

GRAN DIW GLASS

Safety Data Sheet

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

- 1.1 Product identifier:** GRAN DIW GLASS
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Product designed for cleaning 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.

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].
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 to do. Continue rinsing.

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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):

- < 10% potassium hydroxide
- < 5-15% phosphates
- < 5-15% silicates
- < 5% phosphonates
- < 5% polycarboxylates
- auxiliary substances not classified as dangerous

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	< 10%
CAS: 7320-34-5 WE: 230-785-7 Index: No data available Registration: 01-2119489369-18-XXXX	Phosphates Eye Irrit. 2 H319	5-15%
CAS: 1344-09-8 WE: 215-687-4 Index: No data available Registration: 01-2119448725-31-XXXX	Sodium silicate Eye Dam. 1 H318, Skin Irrit. 2 H315	< 6%

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. 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.

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Eye contact:

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

Ingestion:

Wash your mouth with running water. Drink about 1-2 liters of fresh water. Do not induce vomiting. Get medical attention and show this SDS or label. Don't give anything to unconscious person.

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

Severe irritant. May cause serious damage to upper respiratory tract.

Skin:

Causes serious skin burns.

Eyes:

Causes serious eye damage.

Ingestion:

May cause burns in the mucous membranes.

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:

Don't use water jet on liquid'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

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SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Protective clothes, protective chemical-proof gloves (0.11 mm thick), self-contained breathing apparatus, 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 discharge into drains, watercourses or onto the ground at all costs. In case of environmental pollution, contact local authorities.

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.

Phosphates (data for highly concentrated substance):

NDS, NDSCh, NDSP: not identified.

Sodium silicate (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: No data available.

Phosphates (data for highly concentrated substance):

DNEL, PNEC: not identified.

Sodium silicate (data for highly concentrated substance):

DNEL:

Workers (hired in the producing and processing zones, in which substance concentration is over 25%):

Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect, Value: 1.59 mg/kg
Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect, Value: 5.61 mg/m³

OEL (occupational exposure limit): 3 mg/m³ (inhalation by mouth) and 10 mg/m³ (inhalation by airways).
Exceeding above limits by 5% causes bronchitis.

Consumers:

Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect, Value: 0.8 mg/kg
Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect, Value: 1.38 mg/m³
Exposure time: long-term, Exposure route: ingestion, Type of effect: systemic effect, Value: 0.8 mg/kg

PNEC:

Aqua (fresh water): 7.5 mg/l
Aqua (marine water): 1.0 mg/l
Intermittent release: 7.5 mg/l
Sewage treatment plant: 348 mg/l

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, use face shield

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SKIN PROTECTION:

Protective clothes.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Appearance:	Colourless liquid
Odour:	Characteristic for materials 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:	1.220 ± 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).

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SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

Mixture is not reactive.

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 (releases explosive hydrogen).

10.4 Conditions to avoid:

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

10.5 Incompatible materials:

Acids, strong oxidizers, light metals.

10.6 Hazardous decomposition products:

Not known.

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 skin burns.

Eyes:

Causes serious eye damage.

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 = 3333 (acute toxicity, orally)

DETAILS OF PARTICULAR COMPONENTS (according to substances 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.

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Phosphates (data for highly concentrated substance):

LD50: >2000 mg/kg (mouse, orally)

Sodium silicate (data for highly concentrated substance):

LD50: 3400 mg/kg (rat, orally)
LD50: 2.06 mg/m³ (rat, inhalation)
LD50: 5000 mg/kg (rat, dermal)

Irritates skin.
Causes serious eye damage.
No allergic effects.
No mutagenic effects.
No carcinogenic effects.

Reproductive toxicity:

NOAEL: > 159 (rat)
NOAEL: > 200 (mouse)

Not harmful to reproductive system.

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)

Phosphates (data for highly concentrated substance):

LC0: 750 mg/l/48h

Sodium silicate (data for highly concentrated substance):

Acute toxicity for fish:

LC50: 1108 mg/l/96h (Brachydanio rerio)
LC50: 260-310 mg/l/96h (Onochorhynchus mykiss)
NOEC: 348 mg/l/96h (Brachydanio rerio) (lethality)

Long-term toxicity for fish:

NOEC: impossible to state.

Acute toxicity for invertebrates:

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

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Long-term toxicity for invertebrates:

EC50:	207 mg/l/72h	(Scenedesmus subspicatus)	(biomass)
EC50:	> 345.4 mg/l/72h	(Scenedesmus subspicatus)	(growth speed)

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 dioxide (data for highly concentrated substance):

No data available.

Phosphates (data for highly concentrated substance):

No data available.

Sodium silicate (data for highly concentrated substance):

Substance undergoes hydrolysis when in water.

Because of the good solubility in water, substance may sink into surface water and may be detected from far away places.

Soluble silica originating from soluble silicate is indistinguishable from natural silicates with geochemical processes of mineral decomposition, in which concentration in water fits in 10-20 mg SiO₂/L.

That is why silicates released into water not exceeding the predetermined PNEC level for it, doesn't pose a threat to the environment.

12.3. Bioaccumulative potential:

Potassium hydroxide (data for highly concentrated substance):

Not bioaccumulative.

Phosphates (data for highly concentrated substance):

No data available.

Sodium silicate (data for highly concentrated substance):

Low bioaccumulative potential.

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.

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SECTION 14. TRANSPORT INFORMATION

TRADE NAME: GRAN DIW GLASS

- 14.1. **UN Number:** 1719.
14.2. **UN proper shipping name:** Caustic alkali liquid, N.O.S. (potassium hydroxide).
14.3. **Transport hazard class(es):** ADR class. 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:

- 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.

- Potassium hydroxide:** A Chemical Safety Assessment has been carried out.
Phosphates: Introductory registration with transitional period.
Sodium silicate A Chemical Safety Assessment has been carried out.

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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:

- Met.Corr 1** – Substance/Mixture is corrosive to metals, category 1
- Eye Irrit. 2** – Causes serious eye irritation, category 2.
- Eye Dam. 1** – Serious eye damage, category 1.
- Skin Irrit. 2** – Causes skin irritation, category 2.
- Skin Corr. 1A** – Corrosive to skin, category 1A
- Acute Tox. 4** – Acute toxicity, category 4.

- H290** – May be corrosive to metals.
- H302** – Harmful if swallowed.
- H314** – Causes severe skin burns and eye damage.
- H315** – Causes skin irritation.
- H318** – Causes serious eye damage.
- H319** – Causes serious eye irritation.
- H332** – Harmful if inhaled.

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)

GRAN DIW GLASS was submitted to Inspector for Chemical Substances.

Product has certificate of the National Hygiene Institute – PZH (HŻ/01110/01/2012).

Changes compared to the previous version:

- section 6 and 8 (gloves thickness)

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

This Safety Data Sheet contains 11 pages. Changes in the content by unauthorized people is prohibited.