

Material Safety Data Sheet (MSDS)

Creation Date 10.08.2000
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Version: 1.0

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier: BRUDEX**

1.2 Relevant identified uses of the substance or mixture and uses advised against: Preparation was designed as a cleaner for removing organic contaminants. Cleans, feathers, removes stains and degreasing, for use in cleaning: kitchen equipment, industrial flooring, engines, protective clothing.

1.3 Details of the supplier of the safety data sheet:

TENZI Sp. z o.o., 72-002 Dołuje, Skarbimierzyce 20, e-mail: info@tenzi.pl, www.tenzi.pl, tel. +48 91 3119777, fax. +48 91 3119779 E-mail address for a competent person responsible for MSDS: technolog@tenzi.pl

1.4 Emergency telephone number: +48 91 31 19 777 (mon. - fri. 8am-4pm) or 112

SECTION 2. HAZARDS IDENTIFICATION**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008**

Skin Corr. 1B H314- Causes severe skin burns and eye damage.

Eye Dam. 1 H318- Causes serious eye damage

Classification according to Directive 67/548/EEC and 1999/45/CE

Corrosive, Causes serious burns

2.2. Label elements

According to 1272/2008/EC*

Hazard symbols



and signal words **DANGER**

Hazard statements:

H314- Causes severe skin burns and eye damage.

Precautionary statements

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): Remove/Take off immediately all contaminated clothing. Rinse skin

P310 – Immediately call a POISON CENTER or doctor/physician

P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 – Store locked up.

2.3. Other hazards

Substance does not meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS**3.1 Substances**

not applicable

3.2 Mixture

Composition (according to: 648/2004/EC): <5% Phosphonates, <5% Phosphonates, <5% Silicates, <5% Non-ionic surfactants, fragrance composition, excipients, Sodium hydroxide

Product / ingredient name	Concentration [% weigh]	CAS / EC	Index-No.	REACH registration number	Classification
					Regulation (EC) No. 1272/2008 [CLP]
Non-ionic surfactants	< 5	68439-54-3 polimer	---	---	Eye Dam. 1 H318, Acute Tox.4 H302
Sodium metasilicate	< 5	10213-79-3 229-912-9	014-010-00-8	01-2119449811-37-XXXX	Skin Corr. 1B H314, STOT SE 3 H335, Met. Corr. 1 H290
Phosphonates	< 2	6419-19-8 229-146-5	---	01-2119487988-08-XXXX	Eye Irrit. 2 H319, Met. Corr. 1 H290
2-Hydroxyethylamine	< 2	141-43-5 205-483-3	603-030-00-8	01-2119486455-28-XXXX	Acute Tox. 4 H302, Acute Tox. 4 H332, Acute Tox. 4 H312, Skin Corr. 1B H314, STOT SE 3 H335
Sodium hydroxide	< 0,5	1310-73-2 215-185-5	011-002-00-6	01-2119457892-27-XXXX	Skin Corr. 1A H314, Met. Corr. 1 H290

The full texts of R-phrases and H-symbols are in 16th section.

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation– In case of inhalation poisoning symptoms (cough, dyspnea, dizziness) move to fresh air. Lay patient down in semi-recumbent posture, physical activity may cause pulmonary edema. Keep warm and rested. Get medical attention.

Skin contact– If product comes in contact with the skin immediately remove all contaminated clothing and flush exposed area with large amounts of water. Consult a doctor in case burns or irritation occur.

Eye contact- Flush eyes with running water at least 15 minutes keeping eyelids open. Get medical attention

Ingestion- if swallowed, DO NOT induce vomiting. Give a lot water to drink. DO NOT give any neutralizing agents. Immediately contact a doctor and show this MSDS or label.

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

Inhalation– Long-term exposures or work in un-well ventilated area may cause upper respiratory tract irritation

Skin – Causes severe skin burns

Eyes - Causes serious eye damage

Ingestion – if swallowed, may cause irritation of the mucous membrane

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

Obtain medical attention. Self-contained eye wash or shower should be readily available.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: water, foam, dry extinguishing agent, carbon dioxide.

Extinguishing media which shall not be used for safety reason: DO NOT use a solid water stream.

5.2. Special hazards arising from the substance or mixture

Product is non-flammable.

5.3. Advice for firefighters

Firefighters should wear self-contained breathing apparatus and full protective clothing. In case of fire warn the people nearby. Evacuate unprotected and untrained personnel from hazard area. Notify relevant emergency services. If possible, remove the containers away from the influence of fire and high temperature. Water may be used to keep fire-exposed containers cool until fire is out. The after burning residues should be removed.

SECTION 6. ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel: protective gloves, safety glasses

For emergency responders: self-contained breathing apparatus, protective clothes, protective gloves, safety glasses

Avoid skin and eyes contact. Provide proper ventilation.

6.2. Environmental precautions

Avoid discharge into drains, onto the ground water or surface water.

6.3. Methods and material for containment and cleaning up

In case of unexpected release substance into environment inform on emergency, keep away from source of ignition. Prevent spills from entering sewers, surface water or groundwater. If it is possible confine and contain the spill by closing liquid flow, damage container put into protect leak proof wrapping. For large spill make a dike around the outside edges of the spill. Clean-up materials store for disposal as hazardous waste. Decontaminate polluted area with water. For small spill use absorbent materials (sand solid, sawdust, fines limestone) and store for disposal as hazardous waste. Decontaminate polluted area with water.

6.4. Reference to other sections

See section 8 and 13.

SECTION 7. HANDLING AND STORAGE**7.1. Precautions for safe handling**

Please note that you need to be carefully while working with this product. Use personal protection recommended in section 8.2

Mix only with water. DO NOT mix with other chemical substances.

People with skin allergy or respiratory system problems should not have contact with this product.

After usage keep container tightly closed. Keep away from unauthorized people.

Use only adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Store in a tightly close, original plastic container. Store this product in dry environment that will be maintained at temperature between 5°C - 35°C. Store in good ventilated area with easy clean alkali resistant floor. DO NOT expose to sunlight. Keep away from heat, sparks, flame and source of ignition.

7.3. Specific end use(s)

No data available

SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION**8.1. Control parameters**

Please check any national occupational exposure limit values in your country.

DNEL /PNEC values for substances (according to MSDS or Chemical Safety Report):**Non-ionic surfactants (data for high concentrations substance):**

DNEL, PNEC: not identified

Sodium metasilicate (data for high concentrations substance):

No data available

Phosphonates (data for high concentrations substance):

DNEL, PNEC: not identified

2-Hydroxyethylamine (data for high concentrations substance):

DNEL Exposure frequency: Long term, Exposure route: dermal, Value: 1 mg/kg, Group: Workers Type of effect: systemic effect

DNEL Exposure frequency: Long term, Exposure route: inhalation, Value: 3,3 mg/m³, Group: Workers Type of effect: systemic and local effect

DNEL Exposure frequency: Long term, Exposure route: dermal, Value: 0,24 mg/kg, Group: consumers, Type of effect: systemic effect

DNEL Exposure frequency: Long term, Exposure route: oral, Value: 3,75 mg/kg, Group: consumers, Type of effect: systemic effect

PNEC Aqua (fresh water): 0,085 mg/l
PNEC Aqua (marine water): 0,0085 mg/l
PNEC (intermittent release): 0,025 mg/l
PNEC Sediment (freshwater): 0,425 mg/kg
PNEC Sediment (marine water): 0,0425 mg/kg
PNEC Soil 0,035: mg/kg
PNEC Sewage treatment plant: 100 mg/l

Sodium hydroxide (data for high concentrations substance):

DNEL, PNEC: not identified

NOTE: When the concentration of substance is known, personal protective equipment should be chosen based on: substance concentration on a workplace, exposure time and operations performed by the employee. In emergency situations, if substance concentration on the workplace is unknown, personal protection of highest class level should be used.

8.2. Exposure controls

RESPIRATORY PROTECTION: In case of insufficient ventilation, wear suitable respiratory equipment - masks with gas and vapour protection

HAND PROTECTION: Chemical-resistant gloves for example: DERMATRIL

EYE/FACE PROTECTION: Safety glasses, in case of contact with face wear face-shield.

SKIN PROTECTION: Protective clothing

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

APPEARANCE/FORM: – green liquid

ODOUR – characteristic for this fragrance composition

ODOUR THRESHOLD - not identified

pH – 14±1

MELTING/FREEZING POINT: not identified

INITIAL BOILING POINT AND BOILING RANGE: not identified

FLASH POINT: not identified

EVAPORATION RATE: not identified

FLAMMABILITY (SOLID,GAS): not identified

UPPER/LOWER FLAMMABILITY (UEL/LEL): not identified

VAPOUR PRESSURE: not identified

VAPOUR DENSITY: not identified

RELATIVE DENSITY: 1,070÷0,020 g/cm³

SOLUBILITY:

a) WATER – soluble

b) ORGANIC SOLVENT – not identified

PARTITION COEFFICIENT N-OCTANOL/WATER: – not identified

AUTO-IGNITION TEMPERATURE: not identified

DECOMPOSITION TEMPERATURE: not identified

VISCOSITY not identified

EXPLOSIVE PROPERTIES: not identified

OXIDISING PROPERTIES: not identified

9.2. Other information

REFRACTIVE INDEX – 16% Brix* ± 5%

* - Degrees Brix is the content of an aqueous solution. One degree Brix is 1 gram of sucrose in 100 grams of solution and represents the strength of the solution as percentage by weight (% w/w)

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions (see point 7)

10.3 Possibility of hazardous reactions May react violently with acids to release heat.

10.4 Conditions to avoid

Avoid storage unprotected from heat and not well-ventilated area. Avoid long-term expose to sunlight.

10.5 Incompatible materials

Avoid contact with acids and strong oxidizers

10.6 Hazardous decomposition products

unknown

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

ACUTE TOXICITY:

- **INHALATION:** Long-term exposures or work in un-well ventilated area may cause upper respiratory tract irritation

- **DIGESTIVE SYSTEM:** if swallowed, may cause irritation of the mucous membrane

- **SKIN CONTACT :** Causes severe skin burns

- **EYE CONTACT:** Causes serious eye damage

ATEmix= 8865 (Acute toxicity, oral)

ATEmix= 126582 (Acute toxicity, skin)

ATEmix= 65,35 (Acute toxicity, inhalation)

DETAILS OF PARTICULAR COMPONENTS (according to substances's MSDS):

Non-ionic surfactants (data for high concentrations substance):

LD50> 300-2000 mg/kg (rat, oral)

LD50> 2000 mg/kg (rat, dermal)

Skin corrosion/irritation: non-irritant (rabbit)

Serious eye damage/eye irritation: irritant, risk of serious damage to eyes (rabbit)

Germ cell mutagenicity: Ames test: no mutagenic potential

Carcinogenicity: no data available

Reproductive toxicity: no data available

Specific target organ toxicity (single exposure): no data available

Specific target organ toxicity (repeated exposure): no data available

Aspiration hazard: no data available

Sodium metasilicate (data for high concentrations substance):

LD50 1152 - 1349 mg/kg (rat, oral)

LC50 >2,06 g/m³ (rat, inhalation)

LD50 > 5000 mg/kg (rat, skin)

Skin corrosion/irritation: corrosive to skin

Serious eye damage/eye irritation: corrosive to eyes

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure): may cause upper respiratory tract irritation

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.

Phosphonates (data for high concentrations substance):

LD50: >2910 mg/kg (rat, oral)

LD50: >6310 mg/kg (rat, skin)

Skin corrosion/irritation: slightly irritant

Serious eye damage/eye irritation: irritant

Not sensitising.

2-Hydroxyethylamine (data for high concentrations substance):

LD50: 1515 mg/kg (rat,oral) (OECD 401)

LC50> 1,3 mg/l 6h (IRT) (rat, inhalation)

This material is classified as harmful to health under EC criteria. Vapors were tested. Inhalation-risk test (IRT): No mortality within 8 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard.

LD50: 2504 mg/kg (skin) (OECD 402)

Skin corrosion/irritation: corrosive (OECD 404)

Serious eye damage/eye irritation: irritant (rabbit/ OECD 405)

Skin corrosion/irritation: corrosive. Causes severe skin burns and eye damage. May cause serious eye damage.

Respiratory or skin sensitisation: (maximizing test): Not sensitising (guinea pig, OECD Test Guideline 406)

Germ cell mutagenicity: Tests on bacterial, mammalian cell cultures and on animals did not show mutagenic effect.
Reproductive toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The potential to impair fertility and other adverse effects cannot be excluded when given at high doses. Because substance influence on human health is not clear, further researches have been commissioned in this matter.
Teratogenicity effects: Did not show teratogenic effects in animal experiments
Sodium hydroxide (data for high concentrations substance):
LD50: 500 mg/kg (rat, oral)
Toxic if swallowed. Ingestion cause burns and damage to the mouth and esophagus. Risk of perforation in the esophagus and stomach, shock or collapse.
Acute toxicity (inhalation): no data available. May cause irritation and burns of mucous membranes.
Acute toxicity (dermal): no data available
Acute toxicity (other exposure): no data available
Skin corrosion/irritation: Corrosive, may cause severe burns. May cause deep, penetrating ulcers of the skin and skin necrosis.
Serious eye damage/eye irritation: irreversible burns, necrosis corneal, risk of blindness.
Respiratory or skin sensitisation: Not sensitising
Germ cell mutagenicity: no data classified
Carcinogenicity: no data classified
Aspiration hazard: Corrosive to the respiratory tract

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

DETAILS OF PARTICULAR COMPONENTS:

Non-ionic surfactants (data for high concentrations substance):

LC50 > 1-10 mg/l/96h (OECD 203) (Cyprinus carpio)

EC50 > 1-10 mg/l/48h (OECD 202) (Daphnia magna)

EC50 > 1-10 mg/l/72h (OECD 201) (Scenedesmus subspicatus)

Sodium metasilicate (data for high concentrations substance):

- for fish: LC50: 210 mg/l/96h (Brachydanio rerio)

- for Daphnia: EC50: 1700 mg/l/48h (Daphnia magna)

- for algae: EC50: 207 mg/l/72h (Scenedesmus subspicatus)

Phosphonates (data for high concentrations substance):

EC50: 297 mg/l/48h (Daphnia magna)

LC50: >330 mg/l/96h (Bluegill sunfish)

LC50: 4,575 mg/l/96h (Grass shrimp)

Prevent from entering into ditches, sewers, waterways and soil.

2-Hydroxyethylamine (data for high concentrations substance):

Aquatic toxicity:

Toxic to aquatic life. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

-for fish: LC50 (96 h) 349 mg/l, Cyprinus carpio (semi static). Nominal values (confirmed by concentration control analytics), LC50 (96 h) 170 mg/l, Carassius auratus (static). The statement of the toxic effect relates to the analytically determined concentration. Literature data.

- for Daphnia: EC50 (48 h) 65 mg/l, Daphnia magna (static) Nominal values (confirmed by concentration control analytics)

- for aquatic plants: EC50 (72 h) 2,5 mg/l (growth rate) Selenastrum capricornutum (guidelines OECD 201) Literature data, EC50 (72 h) 22 mg/l (growth rate), Scenedesmus subspicatus. Nominal values (confirmed by concentration control analytics)

Sodium hydroxide (data for high concentrations substance):

Toxic to fish and aquatic invertebrates and may adversely affect non-target plants.

- for fish: LC0 157 mg/l/48h, LC50 189 mg/l/48h, LC100 213 mg/l/48h

12.2 Persistence and degradability:

The surfactants contained within the product comply with the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents.

Non-ionic surfactants (data for high concentrations substance):

Readily Biodegradable.

Degree of elimination: >70% after 28 days, according to OECD 301A

Degree of elimination: >60% after 28 days, according to OECD 301B

Sodium metasilicate (data for high concentrations substance):

Substance is readily hydrolyzed. Due to the good solubility in water, preparation can penetrate into the surface waters in place of the release and can be detected at points located far from this place.

Phosphonates (data for high concentrations substance):

BRUDEX

ChZT: 230000 mg/l

BZT: 15700 mg/l

2-Hydroxyethylamine (data for high concentrations substance):Assessment biodegradation and elimination (H₂O): readily biodegradable. (according to OECD criteria)

Elimination information: > 90 % DOC reduction (21 d) (OECD 301 A) (aerobic, activated sludge, domestic)

Sodium hydroxide (data for high concentrations substance):

Readily Biodegradable in water and in air. Substance rapidly dissolves and subsequently dissociates in water. Sodium hydroxide is converted into carbonates.

12.3 Bioaccumulative potential:

Based on structure, bioaccumulation is not expected.

12.4 Mobility in soil

The product is water soluble and may spread in groundwater systems.

12.5 Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT and vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**RESIDUES AND WASTES**

DO NOT mix with other liquid wastes. DO NOT empty into drain. Dispose of this material and its container at hazardous or special waste collection point.

13.1. WASTE TREATMENT METHODS

Contaminated containers should be completely emptied. Several times rise container (or equivalent) promptly after emptying. Empty container can be stored in containers for collection of plastic packaging, or can be delivered to specialized company for recycling.

Disposal should be in accordance with the national/international regulations.

SECTION 14. TRANSPORT INFORMATION

Trade name: BRUDEX

14.1. UN Number: 1719**14.2. UN proper shipping name:** CAUSTIC ALKALI LIQUID, N.O.S.**14.3. Transport hazard class(es):** ADR class. 8**14.4. Packing group:** III**14.5. Environmental hazards:** Product is not dangerous for environment**14.6. Special precautions for user:** For more details see Sections 6 and 8**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** no data available

Warning label:

**SECTION 15. REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

1) COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

2) REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004

on detergents

3) COMMISSION REGULATION (EC) No 907/2006 of 20 June 2006 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes III and VII thereto

4) REGULATION (EC) No 1336/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 amending Regulation (EC) No 648/2004 in order to adapt it to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

5) COMMISSION REGULATION (EC) No 551/2009 of 25 June 2009 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes V and VI thereto (surfactant derogation)

6) REGULATION (EU) No 259/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 March 2012 amending Regulation (EC) No 648/2004 as regards the use of phosphates and other phosphorus compounds in consumer laundry detergents and consumer automatic dishwasher detergents

7) REGULATION (EC) No 273/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 February 2004 on drug precursors)

8) REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 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

15.2. Chemical safety assessment

For mixture: A Chemical Safety Assessment has not been carried out.

For substance:

Non-ionic surfactants: No data available

Sodium metasilicate: A Chemical Safety Assessment has been carried out.

Phosphonates: No data available

2-Hydroxyethylamine: A Chemical Safety Assessment has been carried out.

Sodium hydroxide: A Chemical Safety Assessment has been carried out.

SECTION 16. OTHER INFORMATION

Information above are based on current knowledge of product on its current form. All data are presented in order to take into account safety requirements priority and not to guarantee special properties of the product. If product usage conditions are not under manufacturer control, responsibility for safe use lies with the person that uses them.

The employer is obliged to inform all employees, who have contact with the product, about the risk and safety measures specified in the data sheet.

Safety data presented above were prepared based on safety characteristics of substances used by the producer to compose the product and based on regulations for handling dangerous substances and their preparation.

Classification of chemical mixture was done with calculation methods, based on the content of hazardous ingredients.

The full list of Risk (R) phrases and H symbols from Section 2 and 3:

Eye Dam. 1- Serious eye damage, category 1

Acute Tox. 4- Acute toxicity, category 4

Eye Irrit. 2 - Causes eye irritation, category 2

Met.Corr 1- Substance/Mixture is corrosive to metals, category 1

Skin Corr. 1B- Corrosive to skin, category 1B

STOT SE 3-Specific target organ toxicity - Single exposure STOT, Category 3.

Skin Corr. 1A- Corrosive to skin, category 1A

Skin Irrit. 2 - Causes skin irritation, category 2

H290 – May be corrosive to metals.

H302 – Harmful if swallowed.

H312 – Harmful in contact with skin

H314 – Causes severe skin burns and eye damage.

H318 – Causes serious eye damage.

H319 – Causes serious eye irritation.

H332 – Harmful if inhaled.

H335 – May cause respiratory irritation.

More information on the product can be found on the specific technical data sheet which is available on www.tenzi.pl.

Training: Course participants should be trained about how to handle this hazardous substance, about safety and work

BRUDEX

hygiene. Drivers should also be trained and obtain proper certification in accordance with the ADR requirements.

BRUDEX was submitted to Inspector for Chemical Substances.

Expiry date: 36 months from the production date (if product is stored according to the producent recommendations)

Changes compared to the previous version:

-general update. Updated cards versions are now available on www.tenzi.pl

This Material Safety Data Sheet contains 9 pages. Changes in the content by unauthorized persons is prohibited.

Skarbimierzyce 01.06.2015