

GRAN DI-CL

Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** GRAN DI-CL
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Highly alkaline, low-foaming product, designed for washing dishes inside dishwasher.
- 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

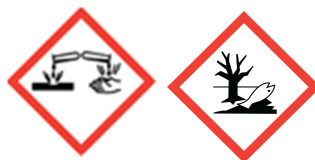
2.1. Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008:

- Skin Corr. 1A H314** – Causes severe skin burns and eye damage.
Eye Dam. 1 H318 – Causes serious eye damage.
Aquatic Acute 1 H400 – Very toxic to aquatic life.

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

Hazard symbols:



Signal words:
DANGER

Hazard statements:
H314 – Causes severe skin burns and eye damage.
H400 – Very toxic to aquatic life.

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].
P310 – Immediately call a POISON CENTER/doctor
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

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to do. Continue rinsing.

P405 – Store locked up.
EUH031 – Contact with acids liberates toxic gas.

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):

- 5-15% bleaching compounds based on chlorine
- ≤ 16% potassium hydroxide
- ≤ 5% phosphates
- ≤ 5% phosphonates
- ≤ 5% polycarboxylate
- auxiliary substances

Identification	Hazardous ingredient/classification	Concentration
CAS: 1310-58-3 WE: 215-181-3 Index: 019-002-00-8 Registration: 01-2119487136-33-XXXX	Potassium hydroxide Acute Tox.4 H302, Skin Corr. 1A H314, Met. Corr. 1 H290	< 16%
CAS: 7681-52-9 WE: 231-668-3 Index: 017-011-00-1 Registration: 01-2119488154-34-XXXX	Sodium hypochlorite (15% of active chlorine) Met. Corr. 1 H290, Skin Corr. 1B H314, STOT SE 3 H335, Eye Dam.1 318, Aquatic Acute 1 H400, EUH 031	15%
CAS: 37971-36-1 WE: 253-733-5 Index: Not applicable Registration: 01-2119436643-39-XXXX	Phosphonates Met. Corr. 1 H290	< 1%

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

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, make sure to keep him warm and calm and get medical attention.

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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 irritation 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. Give lots of water to drink. DO NOT give any neutralizing agents. Immediately get medical attention and show this SDS or label.

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

Strongly irritant, may cause serious damage to upper respiratory tract, burns, chemical pneumonia and pulmonary. Symptoms include: cough, dyspnoea and sore throat.

Skin:

Causes serious skin burns, wounds and deep ulceration.

Eyes:

Corrosive, causes severe eye burns, chemical conjunctivitis and corneal damage (redness, intense pain), possible irreversible impairment of vision or blindness.

Ingestion:

Corrosive, causes serious burns in mouth, throat and stomach. Seriously damages gastrointestinal tissues (perforation risk) which may cause death. Symptoms include strong pain, vomiting, diarrhea and lower blood pressure.

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:**

Use extinguishing measures that are appropriate to local circumstances and surrounding environment.

Unsuitable extinguishing media:

There are not any known extinguishing media that you shouldn't use.

5.2. Special hazards arising from the substance or mixture:

Product is non-flammable. Due to the strong oxidizing properties, in contact with a number of organic substances, hydrogen, powdered metals - poses a risk of explosion.

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

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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), self-contained breathing apparatus, safety glasses.

For emergency responders:

Protective clothes, protective chemical-proof gloves (0.11 mm), self-contained breathing apparatus, safety glasses.

Avoid skin and eye contact. Provide proper ventilation..

6.2. Environmental precautions:

Product is dangerous to the environment and it's very toxic to aquatic life.

Avoid discharge into drains, watercourses or 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.

SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. Control parameters:

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

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

Potassium hydroxide (data for highly concentrated substance):

NDS: 0.5 mg/m³
NDSch: 1 mg/m³
NDSP: not identified.

Sodium hypochlorite (data for highly concentrated substance):

NDS: 0.7 mg/m³
NDSch: 1.5 mg/m³
NDSP: not identified.

Phosphonates (data for highly concentrated substance):

NDS, NDSch, NDSP: not identified.

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

Potassium hydroxide (data for highly concentrated substance):

DNEL, PNEC: not identified.

Sodium hypochlorite (data for highly concentrated substance):

DNEL:

Potential health effects: acute effects, Exposure route: inhalation, Type of effect: systemic effect,	Value: 3.1 mg/m ³
Potential health effects: acute effects, Exposure route: inhalation, Type of effect: local effect,	Value: 3.1 mg/m ³
Potential health effects: chronic effects, Exposure route: inhalation, Type of effect: systemic effect,	Value: 1.55 mg/m ³
Potential health effects: chronic effects, Exposure route: ingestion, Type of effect: systemic effect,	Value: 0.26 mg/kg
Potential health effects: chronic effects, Exposure route: dermal, Type of effect: local effect,	Value: 0.5% as a mixture
Potential health effects: chronic effects, Exposure route: inhalation, Type of effect: local effect,	Value: 1.55 mg/m ³

PNEC:

Aqua (fresh water): 0.21 mg/l
Aqua (marine water): 0.042 mg/l

Phosphonates (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, wear suitable respiratory equipment - masks with gas and vapour protection.

HAND PROTECTION:

Protective gloves resistant to alkaline chemical substances.
0.11 mm thick.

EYE/FACE PROTECTION:

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

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SKIN PROTECTION:

Protective clothes, protective boots.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Appearance:	Yellow coloured liquid
Odour:	Characteristic (chlorine)
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:	1.205 ± 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
Explosive properties:	No data available
Oxidising properties:	No data available

9.2. Other information:

Refractive index: 27% 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.

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10.2 Chemical stability:

Stable under recommended storage conditions (see section 7).

10.3 Possibility of hazardous reactions:

May violently react with acids and light metals.

10.4 Conditions to avoid:

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

10.5 Incompatible materials:

Materials to avoid: acids, strong oxidizers, Hydrogen, metal powder, organic materials (amines, ammonium salts).

10.6 Hazardous decomposition products:

Under the influence of high temperature, product releases oxygen, chlorine and carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

ACUTE TOXICITY:

Inhalation:

Strongly irritant, may cause serious damage to upper respiratory tract, burns, chemical pneumonia and pulmonary. Symptoms include: cough, dyspnoea and sore throat.

Skin:

Causes serious skin burns, wounds and deep ulceration.

Eyes:

Corrosive, causes severe eye burns, chemical conjunctivitis and corneal damage (redness, intense pain), possible irreversible impairment of vision or blindness.

Digestive system:

Corrosive, causes serious burns in mouth, throat and stomach. Seriously damages gastrointestinal tissues (perforation risk) which may cause death. Symptoms include strong pain, vomiting, diarrhea and lower blood pressure.

ATEmix = 2082 (acute toxicity, orally)

DETAILS OF PARTICULAR COMPONENTS (according to substance's SDS):

Potassium dioxide (data for highly concentrated substance):

LD50: 273 mg/kg (rat, orally)

Corrosive to skin above 10% concentration.

Irritant to eyes in 0.5-2% concentration.

Corrosive to eyes above 2% concentration.

Corrosive to respiratory system.

No allergic effects.

Causes burns and damage to digestive system.

No carcinogenic effects.

No mutagenic effects.

Sodium hypochlorite (data for highly concentrated substance):

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LD50: 1100 mg/kg as free chlorine (rat, intraperitoneal).

LC50: 1050 mg/m³ (rat, vapour)

- inhalation:

May cause severe respiratory tract irritation with possible burns.

Low concentrations can cause irritation of the throat and lungs (burning, stinging), coughing and breathing difficulty.

May cause pain, vomiting and possible pulmonary edema.

High concentrations may cause apnoea, loss of consciousness or cardiac failure, collapse.

Symptoms may occur with delay.

- contact with skin:

Corrosive. Causes severe chemical burns with symptoms of pain, redness and blistering.

- contact with eyes:

Corrosive. May cause severe deep burns to the eyeballs, strong pain and redness.

- ingestion:

May cause burns in mouth, throat, esophagus and stomach.

May cause severe damage to the digestive tract (risk of perforation). Advanced stages may cause collapse.

Symptoms: nausea, vomiting, strong pain

Long-term toxicity:

Prolonged or repeated overexposure to sodium hypochlorite may cause skin irritation, chronic upper respiratory tract infection and conjunctivitis.

The odor threshold for chlorine is about 0,2 mg/m³

Phosphonates (data for highly concentrated substance):

LD50: 6500 mg/kg (rat, orally)

LD50: 3000 mg/m³ (rat, inhalation)

Substance not classified as irritant, harmful or toxic to health.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity:

Data for the mixture ingredients:

Potassium dioxide (data for highly concentrated substance):

LC50: 80 ppm (Gambusia affinis)

LC50: 660 ppm (Daphnia magna)

EC50: 1337 ppm (Nitscherai Linearis)

Sodium hypochlorite (data for highly concentrated substance):

LC50: 1,65-2,87 mg/l/48h (seawater)

LC50: 0,58 mg/l/96h (fish, seawater)

EC50: 0,141 mg/l/48h (daphnia, fresh water)

EC50: 0,026 mg/l/48h (daphnia, seawater) - vertebrates

EC50: 0,1 mg/l/21days (fresh water plants)

NOEC: 0,021 mg/l/7days (fresh water) – algae and water plant

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Phosphonates (data for highly concentrated substance):

EC50:	300 mg/l/48h	(Daphnia magna)	data for product
LC50:	1300 mg/l/96h	(Rainbow trout)	data for pure substance

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.

Data for the mixture ingredients:

Potassium hydroxide (data for high concentrations substance):

Inorganic substance.

Sodium hypochlorite (data for highly concentrated substance):

Unsustainable in water and soil when in contact with organic materials.

In 25°C, it degrades to oxygen, in 35°C, it will release chlorine, in 100°C, it will release chlorine dioxide.

Phosphonates (data for highly concentrated substance):

Biodegradation: 17%/28days (Zahn-Wellens)

12.3. Bioaccumulative potential:

Potassium hydroxide (data for highly concentrated substance):

No data available.

Sodium hypochlorite (data for highly concentrated substance):

Does not bioaccumulate due to its high reactivity and toxicity.

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Phosphonates (data for highly concentrated substance):

No data available.

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

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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: GRAN DI-CL

- 14.1. UN Number:** UN 1719
14.2. UN proper shipping name: CAUSTIC ALKALI LIQUID, N.O.S. (sodium hypochlorite, potassium hydroxide).
14.3. Transport hazard class(es): 8.
14.4. Packing group: II
14.5. Environmental hazards: Yes.
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

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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

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:

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

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

Phosphonates: Introductory registration with transitional period.

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:

Aquatic Chronic 2 – Hazardous to the aquatic environment - Chronic Hazard, category 2.

Aquatic Acute 1 – Hazardous to the aquatic environment - Acute Hazard, category 1

Acute Tox. 4 – Acute toxicity, category 4.

Eye Dam. 1 – Serious eye damage, category 1.

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

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

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

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

H290 – May be corrosive to metals.

H302 – Harmful if swallowed.

H314 – Causes severe skin burns and eye damage.

H318 – Causes serious eye damage.

H319 – Causes serious eye irritation.

H335 – May cause respiratory irritation.

H400 – Very toxic to aquatic life.

H412 – Harmful to aquatic life with long lasting effects.

EUH031 – Contact with acids liberates toxic gas.

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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:

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

GRAN DI-CL was submitted to Inspector for Chemical Substances.

Changes compared to the previous version:

- section: 14, 15

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

This Safety Data Sheet contains 12 pages. Changes in the content by unauthorized people is prohibited.