

SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830

KATANA

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

1.1. Product identifier

Product name : KATANA
Synonyms : CHIKARA; EPSILON; FLAZASULFURON 25% water dispersible granule; FLAZASULFURON 25% WG; SL-160 25% WG
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Herbicide

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

ISK Biosciences Europe N.V.
Pegasus Park, De Kleetlaan 12B - box 9
B-1831 Diegem, Belgium
☎ +32 2 627 86 11
☎ +32 2 627 86 00
isk-msds@isk.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aquatic Acute	category 1	H400: Very toxic to aquatic life.
Aquatic Chronic	category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2. Label elements



Signal word Warning

H-statements

H410 Very toxic to aquatic life with long lasting effects.

P-statements

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

Supplemental information

EUH210 Safety data sheet available on request.

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)
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<http://www.big.be>
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134-15857-500-en

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3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
flazasulfuron	104040-78-0	26.6 %	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	(1)	Constituent
methylnaphthalenesulfonic acid/formaldehyde, copolymer, sodium salt	81065-51-2	4.9%≤C <5.6%	Eye Dam. 1; H318	(1)	Constituent
sodium diisopropyl-naphthalenesulphonate	1322-93-6 215-343-3	C < 5 %	Acute Tox. 4; H332 Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT SE 3; H335	(1)	Constituent

(1) For H-statements in full: see heading 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

4.2.1 Acute symptoms

After inhalation:

Unlikely to cause harmful effects.

After skin contact:

Not irritating.

After eye contact:

Not irritating.

After ingestion:

Unlikely to cause harmful effects.

4.2.2 Delayed symptoms

No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Polyvalent foam. ABC powder. Carbon dioxide. MAJOR FIRE: Water spray.

5.1.2 Unsuitable extinguishing media:

Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, sulphur oxides, carbon monoxide - carbon dioxide.

5.3. Advice for firefighters

5.3.1 Instructions:

Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Heat/fire exposure: compressed air/oxygen apparatus.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Prevent dust cloud formation. No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Keep only in the original container. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.
The product will only be used as herbicide.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

If applicable and available it will be listed below.

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

If applicable and available it will be listed below.

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

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Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection:

Dust production: dust mask with filter type P1.

b) Hand protection:

Gloves.

- materials (good resistance)

Rubber, PVC, plastics.

c) Eye protection:

Safety glasses. In case of dust production: protective goggles.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Grains
Odour	Cinnamon odour
Odour threshold	No data available
Colour	Brown
Particle size	97.2% > 710 µm
Explosion limits	No data available
Flammability	Non-flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	ether ; No data available
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	No data available
Relative density	0.84 ; Bulk density
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	5.1 ; 1 %

9.2. Other information

Absolute density	840 kg/m ³
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SECTION 10: Stability and reactivity

10.1. Reactivity

Substance has acid reaction.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid raising dust. Keep away from naked flames/heat.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, sulphur oxides, carbon monoxide - carbon dioxide.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

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Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		4800 mg/kg		Rat	Experimental value	
Dermal	LD50		> 2000 mg/kg		Rat	Experimental value	
Inhalation	LC50		> 6.17 mg/l	4 h	Rat	Experimental value	

flzasulfuron

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		> 5000 mg/kg		Rat (male/female)	Experimental value	
Dermal	LD50		> 2000 mg/kg		Rat	Experimental value	
Inhalation	LC50		> 5.99 mg/l	4 h	Rat	Experimental value	

Judgement of the mixture is based on test data on the mixture as a whole

Conclusion

Not classified for acute toxicity

Corrosion/irritation

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Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating					Literature study	
Skin	Not irritating					Literature study	

Judgement of the mixture is based on test data on the mixture as a whole

Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

Respiratory or skin sensitisation

KATANA

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing					Literature study	

flzasulfuron

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing					Literature study	

Judgement of the mixture is based on test data on the mixture as a whole

Conclusion

Not classified as sensitizing for skin

Specific target organ toxicity

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

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No (test) data on the mixture available

Mutagenicity (in vivo)

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

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Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

KATANA

No (test) data on the mixture available

Judgement is based on the relevant ingredients

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

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No (test) data on the mixture available

Chronic effects from short and long-term exposure

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No effects known.

SECTION 12: Ecological information

12.1. Toxicity

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	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		> 100 mg/l	96 h	Oncorhynchus mykiss			Experimental value
	LC50		> 400 mg/l	96 h	Lepomis macrochirus			Experimental value
Acute toxicity invertebrates	EC50		> 100 mg/l	48 h	Daphnia magna			Experimental value
Toxicity algae and other aquatic plants	EC50		0.025 mg/l	72 h	Selenastrum capricornutum			Experimental value

flazasulfuron

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		22 mg/l	96 h	Oncorhynchus mykiss	Flow-through system		Experimental value
	LC50		> 98 mg/l	96 h	Lepomis macrochirus	Flow-through system		Experimental value
Acute toxicity invertebrates	EC50		> 106 mg/l	48 h	Daphnia magna			Experimental value
Toxicity algae and other aquatic plants	EC50		0.045 mg/l	72 h	Selenastrum capricornutum			Experimental value
	NOEC		0.02 µg/l	7 day(s)	Lemna gibba			Experimental value
Toxicity aquatic micro-organisms		OECD 209	100 mg/l		Activated sludge			Experimental value

Classification of the mixture is based on test data on the mixture as a whole

Conclusion

Slightly harmful to fishes

Slightly harmful to crustacea

Very toxic to algae

Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

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Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
	12.8 day(s) - 15.9 day(s)		

Conclusion

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

flazasulfuron

Log Kow

Method	Remark	Value	Temperature	Value determination
		< 1.5		

methylnaphthalenesulfonic acid/formaldehyde, copolymer, sodium salt

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

12.4. Mobility in soil

flazasulfuron

(log) Koc

Parameter	Method	Value	Value determination
Koc		46.16	Experimental value

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

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Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

02 01 08* (wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing: agrochemical waste containing hazardous substances).

13.1.2 Disposal methods

Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into surface water.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

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Road (ADR)

14.1. UN number

UN number	3077
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14.2. UN proper shipping name

Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
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14.3. Transport hazard class(es)

Hazard identification number	90
Class	9
Classification code	M7

14.4. Packing group

Packing group	III
Labels	9

14.5. Environmental hazards

Environmentally hazardous substance mark	yes
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14.6. Special precautions for user

Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601
Limited quantities	Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number

UN number	3077
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14.2. UN proper shipping name

Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
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14.3. Transport hazard class(es)

Hazard identification number	90
Class	9
Classification code	M7

14.4. Packing group

Packing group	III
Labels	9

14.5. Environmental hazards

Environmentally hazardous substance mark	yes
--	-----

14.6. Special precautions for user

Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601
Limited quantities	Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number

UN number	3077
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14.2. UN proper shipping name

Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
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14.3. Transport hazard class(es)

Class	9
Classification code	M7

14.4. Packing group

Packing group	III
Labels	9

14.5. Environmental hazards

Environmentally hazardous substance mark	yes
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14.6. Special precautions for user

Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601

KATANA

Limited quantities	Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)
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Sea (IMDG/IMSBC)

14.1. UN number	
UN number	3077
14.2. UN proper shipping name	
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
14.3. Transport hazard class(es)	
Class	9
14.4. Packing group	
Packing group	III
Labels	9
14.5. Environmental hazards	
Marine pollutant	P
Environmentally hazardous substance mark	yes
14.6. Special precautions for user	
Special provisions	274
Special provisions	335
Special provisions	966
Special provisions	967
Special provisions	969
Limited quantities	Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
Annex II of MARPOL 73/78	Not applicable

Air (ICAO-TI/IATA-DGR)

14.1. UN number	
UN number	3077
14.2. UN proper shipping name	
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
14.3. Transport hazard class(es)	
Class	9
14.4. Packing group	
Packing group	III
Labels	9
14.5. Environmental hazards	
Environmentally hazardous substance mark	yes
14.6. Special precautions for user	
Special provisions	A97
Special provisions	A158
Special provisions	A179
Special provisions	A197
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	30 kg G

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
0 %	

European drinking water standards (Directive 98/83/EC)

flazasulfuron

Parameter	Parametric value	Note	Reference
Pesticides	0,1 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.
Pesticides — Total	0,5 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.

National legislation Belgium

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No data available

National legislation The Netherlands

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Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 03
Waterbezwaarlijkheid	4

National legislation France

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No data available

National legislation Germany

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Lagerklasse (TRGS510)	13: Nicht brennbare Feststoffe
WGK	2; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

National legislation United Kingdom

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No data available

Other relevant data

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No data available

15.2. Chemical safety assessment

No chemical safety assessment has been conducted.

SECTION 16: Other information

Full text of any H-statements referred to under headings 2 and 3:

- H302 Harmful if swallowed.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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