

BRUDEX

Safety Data Sheet

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:**
Universal cleaning product, designed for removing contamination of organic origin.
Cleans, launder, scours and degreases kitchen accessories, industrial floors, engines and protective clothes.
- 1.3 Details of the supplier of the safety data sheet:**

TENZI Sp. z o.o.
Skarbimierzyce 20
72-002 Dołuje
tel. +48 91 3119777
fax. +48 91 3119779
E-mail address for a competent person responsible for SDS: 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.

- 2.2. Label elements:**
(According to 1272/2008/EC*)

Hazard symbols:



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): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

BRUDEX

Safety Data Sheet

P310 – Immediately call a POISON CENTER/doctor
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. Mixtures:

Composition (according to: 648/2004/EC):

- < 5% phosphates
- < 5% phosphonates
- < 5% silicates
- < 5% non-ionic surfactants
- aroma composition
- auxiliary substances not classified as dangerous
- sodium hydroxide

Identification	Hazardous ingredient/classification	Concentration
CAS: 68439-54-3 WE: Polymer Index: No data available Registration: No data available	Non-ionic surfactants Eye Dam. 1 H318, Acute Tox. 4 H302	< 5%
CAS: 10213-79-3 WE: 229-912-9 Index: 014-010-00-8 Registration: 01-2119449811-37-XXXX	Sodium metasilicate Skin Corr. 1B H314, STOT SE 3 H335, Met. Corr. 1 H290	< 5%
CAS: 6419-19-8 WE: 229-146-5 Index: No data available Registration: 01-2119487988-08-XXXX	Phosphonates Eye Irrit. 2 H319, Met. Corr. 1 H290	< 2%
CAS: 141-43-5 WE: 205-483-3 Index: 603-030-00-8 Registration: 01-2119486455-28-XXXX	2-hydroxy-ethylamine Acute Tox. 4 H302, Acute Tox. 4 H332, Acute Tox. 4 H312, Skin Corr. 1B H314, STOT SE 3 H335	< 2%
CAS: 1310-73-2 WE: 215-185-5 Index: 011-002-00-6 Registration: 01-2119457892-27-XXXX	Sodium hydroxide Skin Corr. 1A H314, Met. Corr. 1 H290	< 0.5%

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

BRUDEX

Safety Data Sheet

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures:

Inhalation:

In case of inhalation poisoning symptoms (cough, dyspnea, dizziness) move the injured to fresh air. Lay him down in semi-recumbent posture and make sure to keep him calm and warm. 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. In case of skin changes or burns, get medical attention.

Eye contact:

Flush eyes with running water (at least 15 minutes) while keeping eyelids open. Get medical attention.

Ingestion:

Do not induce vomiting. Get lots of water to drink. Do not take any neutralizing agents. Get medical attention and show them this SDS or product's label.

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

Inhalation:

In case of long-time exposure and without proper ventilation system, it may cause irritation of the upper respiratory tract.

Skin:

Causes serious skin burns.

Eyes:

Causes severe eye damage

Ingestion:

May cause irritation of the mucous membrane.

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

Get medical attention.

Fresh water and eye-wash preparations must be available on the worksite.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable extinguishing media:

Water, foam, extinguishing powder, carbon dioxide.

Unsuitable extinguishing media:

Do not use water jet on substance's surface.

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 and 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

BRUDEX

Safety Data Sheet

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Protective chemical-proof gloves (0.11 mm thick), safety glasses.

For emergency responders:

Protective clothes, protective chemical-proof gloves (0.11 mm thick), self-contained breathing apparatus, safety glasses. Avoid skin and eye contact. Provide proper ventilation..

6.2. Environmental precautions:

Avoid discharging the product into sewage system and onto the ground at all costs.

6.3. Methods and material for containment and cleaning up:

In case of unexpected release of the substance into the environment, inform appropriate services about the emergency and remove any source of ignition. Prevent spills from entering sewers, surface water or groundwater. If it is possible, confine and contain the spill by closing the flow of the liquid, plug the damaged container and put it into leakproof wrapping. For a larger spill, make a dike around the outside edges of the spill and use absorbent materials (sand, sawdust, minced limestone). Store clean-up materials 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:

Be careful when working with this product.

Use personal protection recommended in section 8

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

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

Avoid risk – read this instruction sheet carefully before using the product.

After usage, keep container tightly closed and keep it away from unauthorized people.

Use only adequate ventilation to avoid inhalation poisoning.

7.2. Conditions for safe storage, including any incompatibilities:

Store in a tightly closed, original plastic container. Store this product in a dry environment that will be maintained at 5°C - 35°C temperature with a good ventilation system and an easy washable, nonabsorbable alkaline resistant floor.

DO NOT expose the product to sunlight and keep away from heat, sparks, flame and source of ignition.

7.3. Specific end use(s):

No data available.

BRUDEX

Safety Data Sheet

SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. Control parameters:

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

NDS/NDSch/NDSP values for individual chemical substances (according to SDS or Chemical Safety Report):

Non-ionic surfactants (data for highly concentrated substance):

NDS, NDSCh, NDSP: not identified.

Sodium metasilicate (data for highly concentrated substance):

NDS, NDSCh, NDSP: not identified.

Phosphonates (data for highly concentrated substance):

NDS, NDSCh, NDSP: not identified.

2-hydroxy-ethylamine (data for highly concentrated substance):

NDS: 2.5 mg/m³

NDSch: 7.5 mg/m³

NDSP: not identified.

Sodium hydroxide (data for highly concentrated substance):

NDS: 0.5 mg/m³

NDSch: 1 mg/m³

NDSP: not identified.

DNEL /PNEC values for individual chemical substances (according to SDS or Chemical Safety Report):

Non-ionic surfactants (data for highly concentrated substance):

DNEL, PNEC: not identified.

Sodium metasilicate (data for highly concentrated substance):

DNEL, PNEC: not identified.

Phosphonates (data for highly concentrated substance):

DNEL, PNEC: not identified.

2-hydroxy-ethylamine (data for highly concentrated substance):

DNEL:

Group: workers, Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect,

Value: 1 mg/kg

Group: workers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect,

Value: 3.3 mg/m³

Group: consumers, Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect,

Value: 0.24 mg/kg

Group: consumers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect,

Value: 2 mg/m³

Group: consumers, Exposure time: long-term, Exposure route: ingestion, Type of effect: systemic effect,

Value: 3.75 mg/kg

PNEC:

Aqua (fresh water): 0.085 mg/l

Aqua (marine water): 0.0085 mg/l

Sediment (fresh water): 0.425 mg/kg

Sediment (marine water): 0.0425 mg/kg

Sewage treatment plant: 100 mg/l

Intermittent release: 0.025 mg/l

Soil: 0.035 mg/kg

BRUDEX

Safety Data Sheet

Sodium hydroxide (data for highly concentrated substance):
DNEL, PNEC: not identified.

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

8.2. Exposure controls:

RESPIRATORY PROTECTION:

In case of insufficient ventilation, it is recommended to wear a gas mask with vapour absorber.

HAND PROTECTION:

Protective chemical-proof gloves (0.11 mm thick)

EYE/FACE PROTECTION:

Safety glasses. In case of contact with skin, use face shield.

SKIN PROTECTION:

Protective clothes.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Appearance:	Orange coloured liquid
Odour:	Characteristic for aroma composition used in production
Odour threshold:	No data available
pH:	14 ± 1
Melting point:	No data available
Freezing point:	No data available
Initial boiling point:	No data available
Boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Upper explosive limit:	No data available
Lower explosive limit:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	1.070 ± 0.020 g/cm ³
Solubility:	
A) Water:	soluble
B) Organic solvent:	No data available
Partition coefficient N-Octan:	No data available
Partition coefficient Water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available

BRUDEX

Safety Data Sheet

Explosive properties: No data available

Oxidising properties: No data available

9.2. Other information:

Refractive index: 16% Brix* \pm 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 section 7).

10.3 Possibility of hazardous reactions:

May violently react with acids (creating chemical salts).

10.4 Conditions to avoid:

Avoid heavily warmed rooms without ventilation and long-term exposure to sunlight.

10.5 Incompatible materials:

Acids, strong oxidizers.

10.6 Hazardous decomposition products:

Not known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

ACUTE TOXICITY:

Inhalation:

In case of long-time exposure and without proper ventilation system, it may cause irritation of the upper respiratory tract.

Skin:

Corrosive. Causes serious skin burns.

Eyes:

Corrosive. Causes serious eye damage.

Ingestion:

May cause irritation of the mucous membrane.

ATEmix = 8865 (acute toxicity, orally)

ATEmix = 126582 (acute toxicity, dermally)

ATEmix = 65.32 (acute toxicity, inhalation)

BRUDEX

Safety Data Sheet

DETAILS OF PARTICULAR COMPONENTS (according to substances SDS):

Non-ionic surfactants (data for highly concentrated substance):

LD50: >300-2000 mg/kg (rat, orally)
LD50: >2000 mg/kg (rat, dermal)

Harmful after ingestion.
Contact with eyes may cause irreversible damage (rabbit).

Sodium metasilicate (data for highly concentrated substance):

LD50: 1152-1349 mg/kg (rat, orally)
LC50: > 2.06mg/m³ (rat, nhalation|)
LD50: > 5000 mg/kg (rat, dermal)

Corrosive to skin.
Corrosive to eyes.
No allergic effects.
No mutagenic effects.
No reproductive problems

Phosponates (data for highly concentrated substance):

LD50: 2910 mg/kg (rat, orally)
LD50: 6310 mg/kg (rat, dermal)

Slight irritation of the skin.
Irritant to eyes.
No allergic effects.

2-hydroxy-ethylamine (data for highly concentrated substance):

LD50: 1515 mg/kg (rat, orally) (OECD 401)
LC50: >1.3 mg/l/6h (rat, inhalation)
LD50: 2504 mg/kg (dermal) (OECD 402)

Skin irritation (rabbit) (OECD 404)
Serious eye irritation (rabbit) (OECD 405)
No allergic effect (guinea pig) (OECD 406)

Teratogenicity:

No distortions.

Reproductive toxicity:

The actual product wasn't tested. Following statements are based on products with similar structure.
After high enough dosage, we cannot exclude potential side effects that may cause fertility problems or other harmful effects on human body.

Sodium hydroxide (data for highly concentrated substance):

LD50: 500 mg/kg (rat, orally)

Very harmful after swallowing. Causes burns in mouth, throat and stomach. Risk of gastrointestinal perforation.
Corrosive effects on skin. Burns, deep wounds and skin necrosis.

BRUDEX

Safety Data Sheet

Serious and irreversible eye damage. Risk of blindness.
No allergic effects.
No mutagenic effects.
No carcinogenic effects.
Corrosive effects on respiratory system. Causes irritation of the mucous membrane.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity:

Data for the mixture ingredients:

Non-ionic surfactants (data for highly concentrated substance):

LC50:	> 1-10 mg/l/96h	(Cyprinus carpio)	(OECD 203)
EC50:	> 1-10 mg/l/48h	(Daphnia magna)	(OECD 202)
EC50:	> 1-10 mg/l/72h	(Scenedesmus subsipicatus)	(OECD 201)

Sodium metasilicate (data for highly concentrated substance):

LC50:	210 mg/l/96h	(fish, Brachydanio rerio)
EC50:	1700 mg/l/48h	(daphnia, Daphnia magna)
EC50:	207 mg/l/72h	(algae, Scenedesmus subspicatus)

Phosphonates (data for highly concentrated substance):

EC50:	297 mg/l/48h	(Daphnia magna)
LC50:	> 330 mg/l/96h	(Bluegil sunfish)
LC50:	4.575 mg/l/96h	(Grass shrimp)

2-hydroxy-ethylamine (data for highly concentrated substance):

LC50:	349 mg/l/96h	(fish, Cyprinus carpio)	(semi-static)
LC50:	170 mg/l/96h	(fish, Carassius auratus)	(static)
EC50:	65 mg/l/48h	(daphnia, Daphnia magna)	(static)
EC50:	2.5 mg/l/72h	(algae, Selenastrum capricornutum)	(growth degree, OECD 201)
EC50:	22 mg/l/72h	(algae, Scenedesmus subspicatus)	(growth degree)

Toxic to aqua organisms.

Sodium hydroxide (data for highly concentrated substance):

Toxic for animals, aquatic organisms and bacteria. May adversely affect plant growth.

LC0:	157 mg/l/48h	(fish)
LC50:	189 mg/l/48h	(fish)
LC100:	213 mg/l/48h	(fish)

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.

BRUDEX

Safety Data Sheet

Data for the mixture ingredients:

Substance	Method	Length	Degraded percentage
Non-ionic surfactants	OECD 301 A	28 days	> 70%
Non-ionic surfactants	OECD 301 B	28 days	> 60%
2-hydroxy-ethylamine	OECD 301 A	21 days	> 90%
Sodium hydroxide	Easily biodegradable	Easily biodegradable	Easily biodegradable

Sodium metasilicate (data for highly concentrated substance):

Substance undergoes hydrolyze when in water.

Because of the good solubility in water, substance may sink into groundwaters and may be detected far away from the place of spill.

Phosphonates (data for highly concentrated substance):

ChZT: 230000 mg/l

BZT: 15700 mg/l

12.3. Bioaccumulative potential:

Based on the data of the mixture ingredients, it is really unlikely for the product to be bioaccumulative..

12.4. Mobility in soil

The product is water soluble and may sink into 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 sewage system. Product should be totally used up according to its description.

If it's impossible to do so, 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 rinse the container 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.

BRUDEX

Safety Data Sheet

SECTION 14. TRANSPORT INFORMATION

TRADE NAME: BRUDEX

- 14.1. UN Number:** 1719.
14.2. UN proper shipping name: Caustic alkali liquid, N.O.S. (Sodium metasilicate, 2-hydroxy-ethylamine).
14.3. Transport hazard class(es): ADR NR 8
14.4. Packing group: III
14.5. Environmental hazards: No.
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 LABELS



SECTION 15. REGULATORY INFORMATION

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

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

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

DIRECTIVE 2008/112/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 amending Council Directives 76/768/EEC, 88/378/EEC, 1999/13/EC and Directives 2000/53/EC, 2002/96/EC and 2004/42/EC of the European Parliament and of the Council in order to adapt them to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

COMMISSION REGULATION (EU) No 758/2013 of 7 August 2013 correcting Annex VI to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

DIRECTIVE 2014/27/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 amending Council Directives 92/58/EEC, 92/85/EEC, 94/33/EC, 98/24/EC and Directive 2004/37/EC of the European Parliament and of the Council, in order to align them to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

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

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

BRUDEX

Safety Data Sheet

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

15.2. Chemical safety assessment

For mixture:

A Chemical Safety Assessment has not been carried out.

For following mixture substances:

Non-ionic surfactants: No data available.

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

Phosphonates: No data available.

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

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

SECTION 16. OTHER INFORMATION

Information above is based on current knowledge of product in 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 symbols and H phrases from Section 2 and 3:

Acute Tox. 4	– Acute toxicity, category 4.
Met.Corr 1	– Substance/Mixture is corrosive to metals, category 1
Eye Dam. 1	– Serious eye damage, category 1.
Skin Irrit. 2	– Causes skin irritation, category 2.
Skin Corr. 1A	– Corrosive to skin, category 1A.
Skin Corr. 1B	– Corrosive to skin, category 1B.
Eye Irrit. 2	– Causes serious eye irritation, category 2.
STOT SE 3	– Specific target organ toxicity - Single exposure STOT, category 3.
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.
H412	– Harmful to aquatic life with long lasting effects.

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

Expiry date:

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



BRUDEX

Safety Data Sheet

BRUDEX was submitted to Inspector for Chemical Substances.

Changes compared to the previous version:

- section 14 and 15

Updated cards versions are now available on www.tenzi.pl

This Safety Data Sheet contains 13 pages. Changes in the content by unauthorized people is prohibited.