to the former version are marked by "!" on the left margin of the paper.
All the raw materials in this product are listed in TSCA.
Refer to product information paper.



Safety Data Sheet according to Regulation (EC) No. 1907/
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gleitmo SFL 9680 K1
A01-05650

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Sources of key data used

Material Safety Data Sheets of raw materials

Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)

- R 10 Flammable.
- R 20/21 Harmful by inhalation and in contact with skin.
- R 38 Irritating to skin.
- R 65 Harmful: may cause lung damage if swallowed.
- R 66 Repeated exposure may cause skin dryness or cracking.
- R 67 Vapours may cause drowsiness and dizziness.





Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Printed 22.09.2012
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gleitmo SFL 9680 K2
A01-05651

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

Product identifier

Name of product gleitmo SFL 9680 K2

Relevant identified uses of the substance or mixture and uses advised against
Recommended intended purpose(s)

see Product information

Details of the supplier of the safety data sheet

Manufacturer/distributor

FUCHS LUBRITECH GMBH
Werner-Heisenberg-Straße 1, D-67661 Kaiserslautern/Germany
Phone +49 (0) 6301 3206 - 0, Fax +49 (0) 6301 3206 - 940
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Emergency telephone number

Emergency advice

+49 (0)171 / 4632154

No information available.

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to 67/548/EEC or 1999/45/EC

F; R11
Xi; R36
R67

R-phrases

11 Highly flammable.
36 Irritating to eyes.
67 Vapours may cause drowsiness and dizziness.

Label elements

Labelling according to 67/548/EEC or 1999/45/EC

Remarks for labelling

The product is classified and labelled in accordance with EC directives/German regulations on dangerous substances.

Xi Irritant
F Highly flammable



R-phrases

11 Highly flammable.
36 Irritating to eyes.
67 Vapours may cause drowsiness and dizziness.

S-phrases

16 Keep away from sources of ignition - No smoking.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
33 Take precautionary measures against static discharges.
60 This material and its container must be disposed of as hazardous waste.
9 Keep container in a well-ventilated place.

Hazardous ingredients for labeling

propan-2-ol

Other hazards

No information available.



SECTION 3: Composition/ information on ingredients

Mixtures

Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to 67/548/EEC
67-63-0	200-661-7	propan-2-ol	50 - 100	F R11; Xi R36; R67

Description

Resin in solvent

Additional advice

none at appropriate handling and storage

SECTION 4: First aid measures

Description of first aid measures

General information

Remove contaminated soaked clothing immediately, don't leave to dry.

In case of inhalation

Ensure of fresh air.

Refer for medical treatment.

In case of respiratory standstill give artificial respiration by respirator and send for a doctor.

In case of skin contact

In case of contact with skin wash off with soap and water.

Refer for medical treatment.

In case of eye contact

In case of contact with eyes rinse thoroughly with warm water.

Refer to medical treatment.

In case of ingestion

Do not induce vomiting.

Medical treatment.

Rinse out mouth and give plenty of water to drink.

Give plenty of water to drink in small sips.

Most important symptoms and effects, both acute and delayed

Physician's information / possible symptoms

No symptoms known so far.

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Foam

Dry fire-extinguishing substance

Carbon dioxide

Special hazards arising from the substance or mixture

Fire gas of organic material has to be classed invariably as respiratory poison.

Advice for firefighters

Special protective equipment for fire-fighters

In case of rescue and maintenance activities in storage containers use environment-independent breathing apparatus because of risk of suffocation by edging out of air oxygen

Wear full protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Keep people away and stay on the upwind side.

Use personal protective clothing.

Keep away sources of ignition.



Environmental precautions
No information available.

Methods and material for containment and cleaning up
Take up with absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).
Take up mechanically and send for disposal.

Reference to other sections
No information available.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Provide good ventilation.
Avoid contact with skin and eyes

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking
Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions

Store only at temperature of 30°C maximum (=86°F).
Keep container tightly closed, store at cool and aired place, open and handle carefully.
Recommended storage temperature: room temperature.

Fire class B

Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure controls

Respiratory protection

If ventilation insufficient, wear respiratory protection.
Multi-purpose filter ABEK

Hand protection

gloves (solvent resistant) e.g. nitril rubber (opermeation > 480 min/ 0,11 mm thickness in accordance with DIN / EN 374)

Eye protection

safety goggles / face protection
safety goggles with side protection

Skin protection

rubber apron

General protective measures

Avoid contact with eyes and skin
Do not inhale gases/vapours/aerosols.

Hygiene measures

At work do not eat, drink, smoke or take drugs.
Follow general rules of industrial hygiene for safe handling of chemical products
Work in rooms with good ventilation.
Wash hands before breaks and after work.

Additional advice on system design

not necessary in general

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Form	Colour	Odour
liquid	clear	alcoholic

Important health, safety and environmental information

Value	Temperature	at	Method	Remark
pH value in delivery state				not applicable



	Value	Temperature	at	Method	Remark
boiling range	> -81 °C		1013 hPa		
melting range	-88 °C				
Flash point	> 12 °C				
Autoignition					unknown
Lower explosion limit	2 Vol-%				
Upper explosion limit	12 Vol-%				
Density	0,83 g/cm ³	25 °C			
Solubility in water					hydrolyses

Other information
No information available.

SECTION 10: Stability and reactivity

Reactivity

No information available.

Chemical stability

No information available.

Possibility of hazardous reactions

No information available.

Conditions to avoid

Evolution of explosive gases/vapours.
Heating, unshielded flame, ignition source, electrostatic charge

Incompatible materials

Materials to avoid

Reactions with combustible substances.
Reactions with water.

Hazardous decomposition products

none at appropriate handling and storage

Thermal decomposition

Remark No decomposition if used as directed.

SECTION 11: Toxicological information

Information on toxicological effects

No information available.

SECTION 12: Ecological information

Toxicity

No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment

No information available.

Other adverse effects



Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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gleitmo SFL 9680 K2
A01-05651

General regulation

Ecological dates are not available.
Do not allow uncontrolled leakage of product into the environment.
Product is not allowed to be discharged into aquatic environment.

SECTION 13: Disposal considerations

Waste treatment methods

Recommendations for the product

Disposal according to local authority prescriptions

Recommendations for packaging

Contaminated packings have to be treated like the product itself.

Recommended cleansing agent

isopropanol

SECTION 14: Transport information

Land and inland navigation transport ADR/RID

UN 1993 FLAMMABLE LIQUID, N.O.S. (propan-2-ol), 3, II, (D/E), Special provisions 640D, Classification code: F1

Marine transport IMDG

UN 1993 FLAMMABLE LIQUID, N.O.S. (propan-2-ol), 3, II

Air transport ICAO/IATA-DGR

UN 1993 Flammable liquid, n.o.s. (propan-2-ol), 3, II

Special precautions for user

No information available.

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

No information available.

SECTION 15: Regulatory information

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

VOC standard

VOC content 70 %

National regulations

Other regulations, restrictions and prohibition regulations

ZH 1/118 "Working with health hazard substances (for the workers) (M 050)"

ZH 1/129 "Data Sheet: Irritating substances / corrosive substances (M 004)"

ZH 1/319 "Data Sheet: Solvents (M 017)"

Water hazard class

1 Mixture-WGK according to VwVwS (GER)

**Decree for case of interference/
remarks**

Anhang I, Nr. 7b

Chemical Safety Assessment

No information available.

SECTION 16: Other information

Training advice

Use information in this MSDS

Recommended uses and restrictions

usage only according to instructions for use and observance of warning notes
National and local regulations concerning chemicals shall be observed.

Further information

All the raw materials in this product are listed in TSCA.

All the raw materials in this product are listed in PICCS.

All the raw materials in this product are listed in IECSC.

All the raw materials in this product are listed in ENCS.

All the raw materials in this product are listed in KECL.

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Sources of key data used

Adoption of supplier data sheet



Safety Data Sheet according to Regulation (EC) No. 1907/
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gleitmo SFL 9680 K2

A01-05651

Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)

R 11 Highly flammable.

R 36 Irritating to eyes.

R 67 Vapours may cause drowsiness and dizziness.



Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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revision 09.06.2011 (GB) Version 1.9
gleitmo SFL 9680 K3
A01-05652

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

Product identifier

Name of product gleitmo SFL 9680 K3

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

Recommended intended purpose(s)
see Product information

Details of the supplier of the safety data sheet

Manufacturer/distributor

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Werner-Heisenberg-Straße 1, D-67661 Kaiserslautern/Germany
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Advice

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Emergency telephone number

Emergency advice

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No information available.

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to 67/548/EEC or 1999/45/EC

Xn; R22
Xi; R38
T; R48/25
N; R51/53
Repr. Cat. 2; R60
Repr. Cat. 2; R61
Muta. Cat. 3; R68

R-phrases

60 May impair fertility.
61 May cause harm to the unborn child.
38 Irritating to skin.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
68 Possible risk of irreversible effects.
22 Also harmful if swallowed.
48/25 Also toxic: danger of serious damage to health by prolonged exposure if swallowed.

Label elements

Labelling according to 67/548/EEC or 1999/45/EC

Remarks for labelling

The product is classified and labelled in accordance with EC directives/German regulations on dangerous substances. Classification happened on the basis of calculation methods of preparation directive (1999/45/EC).

T Toxic
N Dangerous for the environment



R-phrases

60 May impair fertility.
61 May cause harm to the unborn child.
38 Irritating to skin.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
68 Possible risk of irreversible effects.
22 Also harmful if swallowed.
48/25 Also toxic: danger of serious damage to health by prolonged exposure if swallowed.

S-phrases

53 Avoid exposure - obtain special instructions before use.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.



28	In case of skin contact immediately flush with lots of water and soap
36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
57	Use appropriate container to avoid environmental contamination.
61	Avoid release to the environment. Refer to special instructions/safety data sheets.

Hazardous ingredients for labeling

Dibutylzinndilaurat

Other hazards

Information pertaining to special dangers for human and environment

Toxic to aquatic organisms, may cause long-term harmful effects in the aquatic environment.

SECTION 3: Composition/ information on ingredients

Mixtures

Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to 67/548/EEC
77-58-7	201-039-8	Dibutylzinndilaurat	> 95	T; R 22-38-48/25-51/53-60-61-68

SECTION 4: First aid measures

Description of first aid measures

General information

Remove contaminated soaked clothing immediately, don't leave to dry.

In case of inhalation

After inhalation of product or fire gases remove person from hazard area. Let him or her breath fresh air. Call for a physician.

In case of skin contact

In case of contact with skin wash off with soap and water.

Consult a doctor if skin irritation persists.

In case of eye contact

In case of contact with eyes rinse with plenty of water carefully. In the event of persistent symptoms seek medical treatment.

In case of ingestion

Do not induce vomiting.

Call for a doctor immediately.

Rinse out mouth and give plenty of water to drink.

Most important symptoms and effects, both acute and delayed

Physician's information / possible symptoms

No symptoms known so far.

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Foam

Dry powder

Carbon dioxide

Water spray jet

Extinguishing media which must not be used for safety reasons

Full water jet

Special hazards arising from the substance or mixture

Fire gas of organic material has to be classed invariably as respiratory poison.

Carbon monoxide (CO)

Carbon dioxide (CO2)

cracking products of organic compounds

Advice for firefighters

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Wear full protective clothing.



Additional information

Cool endangered containers with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Keep away personal without protection.
Avoid contact with skin and eyes

Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).
Send in suitable containers for recovery or disposal.
Send the material taken up as prescribed to the disposal station.

Additional Information

Informations for disposal see chapter 13.

Reference to other sections

No information available.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Care for suitable extraction / ventilation at processing machines.
Take the usual precautions when handling with chemicals.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Prevent penetration into the ground.

Advice on storage compatibility

Do not store together with food.

Further information on storage conditions

Keep container tightly closed, store at cool and aired place, open and handle carefully.
Protect from heat and direct solar radiation.
Store in a dry place.

Storage group 10

Fire class B

Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

Control parameters

Additional advice

As basis for this information served the valid references.

Exposure controls

Respiratory protection

If ventilation insufficient, wear respiratory protection.
Multi-purpose filter ABEK

Hand protection

PVC gloves

Eye protection

tightly fitting goggles

Skin protection

Light protective clothing.
Usual working clothes for chemical industries

General protective measures

Avoid contact with eyes and skin
Do not inhale gases/vapours/aerosols.



Hygiene measures

Cloths contaminated with product should not be kept in trouser pockets.
At work do not eat, drink, smoke or take drugs.
Follow general rules of industrial hygiene for safe handling of chemical products
Remove soiled or soaked clothing immediately.
Work in rooms with good ventilation.
Keep away from food and drink.
Wash hands and skin before breaks and after work.
Use barrier skin cream.

Additional advice on system design

not necessary in general

! SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Form	Colour	Odour
liquid	yellowish	perceptible

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value in delivery state	3,5 - 4		1 %		H2O
boiling point	205 °C		13 mbar		
melting point	5 °C				
Flash point	> 140 °C			closed cup	
Ignition temperature	450 °C				
Autoignition					unknown
Vapour pressure	< 0,1 hPa	20 °C			
Density	1,05 g/cm ³				
Solubility in water					insoluble
Viscosity	22 mm ² /s				

Other information

No information available.

SECTION 10: Stability and reactivity

Reactivity

No information available.

Chemical stability

No information available.

Possibility of hazardous reactions

No information available.

Conditions to avoid

No information available.

Incompatible materials

Materials to avoid

Reactions with strong oxidising agents.

Hazardous decomposition products

No information available.



! SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	201 mg/kg	rat		
Irritability skin	irritant	rabbit		
Irritability eye	irritant	rabbit eye		
Skin sensitization	No sensitizing effect known			

! Toxicity test (Additional information)

mutagenicity: yes, cat3...teratogenicity:yes, cat 1/2

! SECTION 12: Ecological information

Toxicity

No information available.

Persistence and degradability

Elimination rate	Method of analysis	Method	Validation
Biological degradability			not readily degradable

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment

No information available.

Other adverse effects

Behaviour in sewage plant

Product gets duly not into waste water before it is not treated according to the local regulations.

! General regulation

May cause long-term adverse effects in the aquatic environment.

Toxic to aquatic organisms.

Do not allow uncontrolled leakage of product into the environment.

Product is not allowed to be discharged into aquatic environment.

SECTION 13: Disposal considerations

Waste treatment methods

Waste code No.

07 01 99

Name of waste

wastes not otherwise specified

Recommendations for the product

Standardized regulations for residual waste disposal within the EG member states do not exist.

German statutes are prescribed in the law of "recycling and waste" (KrW/AbfG)

Recommendations for packaging

Uncontaminated packaging may be taken for recycling.

For containers with contamination is valid the EAC: 150199 D1 Containers with contamination

General information

Ultimately responsible for correct classification is the waste producer, as the EWC names different codes for different origins of same waste

Therefore the a.m. recommendation has to be checked in case of need.



! SECTION 14: Transport information

Land and inland navigation transport ADR/RID

UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S. (dibutyltin dilaurate), 6.1, III, (E), Classification code: T3
Subsidiary risk Hazardous to the environment

! Marine transport IMDG

UN 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S. (dibutyltin dilaurate), 6.1, III

Air transport ICAO/IATA-DGR

UN 2788 Organotin compound, liquid, n.o.s. (dibutyltin dilaurate), 6.1, III

Special precautions for user

No information available.

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

No information available.

SECTION 15: Regulatory information

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

VOC standard

VOC content 0 %

National regulations

Water hazard class 3 KBWS-classification

Decree for case of interference/
remarks Anhang I, Nr. 9a

Chemical Safety Assessment

No information available.

SECTION 16: Other information

Training advice

Use information in this MSDS

Recommended uses and restrictions

usage only according to instructions for use and observance of warning notes
National and local regulations concerning chemicals shall be observed.

Further information

Substantial changes to the former version are marked by "I" on the left margin of the paper.

All the raw materials in this product are listed in TSCA.

Refer to product information paper.

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Sources of key data used

Adoption of supplier data sheet

Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)

R 22 Harmful if swallowed.

R 38 Irritating to skin.

R 48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 60 May impair fertility.

R 61 May cause harm to the unborn child.

R 68 Possible risk of irreversible effects.