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

1.1. Product identifier

TS Kettenöl Ultimate 125ml B

UFI: P6P2-M0KQ-Y00Y-TWJA

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

Use of the substance/mixture

Lubricant

1.3. Details of the supplier of the safety data sheet

Company name:	TUNAP GmbH & Co. KG	
Street:	Buergermeister-Seidl-Strasse 2	
Place:	D-82515 Wolfratshausen	
Telephone:	+49 (0) 8171/1600-0	Telefax: +49 (0) 8171/1600-40
E-mail:	sdb@tunap.com	
Internet:	www.tunap.com	

1.4. Emergency telephone number:

1774 / +356 2559 4600

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aerosol 1; H222-H229
Skin Sens. 1; H317

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

Polysulfides, di-tert-dodecyl
Reaction products of triphenyl phosphite and isodecanol (1:2)
Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate
bis(2-ethylhexyl)[(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl)
[(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl)
[(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl)
[(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl)
[(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine

Signal word: Danger

Pictograms:

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H317	May cause an allergic skin reaction.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

	smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing spray.
P280	Wear protective gloves/protective clothing.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents/container according to the official regulations.

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
106-97-8	butane			25 - < 50 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Liquefied gas; H220 H280			
68425-15-0	Polysulfides, di-tert-dodecyl			0.1 - < 1 %
	270-335-7		01-2119540516-41	
	Skin Sens. 1B; H317			
68411-46-1	Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene			0.1 - < 1 %
	270-128-1		01-2119491299-23	
	Repr. 2, Aquatic Chronic 3; H361f H412			
25550-98-5	Reaction products of triphenyl phosphite and isodecanol (1:2)			0.1 - < 1 %
	701-374-4		01-2119962888-14	
	Skin Sens. 1, Aquatic Chronic 3; H317 H412			
	Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate			0.1 - < 1 %
	947-946-9		01-2120772600-59	
	Skin Irrit. 2, Skin Sens. 1B, Aquatic Chronic 4; H315 H317 H413			
	bis(2-ethylhexyl)[(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine			< 0.1 %
	939-700-4		01-2119982395-25	
	Skin Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 2; H315 H317 H400 H411			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
68425-15-0	270-335-7	Polysulfides, di-tert-dodecyl	0.1 - < 1 %
	inhalation: LC50 = >20 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg		
68411-46-1	270-128-1	Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene	0.1 - < 1 %
	inhalation: LC50 = >5 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg		
25550-98-5	701-374-4	Reaction products of triphenyl phosphite and isodecanol (1:2)	0.1 - < 1 %
	dermal: LD50 = >5000 mg/kg; oral: LD50 = >5000 mg/kg		
	939-700-4	bis(2-ethylhexyl)[(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl)[(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl)[(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl)[(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl)[(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine	< 0.1 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 3313 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, nausea, dizziness, fatigue, skin irritation

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water mist. Foam. Carbon dioxide (CO2). Extinguishing powder.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard

area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information

Danger of bursting container.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear personal protection equipment.

For non-emergency personnel

First aider: Pay attention to self-protection!

For emergency responders

Fight fire with normal precautions from a reasonable distance.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. Methods and material for containment and cleaning up

For containment

Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Observe instructions for use.
Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
When using do not eat, drink, smoke, sniff.
Wear personal protection equipment (refer to section 8).
In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

Further information on handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Observe legal regulations and provisions.

Hints on joint storage

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Protect from frost. Protect from direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

Lubricant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Name of agent			
DNEL type		Exposure route	Effect	Value
68411-46-1	Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene			
Worker DNEL, long-term		inhalation	systemic	0,6 mg/m³
Worker DNEL, long-term		dermal	systemic	0,08 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,14 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,04 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,04 mg/kg bw/day
25550-98-5	Reaction products of triphenyl phosphite and isodecanol (1:2)			
Worker DNEL, long-term		inhalation	systemic	70,5 mg/m³
Worker DNEL, long-term		dermal	systemic	50 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	35 mg/m³
Consumer DNEL, long-term		dermal	systemic	25 mg/kg bw/day
	Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate			
Worker DNEL, long-term		inhalation	systemic	4,93 mg/m³
Worker DNEL, long-term		dermal	systemic	1,4 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,87 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,5 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,5 mg/kg bw/day
	bis(2-ethylhexyl)[(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine			
Worker DNEL, long-term		inhalation	systemic	1,3 mg/m³
Worker DNEL, long-term		dermal	systemic	0,4 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,3 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,2 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,2 mg/kg bw/day

PNEC values

CAS No	Name of agent	
Environmental compartment		Value
68411-46-1	Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene	
Freshwater		0,034 mg/l
Freshwater (intermittent releases)		0,51 mg/l
Marine water		0,003 mg/l
Freshwater sediment		0,446 mg/kg
Marine sediment		0,045 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		1,76 mg/kg
	bis(2-ethylhexyl)[(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,01 mg/l
Marine water		0 mg/l
Micro-organisms in sewage treatment plants (STP)		0,69 mg/l

Additional advice on limit values

a no restriction
b End of exposure or end of shift
c at long-term exposure:
d before next shift

blood (B)
Urine (U)

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses.
EN 166

Hand protection

Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
Suitable material: NBR (Nitrile rubber) Breakthrough time: 480min
Thickness of the glove material 0,45 mm
EN ISO 374

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
When exceeding the relevant workplace exposure limits, note the following:
Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..

Filtering device with filter or ventilator filtering device of type: AX
Observe the wear time limits as specified by the manufacturer.
Observe legal regulations and provisions.

Environmental exposure controls

Observe legal regulations and provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	green
Odour:	like mineral oil

		Test method
Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	40- °C	
Flammability:	not applicable not applicable	
Lower explosion limits:	1,5 vol. %	
Upper explosion limits:	15 vol. %	
Flash point:	-80 °C	
Auto-ignition temperature:	not determined	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):		DIN 19268
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.	

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	not determined	
Density (at 20 °C):	0,89 g/cm³	DIN 51757
Relative vapour density:	not determined	

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Heating may cause an explosion.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate:	not determined
Solid content:	not determined

Further Information

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurized container: May burst if heated.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

10.5. Incompatible materials

Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

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

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
68425-15-0	Polysulfides, di-tert-dodecyl					
	oral	LD50 mg/kg	>2000	Rat		
	dermal	LD50 mg/kg	>2000	Rabbit		
	inhalation (4 h) vapour	LC50	>20 mg/l	Rat		
68411-46-1	Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene					
	oral	LD50 mg/kg	> 5000	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 mg/kg	> 2000	Rat	Study report (1988)	OECD Guideline 402
	inhalation (4 h) dust/mist	LC50	>5 mg/l	Rat		
25550-98-5	Reaction products of triphenyl phosphite and isodecanol (1:2)					
	oral	LD50 mg/kg	>5000	Rat		
	dermal	LD50 mg/kg	>5000	Rabbit		
	bis(2-ethylhexyl)[(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine					
	oral	LD50 mg/kg	3313	Rat	Study report (1981)	OECD Guideline 401
	dermal	LD50 mg/kg	> 2000	Rat	Study report (2012)	OECD Guideline 402

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (Polysulfides, di-tert-dodecyl; Reaction products of triphenyl phosphite and isodecanol (1:2); Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate; bis(2-ethylhexyl)[(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine)

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.
No indication of human carcinogenicity.
No indications of human germ cell mutagenicity exist.
No indications of human reproductive toxicity exist.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Ingestion, Inhalation, Skin contact, Eye contact.
Reference to other sections: 2.1, 4.2.

Specific effects in experiment on an animal

No information available.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
68425-15-0	Polysulfides, di-tert-dodecyl						
	Acute fish toxicity	LC50 mg/l	>100	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 mg/l	>100	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 mg/l	>100	48 h	Daphnia magna (Big water flea)		
68411-46-1	Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene						
	Acute fish toxicity	LC50 mg/l	> 100	96 h	Danio rerio	Study report (1988)	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Desmodesmus subspicatus	Study report (2006)	OECD Guideline 201
	Acute crustacea toxicity	EC50	51 mg/l	48 h	Daphnia magna	Study report (2004)	OECD Guideline 202
25550-98-5	Reaction products of triphenyl phosphite and isodecanol (1:2)						
	Acute algae toxicity	ErC50	45 mg/l	72 h	Desmodesmus subspicatus	Study report (1993)	other: 87/302/EEC, Algal inhibition test
	Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate						
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Raphidocelis subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute bacteria toxicity	EC50 mg/l ( )	> 1000	3 h	activated sludge of a predominantly domestic sewag	REACh Registration Dossier	OECD Guideline 209
	bis(2-ethylhexyl)[(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine						
	Acute fish toxicity	LC50	1,3 mg/l	96 h	Danio rerio	Study report (1988)	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	0,976	72 h	Desmodesmus subspicatus	Study report (2013)	OECD Guideline 201

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
106-97-8	butane	2,89
68411-46-1	Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene	> 6
25550-98-5	Reaction products of triphenyl phosphite and isodecanol (1:2)	9,32
	bis(2-ethylhexyl)[(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine	6,56

BCF

CAS No	Chemical name	BCF	Species	Source
68411-46-1	Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene	411	Cyprinus carpio	Study report (2000)
25550-98-5	Reaction products of triphenyl phosphite and isodecanol (1:2)	606,5		US EPA (2009)
	bis(2-ethylhexyl) [(4-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(4-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine; bis(2-ethylhexyl) [(5-methyl-2H-1,2,3-benzotriazol-2-yl)methyl]amine; bis(2-ethylhexyl) [(6-methyl-1H-1,2,3-benzotriazol-1-yl)methyl]amine	1676		EPIWIN (2011)

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
The product has not been tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 1950

14.2. UN proper shipping name: AEROSOLS

14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1
Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1
Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1
Marine pollutant:	no
Special Provisions:	63, 190, 277, 327, 344, 381,959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS, flammable
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1
Special Provisions:	A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 28, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions:	No information available.
Directive 2004/42/EC on VOC in paints and varnishes:	No information available.
Information according to Directive 2012/18/EU (SEVESO III):	P3a FLAMMABLE AEROSOLS

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Aerosol Directive (75/324/EEC)

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	1 - slightly hazardous to water
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,11.

Abbreviations and acronyms

Flam. Gas: Flammable gases
Aerosol: Aerosol
Liquefied gas
Skin Irrit: Skin irritation
Skin Sens: Skin sensitisation
Repr: Reproductive toxicity
Aquatic Acute: Acute aquatic hazard
Aquatic Chronic: Chronic aquatic hazard
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level
WEL (UK): Workplace Exposure Limits
TWA (EC): Time-Weighted Average
ATE: Acute Toxicity Estimate
STEL (EC) Short Term Exposure Limit
LC50: Lethal Concentration
EC50: half maximal Effective Concentration
ErC50: means EC50 in terms of reduction of growth rate

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Skin Sens. 1; H317	Bridging principle "Aerosols"

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)