Safety Data Sheet

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

TWE-1500

Version number: 1.0 Date of compilation: 2022-03-09

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

1.1 Product identifier

Trade name **TWE-1500**

Alternative name(s) Bug Remover

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

Relevant identified uses general use

1.3 Details of the supplier of the safety data sheet

Transchem Europe / Pandion Europe
Maaltebruggecenter Blok G Derbystrat 359
9051 St Denijs Westrem – Gent
Belgium

Telephone: +32 499 927879
e-mail: info@turtlewaxpro.com
Website: https://turtlewaxpro.com/emea/

e-mail (competent person) kberzitis@transchem.com (Karl Berzitis)

1.4 Emergency telephone number

Emergency information service INFOTRAC +1-352-323-3500
24 Hours

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
3.4S	skin sensitisation	1	Skin Sens. 1	H317

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word danger
- Pictograms

GHS05, GHS07

- Hazard statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

- Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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.
P362+P364	Take off contaminated clothing and wash it before reuse.

- Hazardous ingredients for labelling

tetrasodium ethylene diamine tetraacetate, disodium metasilicate, Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid, Citral

2.3 Other hazards

of no significance

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
tetrasodium ethylene diamine tetraacetate	CAS No 64-02-8 EC No 200-573-9 Index No 607-428-00-2 REACH Reg. No 01-2119486762-27-xxxx	5 – < 10	Acute Tox. 4 / H302 Eye Dam. 1 / H318
disodium metasilicate	CAS No 6834-92-0 EC No 229-912-9 Index No 014-010-00-8 REACH Reg. No 01-2119449811-37-xxxx	1 – < 5	Acute Tox. 4 / H302 Acute Tox. 3 / H331 Skin Corr. 1B / H314 STOT SE 3 / H335
2-methylpentane-2,4-diol	CAS No 107-41-5 EC No 203-489-0 REACH Reg. No 01-2119539582-35-xxxx	1 – < 5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319

Name of substance	Identifier	Wt%	Classification acc. to GHS
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	CAS No 68439-57-6 EC No 931-534-0 REACH Reg. No 01-2119513401-57-xxxx	1 – < 5	Skin Irrit. 2 / H315 Eye Dam. 1 / H318
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid	EC No 946-533-0 REACH Reg. No 01-2120750377-50-xxxx	1 – < 5	Eye Dam. 1 / H318 Skin Sens. 1B / H317 STOT SE 3 / H335 Aquatic Acute 1 / H400 Aquatic Chronic 3 / H412
trisodium nitrilotriacetate	CAS No 5064-31-3 EC No 225-768-6 Index No 607-620-00-6 REACH Reg. No 01-2119519239-36-xxxx	< 1	Acute Tox. 4 / H302 Eye Irrit. 2 / H319 Carc. 2 / H351
Citral	CAS No 5392-40-5 EC No 226-394-6 REACH Reg. No 01-2119462829-23-xxxx	< 1	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317

Concentration limit, M-Factor, ATE

Hazardous ingredients, Specific Conc. Limits, M-factors, ATE

Name of substance	Specific Conc. Limits	M-Factors	ATE
tetrasodium ethylene diamine tetraacetate	-	-	>1,780 $^{mg}/_{kg}$
disodium metasilicate	-	-	770 $^{mg}/_{kg}$ >2.06 $^{mg}/_{l}$/4h 0.5 $^{mg}/_{l}$/4h
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	Skin Irrit. 2; H315: C ≥ 5 % Eye Dam. 1; H318: C ≥ 38 % Eye Irrit. 2; H319: 5 % ≤ C < 38 %	-	-
trisodium nitrilotriacetate	Carc. 2; H351: C ≥ 5 %	-	1,740 $^{mg}/_{kg}$

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas. Never add water to this product.

- Handling of incompatible substances or mixtures

Do not mix with acids.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

- General rule

Keep out of reach of children. Store in a dry place. Store in a closed container. Store in a well-ventilated place. Keep away from incompatible materials.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
IE	hexylene glycol	107-41-5	OELV			25	125				S.I. No. 619 of 2001

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
IE	citral	5392-40-5	OELV	5						iv	S.I. No. 619 of 2001

Notation

Ceiling-C	ceiling value is a limit value above which exposure should not occur
iv	inhalable fraction and vapour
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
tetrasodium ethylene diamine tetraacetate	64-02-8	DNEL	1.5 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
tetrasodium ethylene diamine tetraacetate	64-02-8	DNEL	3 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
tetrasodium ethylene diamine tetraacetate	64-02-8	DNEL	1.5 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
tetrasodium ethylene diamine tetraacetate	64-02-8	DNEL	3 mg/m³	human, inhalatory	worker (industry)	acute - local effects
2-methylpentane-2,4-diol	107-41-5	DNEL	44.4 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
2-methylpentane-2,4-diol	107-41-5	DNEL	49 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
2-methylpentane-2,4-diol	107-41-5	DNEL	98 mg/m³	human, inhalatory	worker (industry)	acute - local effects
2-methylpentane-2,4-diol	107-41-5	DNEL	42 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	DNEL	152.2 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	DNEL	2,158 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		DNEL	16.4 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects

Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		DNEL	4.67 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		DNEL	153 µg/cm²	human, dermal	worker (industry)	chronic - local effects
trisodium nitrilotriacetate	5064-31-3	DNEL	3.5 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
trisodium nitrilotriacetate	5064-31-3	DNEL	5.25 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Citral	5392-40-5	DNEL	9 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Citral	5392-40-5	DNEL	1.7 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Citral	5392-40-5	DNEL	140 µg/cm²	human, dermal	worker (industry)	chronic - local effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
tetrasodium ethylene diamine tetraacetate	64-02-8	PNEC	2.83 mg/l	aquatic organisms	freshwater	short-term (single instance)
tetrasodium ethylene diamine tetraacetate	64-02-8	PNEC	0.283 mg/l	aquatic organisms	marine water	short-term (single instance)
tetrasodium ethylene diamine tetraacetate	64-02-8	PNEC	50 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
tetrasodium ethylene diamine tetraacetate	64-02-8	PNEC	1.1 mg/kg	terrestrial organisms	soil	short-term (single instance)
2-methylpentane-2,4-diol	107-41-5	PNEC	0.429 mg/l	aquatic organisms	freshwater	short-term (single instance)
2-methylpentane-2,4-diol	107-41-5	PNEC	0.043 mg/l	aquatic organisms	marine water	short-term (single instance)
2-methylpentane-2,4-diol	107-41-5	PNEC	20 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
2-methylpentane-2,4-diol	107-41-5	PNEC	1.59 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
2-methylpentane-2,4-diol	107-41-5	PNEC	0.159 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
2-methylpentane-2,4-diol	107-41-5	PNEC	0.066 mg/kg	terrestrial organisms	soil	short-term (single instance)

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	PNEC	0.024 mg/l	aquatic organisms	freshwater	short-term (single instance)
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	PNEC	0.002 mg/l	aquatic organisms	marine water	short-term (single instance)
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	PNEC	4 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	PNEC	0.767 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	PNEC	0.077 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	PNEC	1.21 mg/kg	terrestrial organisms	soil	short-term (single instance)
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		PNEC	2.4 µg/l	aquatic organisms	freshwater	short-term (single instance)
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		PNEC	0.24 µg/l	aquatic organisms	marine water	short-term (single instance)
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		PNEC	8.37 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		PNEC	190 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		PNEC	19 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		PNEC	36.6 µg/kg	terrestrial organisms	soil	short-term (single instance)
trisodium nitrilotriacetate	5064-31-3	PNEC	540 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
trisodium nitrilotriacetate	5064-31-3	PNEC	0.93 mg/l	aquatic organisms	freshwater	short-term (single instance)
trisodium nitrilotriacetate	5064-31-3	PNEC	0.093 mg/l	aquatic organisms	marine water	short-term (single instance)
trisodium nitrilotriacetate	5064-31-3	PNEC	0.8 mg/l	aquatic organisms	water	intermittent release
Citral	5392-40-5	PNEC	0.007 mg/l	aquatic organisms	freshwater	short-term (single instance)
Citral	5392-40-5	PNEC	0.001 mg/l	aquatic organisms	marine water	short-term (single instance)
Citral	5392-40-5	PNEC	1.6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Citral	5392-40-5	PNEC	0.125 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Citral	5392-40-5	PNEC	0.013 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Citral	5392-40-5	PNEC	0.021 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	transparent - light green
Odour	like lemon
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	12.5 – 13.5 (23 °C) (base)
Kinematic viscosity	not determined

Solubility(ies)

Water solubility	Soluble.

Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available

Vapour pressure	not determined

Density and/or relative density

Density	not determined
Relative vapour density	information on this property is not available
Relative density	1.09 at 23 °C (water = 1)

Particle characteristics	not relevant (liquid)

9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Incompatible materials.

10.5 Incompatible materials

Oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

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

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
tetrasodium ethylene diamine tetraacetate	64-02-8	oral	>1,780 $^{mg}/_{kg}$
disodium metasilicate	6834-92-0	oral	770 $^{mg}/_{kg}$
disodium metasilicate	6834-92-0	inhalation: vapour	>2.06 $^{mg}/_{l}$/4h
disodium metasilicate	6834-92-0	inhalation: dust/mist	0.5 $^{mg}/_{l}$/4h
trisodium nitrilotriacetate	5064-31-3	oral	1,740 $^{mg}/_{kg}$

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
tetrasodium ethylene diamine tetraacetate	64-02-8	oral	LD50	>1,780 – <2,000 $^{mg}/_{kg}$	rat
disodium metasilicate	6834-92-0	oral	LD50	770 – 820 $^{mg}/_{kg}$	mouse
disodium metasilicate	6834-92-0	inhalation: vapour	LC50	>2.06 $^{mg}/_{l}$/4h	rat
disodium metasilicate	6834-92-0	dermal	LD50	>5,000 $^{mg}/_{kg}$	rat
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	oral	LD50	2,290 $^{mg}/_{kg}$	rat
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	inhalation: dust/mist	LC50	>52 $^{mg}/_{l}$/4h	rat
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	dermal	LD50	6,300 $^{mg}/_{kg}$	rabbit
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		dermal	LD50	>2,000 $^{mg}/_{kg}$	rat
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		oral	LD50	>2,000 $^{mg}/_{kg}$	rat
trisodium nitrilotriacetate	5064-31-3	oral	LD50	1,740 $^{mg}/_{kg}$	rat
Citral	5392-40-5	oral	LD50	6,800 $^{mg}/_{kg}$	rat
Citral	5392-40-5	dermal	LD50	>2,000 $^{mg}/_{kg}$	rat

Skin corrosion/irritation

Causes skin irritation. In vitro skin corrosion: human skin model test. Shall not be classified as corrosive to skin.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

- IARC Monographs (WHO)

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
trisodium nitrilotriacetate		2B	

Legend
2B Possibly carcinogenic to humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
tetrasodium ethylene diamine tetraacetate	64-02-8	LC50	>100 mg/l	fish	96 h
tetrasodium ethylene diamine tetraacetate	64-02-8	EC50	>114 mg/l	aquatic invertebrates	48 h
tetrasodium ethylene diamine tetraacetate	64-02-8	ErC50	>60 mg/l	algae	72 h
disodium metasilicate	6834-92-0	LC50	310 mg/l	fish	96 h
disodium metasilicate	6834-92-0	EC50	1,700 mg/l	aquatic invertebrates	48 h
2-methylpentane-2,4-diol	107-41-5	LC50	9,910 mg/l	fish	96 h
2-methylpentane-2,4-diol	107-41-5	EC50	5,410 mg/l	aquatic invertebrates	48 h
2-methylpentane-2,4-diol	107-41-5	ErC50	>429 mg/l	algae	72 h

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	LC50	4.2 mg/l	fish	96 h
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	EC50	4.53 mg/l	aquatic invertebrates	48 h
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	ErC50	5.2 mg/l	algae	72 h
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		LC50	4.2 mg/l	rainbow trout (Oncorhynchus mykiss)	96 h
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		ErC50	2.4 mg/l	algae	72 h
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		EC50	0.593 mg/l	algae	72 h
trisodium nitrilotriacetate	5064-31-3	LC50	114 mg/l	fish	96 h
trisodium nitrilotriacetate	5064-31-3	EC50	98 mg/l	aquatic invertebrates	96 h
trisodium nitrilotriacetate	5064-31-3	ErC50	>91.5 mg/l	algae	72 h
Citral	5392-40-5	LC50	6.78 mg/l	fish	96 h
Citral	5392-40-5	EC50	6.8 mg/l	aquatic invertebrates	48 h
Citral	5392-40-5	ErC50	103.8 mg/l	algae	72 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
disodium metasilicate	6834-92-0	EC50	>100 mg/l	microorganisms	3 h
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	EC50	230 mg/l	microorganisms	3 h
Citral	5392-40-5	EC50	160 mg/l	microorganisms	30 min

Biodegradation

The surfactant contained in this preparation complies with the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents.

12.2 Persistence and degradability

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
tetrasodium ethylene diamine tetraacetate	64-02-8	oxygen depletion	78 %	56 d		ECHA
2-methylpentane-2,4-diol	107-41-5	oxygen depletion	81 %	28 d		ECHA
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	carbon dioxide generation	80 %	28 d		ECHA
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6	DOC removal	96 %	28 d		ECHA
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		oxygen depletion	60 %	12 d		ECHA
trisodium nitrilotriacetate	5064-31-3	DOC removal	>95 %	28 d		ECHA
Citral	5392-40-5	oxygen depletion	>90 %	28 d		ECHA

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
tetrasodium ethylene diamine tetraacetate	64-02-8	1.8	-13.17 (25 °C)	
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	68439-57-6		-1.3 (pH value: 5.43, 20 °C)	
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid		70.79	3.43 (pH value: 7, 23.7 °C)	
Citral	5392-40-5		2.76 (25 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1	**UN number or ID number**	not subject to transport regulations
14.2	**UN proper shipping name**	not relevant
14.3	**Transport hazard class(es)**	none
14.4	**Packing group**	not assigned
14.5	**Environmental hazards**	non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Dangerous substances with restrictions (REACH, Annex XVII)

Name of substance	Name acc. to inventory	CAS No	Restriction	No
TWE-1500	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3	3
tetrasodium ethylene diamine tetraacetate	substances in tattoo inks and permanent make-up		R75	75
trisodium nitrilotriacetate	substances in tattoo inks and permanent make-up		R75	75
disodium metasilicate	substances in tattoo inks and permanent make-up		R75	75
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	substances in tattoo inks and permanent make-up		R75	75
2-methylpentane-2,4-diol	substances in tattoo inks and permanent make-up		R75	75
Reaction products of 1H-Imidazole-1-ethanol, 4,5-dihydro-, 2-(C11-17 and C17 unsatd. alkyl) derivs. and sodium hydroxide and propenoic acid	substances in tattoo inks and permanent make-up		R75	75
Citral	substances in tattoo inks and permanent make-up		R75	75

Legend

R3 1. Shall not be used in:
- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
— can be used as fuel in decorative oil lamps for supply to the general public, and
— present an aspiration hazard and are labelled with H304.
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
(a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";
(b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter fluid may lead to life threatening lung damage';
(c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.';

Legend

R75 1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in question is or are present in the following circumstances:
(a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
(b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the mixture in a concentration equal to or greater than:
(i) 0,1 % by weight, if the substance is used solely as a pH regulator;
(ii) 0,01 % by weight, in all other cases;
(e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (*1), the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
(f) in the case of a substance for which a condition of one or more of the following kinds is specified in column g (Product type, Body parts) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight:
(i) “Rinse-off products”;
(ii) “Not to be used in products applied on mucous membranes”;
(iii) “Not to be used in eye products”;
(g) in the case of a substance for which a condition is specified in column h (Maximum concentration in ready for use preparation) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration, or in some other way, that does not accord with the condition specified in that column;
(h) in the case of a substance listed in Appendix 13 to this Annex, the substance is present in the mixture in a concentration equal to or greater than the concentration limit specified for that substance in that Appendix.
2. For the purposes of this entry use of a mixture “for tattooing purposes” means injection or introduction of the mixture into a person’s skin, mucous membrane or eyeball, by any process or procedure (including procedures commonly referred to as permanent make-up, cosmetic tattooing, micro-blading and micro-pigmentation), with the aim of making a mark or design on his or her body.
3. If a substance not listed in Appendix 13 falls within more than one of points (a) to (g) of paragraph 1, the strictest concentration limit laid down in the points in question shall apply to that substance. If a substance listed in Appendix 13 also falls within one or more of points (a) to (g) of paragraph 1, the concentration limit laid down in point (h) of paragraph 1 shall apply to that substance.
4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:
(a) Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);
(b) Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).
5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 to classify or re-classify a substance such that the substance then becomes caught by point (a), (b), (c) or (d) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect on the date of application of that new or revised classification.
6. If Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 to list or change the listing of a substance such that the substance then becomes caught by point (e), (f) or (g) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the amendment takes effect after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect from the date falling 18 months after entry into force of the act by which that amendment was made.
7. Suppliers placing a mixture on the market for use for tattooing purposes shall ensure that, after 4 January 2022, the mixture is marked with the following information:
(a) the statement “Mixture for use in tattoos or permanent make-up”;
(b) a reference number to uniquely identify the batch;
(c) the list of ingredients in accordance with the nomenclature established in the glossary of common ingredient names pursuant to Article 33 of Regulation (EC) No 1223/2009, or in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC name, the CAS and EC number. Ingredients shall be listed in descending order by weight or volume of the ingredients at the time of formulation. “Ingredient” means any substance added during the process of formulation and present in the mixture for use for tattooing purposes. Impurities shall not be regarded as ingredients. If the name of a substance, used as ingredient within the meaning of this entry, is already required to be stated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient does not need to be marked in accordance with this Regulation;
(d) the additional statement “pH regulator” for substances falling under point (d)(i) of paragraph 1;
(e) the statement "Contains nickel. Can cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;
(f) the statement "Contains chromium (VI). Can cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;
(g) safety instructions for use insofar as they are not already required to be stated on the label by Regulation (EC) No 1272/2008.
The information shall be clearly visible, easily legible and marked in a way that is indelible.
The information shall be written in the official language(s) of the Member State(s) where the mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise.
Where necessary because of the size of the package, the information listed in the first subparagraph, except for point (a), shall be included instead in the instructions for use.
Before using a mixture for tattooing purposes, the person using the mixture shall provide the person undergoing the procedure with the information marked on the package or included in the instructions for use pursuant to this paragraph.

Legend

8. Mixtures that do not contain the statement “Mixture for use in tattoos or permanent make-up” shall not be used for tattooing purposes.
9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).
10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

none of the ingredients are listed

Deco-Paint Directive

VOC content	3.22 %

Industrial Emissions Directive (IED)

VOC content	3.348 %

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Water Framework Directive (WFD)

List of pollutants (WFD)

Name of substance	CAS No	Listed in	Remarks
tetrasodium ethylene diamine tetraacetate		a)	
trisodium nitrilotriacetate		a)	
trisodium nitrilotriacetate		a)	
disodium metasilicate		a)	

Legend

A) Indicative list of the main pollutants

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

National inventories

Country	Inventory	Status
CA	DSL	not all ingredients are listed
EU	REACH Reg.	all ingredients are listed or exempt from listing
US	TSCA	not all ingredients are listed

Legend

DSL Domestic Substances List (DSL)
REACH Reg. REACH registered substances
TSCA Toxic Substance Control Act

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC	International Agency for Research on Cancer
IARC Monographs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code

Abbr.	Descriptions of used abbreviations
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
S.I. No. 619 of 2001	Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.