



SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

TOP EFEKT MOSS

Creation date	10th August 2000	Version	2.0
Revision date	25th March 2022		

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

- 1.1. Product identifier**
Substance / mixture TOP EFEKT MOSS
mixture
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
Mixture's intended use
Fungicidal product. Permission for trading biocidal product: 3194/07
Mixture uses advised against
not available
- 1.3. Details of the supplier of the safety data sheet**
Manufacturer
Name or trade name TENZI Sp. z o.o.
Address Skarbimierzyce 20, Dołuje, 72-002
Poland
VAT Reg No PL8512583405
Phone +48 91 3119777
E-mail info@tenzi.pl
Web address www.tenzi.pl
- Competent person responsible for the safety data sheet**
Name technolog@tenzi.pl
E-mail technolog@tenzi.pl
- 1.4. Emergency telephone number**
European emergency number: 112

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**
Classification of the mixture in accordance with Regulation (EC) No 1272/2008
The mixture is classified as dangerous.

Skin Corr. 1B, H314
Eye Dam. 1, H318
Aquatic Acute 1, H400
Aquatic Chronic 2, H411

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse effects on human health and the environment

Causes severe skin burns and eye damage. Causes serious eye damage. Toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

- 2.2. Label elements**
Hazard pictogram



Signal word
Danger

Hazardous substances

Alkyl (C12-16) dimethyl benzyl ammonium chloride (ADBAC/BKC (C12-16))

Hazard statements

H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.



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P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P405	Store locked up.

Supplemental information

5-<15 % cationic surfactants

Requirements for child-resistant fastenings and tactile warning of danger

Container must carry a tactile warning of danger. Container must be fitted with child-resistant fastening.

2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of substances and additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 68424-85-1 EC: 270-325-2 Registration number: 01-2119965180-41	Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)	10	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)	

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Depending on the situation, call medical rescue service or ensure medical treatment.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible.

If swallowed

DO NOT INDUCE VOMITING! Even the induced vomiting can cause complications as in case of detergents and other foaming substances. Rinse out the mouth with water and provide 2-5 dL of water. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible.



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

If inhaled

Inhaling vapours can cause corrosion of the breathing system.

If on skin

Causes severe skin burns.

If in eyes

Causes serious eye damage.

If swallowed

Corrosion of the digestion system can occur.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes.

6.2. Environmental precautions

Do not allow to enter drains. Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not inhale mist/vapours/spray. Prevent contact with skin and eyes. Wash hands and exposed parts of the body thoroughly after handling. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store in a tightly closed, original plastic container (high density polyethylene HDPE). Store this product in a dry environment that will be maintained at 5°C - 35°C temperature with a good ventilation system and an easy washable, nonabsorbable alkaline resistant floor. DO NOT expose the product to sunlight and keep away from heat, frost, sparks, flame and source of ignition.

Storage temperature

min 5 °C, max 35 °C

7.3. Specific end use(s)

not available



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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains no substances for which occupational exposure limits are set.

DNEL

Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)

Workers / consumers	Route of exposure	Value	Effect	Determining method	Source
Workers	Inhalation	3.96 mg/m ³	Systemic chronic effects		karta charakterystyki
Workers	Dermal	5.7 mg/kg bw/day	Systemic chronic effects		karta charakterystyki
Consumers	Inhalation	1.64 mg/m ³	Systemic chronic effects		karta charakterystyki
Consumers	Dermal	3.4 mg/kg bw/day	Systemic chronic effects		karta charakterystyki
Consumers	Oral	3.4 mg/kg bw/day	Systemic chronic effects		karta charakterystyki

PNEC

Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)

Route of exposure	Value	Determining method
Drinking water	0.0009 mg/l	
Seawater	0.00009 mg/l	
Water (intermittent release)	0.00016 mg/l	
Freshwater sediment	0.267 mg/kg of dry substance	
Sea sediments	0.0267 mg/kg of dry substance	

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Thermal hazard

Data not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2. Collect spillage.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	Characteristic for the materials used
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	data not available
Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	data not available



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Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	8 (undiluted at 20 °C)
Kinematic viscosity	data not available
Solubility in water	soluble
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	
Relative density	0,990 g/cm ³ (+-) 0,020
Form	colorless liquid

9.2. Other information

not available

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

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

No toxicological data is available for the mixture.

Acute toxicity

Based on available data the classification criteria are not met.

Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)

Route of exposure	Parameter	Method	Value	Time of exposure	Species	Sex	Source
Oral	LD ₅₀	OECD 401	>300-2000 mg/kg		Rat (Rattus norvegicus)		karta charakterystyki

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)

Route of exposure	Result	Time of exposure	Species	Source
	Corrosive		Rabbit	karta charakterystyki

Serious eye damage/irritation

Causes serious eye damage.



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Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)

Route of exposure	Result	Method	Time of exposure	Species	Sex	Source
	Negative	OECD 406		Guinea-pig		karta charakterystyki

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)

Result	Method	Time of exposure	Specific target organ	Species	Sex	Source
Negative	OECD 471			Rat		karta charakterystyki

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Based on available data the classification criteria are not met.

11.2. Information on other hazards

not available

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Very toxic to aquatic life.

Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)

Parameter	Method	Value	Time of exposure	Species	Environment	Source
LC ₅₀		>0.1-1 mg/l	96 hour	Fishes		karta charakterystyki
EC ₅₀		>0.01-0.1 mg/kg	48 hour	Daphnia (Daphnia magna)		karta charakterystyki
IC ₅₀		>0.01-0.1 mg/l	72 hour	Algae (Selenastrum capricornutum)		karta charakterystyki



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Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)

Parameter	Method	Value	Time of exposure	Species	Environment	Source
NOEC	OECD 201	>0.001-0.01 mg/l		Algae (Pseudokirchneriella subcapitata)		karta charakterystyki

12.2. Persistence and degradability

Biodegradability

Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/ BKC (C12 -C16)) (active substance)

Parameter	Method	Value	Time of exposure	Environment	Result	Source
	OECD 301D				Easily biodegradable	karta charakterystyki

Surfactants are biodegradable according to the European Parliament and Council Regulation (EC) No. 648/2004 on detergents, as amended.

12.3. Bioaccumulative potential

Data not available.

12.4. Mobility in soil

Data not available.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

Data not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

07 06 04 other organic solvents, washing liquids and mother liquors *

Packaging waste type code

15 01 02 plastic packaging

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

SECTION 14: Transport information

14.1. UN number or ID number

UN 1760

14.2. UN proper shipping name

CORROSIVE LIQUID, N.O.S. (alkyl(C12-C16) dimethyl benzyl ammonium chloride)



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14.3. Transport hazard class(es)

8 Corrosive substances

14.4. Packing group

II - substances presenting medium danger

14.5. Environmental hazards

Yes

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

Additional information

Hazard identification No.

UN number

Safety signs



8+hazardous for the environment



SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended. REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents, as ammended.

15.2. Chemical safety assessment

Chemical safety assessment has not been carried out for the mixture.

Alkyl (C12-16) dimethyl benzyl ammonium chloride (ADBAC/BKC (C12-16)): the manufacturer has performed a chemical safety assessment

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Guidelines for safe handling used in the safety data sheet

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P405	Store locked up.

Other important information about human health protection



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The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CE ₅₀	Concentration of a substance when it is affected 50% of the population
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC ₅₀	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
log Kow	Octanol-water partition coefficient
LZO	Volatile organic compounds
MARPOL	International Convention for the Prevention of Pollution from Ships
NOEC	No observed effect concentration
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UE	European Union
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
vPvB	Very Persistent and very Bioaccumulative
WE	Identification code for each substance listed in EINECS
Acute Tox.	Acute toxicity
Aquatic Acute	Hazardous to the aquatic environment
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
Eye Dam.	Serious eye damage
Skin Corr.	Skin corrosion

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet



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REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

General update

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.