

Material Safety Data Sheet

Creation Date: 10.08.2000

Revision Date: 06.07.2010

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY**1.1 Identification of the preparation: GRAN REX****1.2 Use of the preparation:** Concentrated liquid for manual washing dishes.**1.3 Company identification:** TENZI Sp. z o.o., 72-002 Dołuje, Skarbimierzycze 18, e-mail: tenzi@tenzi.pl, www.tenzi.pl
tel. +48 91 31 19 777, fax +48 91 31 19 779**1.4 Emergency Telephone:** +48 91 31 19 777 (Mon-Fr. 8-16); or 998**2. HAZARDS IDENTIFICATION**

Product classified as hazardous in accordance to the applicable regulations (in accordance to Ordinance of the Minister of Health from 2nd September 2003 on criteria and classification of chemical substances and chemical preparations (Journal of Law No 171, item 1665 and 1666)).

Xi - Irritating

R36/38 – Irritating to eyes and skin

3. COMPOSITION / INFORMATION ON INGREDIENTS

Composition (according to: 648/2004/WE): <5% anionic and amphoteric surfactants, preservative (Glutaral), odor composition (Limonene), remaining components – sodium hydroxide, auxiliary components

Hazardous ingredients	Concentration [% weight]	CAS Number	WE Number	Index Number	Caution signs	R signs
Sodium hydroxide (100%)	< 1	1310-73-2	215-185-5	011-002-00-6	C	R35
Anionic surfactants	5÷15	68585-34-2	polimer	---	Xi	R38, R41
Amphoteric surfactants	< 5	61789-40-0	263-058-8	---	Xi	R36
Preservation substance (Glutaral)	< 0,1	111-30-8	203-856-5	605-022-00-X	T, N, C	R23/25, R34, R42/43, R50

The full texts of R symbols are in section 16.

4. FIRST AID MEASURES

INHALATION – In case of inhalation poisoning symptoms (cough, shortness of breath, giddiness) move to fresh air. Ensure the calm in half-lying or half-sitting position, exercise can cause emphysema. Protect against heat loss. Seek medical advice.

SKIN CONTACT – In case of clothes poisoning, immediately take them off and rinse the skin with plenty of water (current water is the best). In case of the skin irritation or burns consult a doctor.

EYE CONTACT – In case of contact with eyes, rinse them immediately with plenty of cold water (at least during 15 minutes) keep the eyes open, seek medical advice.

INGESTION – In case of ingestion, do not cause vomiting. Give water to drink.. Do not give any other neutralizing agents. Immediately consult a doctor, show label if possible

GRAN REX**5. FIRE FIGHTING MEASURES**

NON-FLAMMABLE

SUITABLE EXTINGUISHING MEDIA: Appropriate to the environment surrounding the product.

EXTINGUISHING MEDIA WHICH SHALL NOT BE USED FOR SAFETY REASONS: All known extinguishing media can be used.

SPECIAL EXPOSURE HAZARDS: Non-flammable preparation.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS: Use self-contained breathing apparatus and chemically protective clothing.

FURTHER INFORMATION: In case of fire inform all persons nearby on fire, evacuate third persons from danger area, call the call fire brigade. If possible remove the containers away from the influence of fire and high temperature. If impossible cool the container by stream of water. The after burning residues should be removed.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: protective acid resistant clothing, self-contained breathing apparatus; protective acid resistant gloves, protective glasses.

Avoid direct skin and eyes contact; ensure suitable ventilation.

ENVIRONMENTAL PRECAUTIONS AND METHODS FOR CLEANING UP: In case of unintended release substance into environment inform on emergency and remove the source of leak. Prevent from entering sewers. If it is possible eliminate the leak (close liquid flow, make tight, damaged container put into protect leak proof wrapping) For huge leak, absorb the place where it can be accumulated, pump out if possible. Small quantity of leak absorb by inflammable absorbing material (sand, solid, sawdust, fines limestone), and next place in the appropriate waste container- pass to utilization. Polluted surface wash out.

7. HANDLING AND STORAGE**7.1. HANDLING**

Handle with preparation very carefully. Require use the appropriate individual protection equipment – see point 8.

Mixing only with water. Under no circumstances do not mix with other chemical substances.

Person with skin or respiratory system allergy should not have contact with this substances.

Avoid risks – before usage read operating instruction carefully.

After usage close tightly, keep away from unauthorized persons.

During operation with substances ensure good air-ventilation room in order to avoid inhalation poisoning.

7.2. STORAGE

Keep only in original container made from plastic (polyethylene with the high quality of HDPE). Do not pour to replaceable containers. Keeping the container in dry, tightly closed rooms with temperature + 5 ÷ 30° C with the good ventilation, rooms should have easy clean floor alkali resistant. Keep away from sun and heat. Keep away from ignition and fire sources.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1. EXPOSURE LIMIT VALUES**

Control parameters of concentration (in acc. to Ordinance of Minister of Labour and Social Policy from 29th of November 2002, (Journal of Law, No 217, item 1833 with further amendments – Journal of Law No 212, item 1796, from 10th of October 2005)):

Sodium hydroxide (data for the concentrated substance):

NDS: 0,5 mg/m³

NDSCh: 1 mg/m³

Anionic surfactants (data for the concentrated substance):

NDS, NDSCh: - no data available

Amphoteric surfactants (data for the concentrated substance):

GRAN REX

NDS, NDSCh: - no data available

Preservative (Glutaral) (data for the concentrated substance):

NDS, NDSCh: - no data available

Recommendations to the procedure of monitoring hazardous substances in air – method of measurements:

- Ordinance of the Minister of Health from 20th April 2005 on test and measurements of the factors harmful for work environment (Journal of Law No 73, item 645)
- PN-89/Z-01001/06 – Air protection against pollution.. - names, definitions and units. Terminology concerning test of air pollution around workplaces.
- PN-89/Z-04008/07 – Air protection against pollution. Samples. The principles of getting samples of air around workplace and result analysis.
- PN-EN-689:2002 – Air around workplace- Guidelines of assessment of inhalation exposure on chemical substances by comparison to acceptable concentration rates and measurement strategy.

Notice: When the concentration of substance is known, personal protection should be chosen including this concentration around workplace, time of exposure and operations performed by worker. In emergency, if the concentration around workplace is unknown, personal protection of high protection class must be used.

8.2. EXPOSURE CONTROLS

Used personal protection should comply with the requirements of Ordinance of the Minister of Economy from 21st December 2005 on essential requirements of personal protection measures (Journal of Law No. 259, item 2173):

RESPIRATORY PROTECTION: Not required

HAND PROTECTION: Protective gloves

EYE PROTECTION: Protective glasses

SKIN PROTECTION: Protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1. GENERAL INFORMATION**

FORM - liquid

ODOUR - characteristic

9.2. IMPORTANT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION

pH – 14±1

TEMPERATURES

- a) BOILING POINT – no data available
- b) MELTING POINT – no data available
- c) FLASH POINT - no data available
- d) AUTOIGNITION – no data available

FLAMABILITY – no data available

EXPLOSIVE PROPERTIES - no data available

OXIDATIVE PROPERTIES – no data available

VAPOR PRESSURE – no data available

RELATIVE DENSITY – 1,047 ± 0,020 g/cm³

DISSOLUBILITY

- a) WATER – full
- b) ORGANIC SOLVENT – no data available

PARTITION COEFFICIENT n-octanol /water – no data available

VISCOSITY – no data available

VAPOUR DENSITY – no data available

VAPORIZATION RATE – no data available

9.3. OTHER INFORMATION

INDEX OF REFRACTION – 16,4 % Brix * ± 5%

*- presented as weight % of sucrose content in water solution.

10. STABILITY AND REACTIVITY

GRAN REX

Stabile under normal storing conditions (see: Point 7).

10.1.CONDITIONS TO AVOID: strong heated rooms without ventilation. protect from long term exposure on light and pollution.

10.2.MATERIALS TO AVOID: acids, strong oxidizers

10.3. HAZARDOUS DECOMPOSITION PRODUCTS: no data available

11. TOXICOLOGICAL INFORMATION**EXPOSURE**

-**RESPIRATORY:** long-term using without ventilation can cause irritation of upper respiratory tract

-**INGESTION:** If swallowed, can irritate mucosa.

-**SKIN CONTACT:** Irritating.

-**EYES CONTACT:** Irritating.

DETAILS OF PARTICULAR COMPONENTS (IN ACCORDANCE TO THE PARTICULAR SUBSTANCE DATA SHEET):**Sodium hydroxide (data for the concentrated substance):**

Local reaction:

- inhalation – high irritating, it can cause serious damage of upper respiratory tract, burns, possibility of chemical pneumonia and lungs swelling. Symptoms – sneezing, exudation from nose, cough, sore throat and even coma..

- Consumption – caustic, causes seriously burn of mouth cavity, throat, stomach and serious damage of food system tissues (risk of perforation) – can come to death. Symptoms – huge ache, vomiting, diarrhea, blood pressure fall, symptoms of damage can be even few days after contact.

- contact with skin – caustic, possibility of serious burn and injuries, deep ulceration, skin is blue or very pale. Injuries made by burns heal very slow and cause serious changes on the skin.

- contact with eyes – caustic, possibility of serious burn, damage of cornea and eyes (red mark, huge pain) which can lead to irreparable deterioration of sight and even lost sight.

LDL0 500 mg/kg (rabbit, orally).

Anionic surfactants (data for the concentrated substance):

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

With long-time contact with skin this product causes significant irritation. It can be reason of serious eyes harm (even irreparable).

If you swallow it, substance can cause mouth cavity irritation and upper food canal irritation.

Amphoteric surfactants (data for the concentrated substance):

This substance can cause eyes irritation, red mark, itch, and skin irritation in long-time contact.

LD50 > 2000 mg/kg (orally).

Preservation substance(Glutaral) (data for the concentrated substance):

- LD50 134 mg/kg (rat, orally)

- LD50 2500 mg/kg (rabbit, skin)

- LD50 0,48 mg/l/48h (rat, inhalation)

Irritated reaction in contact with skin/rabbit: substance is caustic.

Irritated reaction in contact with eyes/rabbit: substance is caustic.

After inhalation or contact with skin substance can be allergic.

Mutagenic action:

Ames-test: positive; mutagenic for bacterium

In vivo-test: There is any notes about mutagenity reaction

Product is not diluted – you can't jostle

Smogs /aerosols which are inhaled: toxic

12. ECOLOGICAL INFORMATION

Surface-active agents contained in preparation comply with the biodegradability criteria pursuant to Ordinance EC 648/2004 on detergents.

ECOTOXITY EFFECTS (in acc. MSDS):**Sodium hydroxide (data for the concentrated substance):**

Product is not biodegradable.

GRAN REX**Ecotoxicity:**

Toxicity for fishes: LC50 45,5 mg/l/96h (Onchorhynchus mykiss), LC50 99 mg/l/48h (Limnea macrochirus)

Toxicity for daphnia: EU50 76 mg/l/24h (Daphnia magna)

Biological effect: toxicity for fishes and plankton. Damaging effect relay on pH value.

Death of fishes is possible. It does not cause biological shortage of oxygen.

It is possibility of neutralizing sewage treatment plant.

You have to protect from penetrate this product to ground water, ponds and sewage system

Anionic surfactants (data for the concentrated substance):

Product is dissolving in water.

Surface active anion agents which are in this product are biodegradable consistent with Decree WE 648/2004 about detergents.

Biodegradation:75% BOD/COD after 28 days test of closed bottle EEC C.4.E, OECD 301 D.

You do not admit on penetrate to ground water and surface water.

Amphoteric surfactants (data for the concentrated substance):

You should not expect negative causes for environment. Surface active agents which are in this product are biodegradable consistent with Decree WE 648/2004 about detergents. Biodegradation >60% produce of CO₂, 70% DOC reduction – easily goes into biodegradation.

Preservative (Glutaral) (data for the concentrated substance):

You can't allow on penetrate to any water and ground.

Elimination from water: 90-100% - good degradation (DIE AWAY TEST (OECD 301A); DOC - symbol)

Ecotoxicity:

- for algae: EC0 – 0,62 mg/l/72h (Scenedesmus subs.)

- for algae: EC50 – 1,7 mg/l/72h (Scenedesmus subs.)

- for fishes LC0 – 5 mg/l/96h (Lepomis macrochirus)

- for fishes LC50 – 18,8 mg/l/96h (Lepomis macrochirus)

- for fishes LC0 – 18 mg/l/96h (Salmo gairdneri)

- for fishes LC50 – 24 mg/l/96h (Salmo gairdneri)

- for fishes LC0 – 5,2 mg/l/96h (Pimephales promelas)

- for fishes LC50 – 10,8 mg/l/96h (Pimephales promelas)

- for daphne EC50 – 10 mg/l/48h (Daphnia magna)

There are no organic connected halogens (which can make AOX worth in sewage treatment plant) in this product.

13. DISPOSAL CONSIDERATIONS**RESIDUES OR WASTES:**

Do not mix the substance with other liquid wastes. Do not enter to the sewage. The product should be totally used pursuant to its recommendation, if impossible the product or residues must be disposed as special wastes.

Waste code and type: 07 06 04 - other halogenated solvents, washing liquids and mother liquors.

Code classification pursuant to the Ordinance of the Minister of Environment from 27th September 2001 on waste records (Journal of Law No 112, item 1206).

PACKAGING:

Polluted packaging should be totally empty. Empty container rinse with water several times, which should be disposed as preparation. Empty packaging can be stored in containers designated to the collecting the plastic or refer to company specialized in utilization.

Comply with the regulations from Act from 27th April 2001 on wastes (Journal of Law No 62, item 628) with further amendments.

Comply with the regulations from Act from 11th May 2001 on packaging and packaging waste (Journal of Law No 63, item 638) with further amendments.

Waste code and type: 15 01 02 - plastic packaging.

14. TRANSPORT INFORMATION

TRADE NAME: **GRAN REX**

HAZARDOUS CLASS IN TRANSPORT IN ACCORDANCE TO ADR/RID: does not apply

NAME OF DANGEROUS MATERIAL: does not apply

PACKAGING GROUP: does not apply

UN CODE: does not apply
WARNING LABEL: does not apply

15. REGULATORY INFORMATION

LABELLING (according to Ordinance of the Minister of Health and Social Care from 2nd September 2003 on labeling of chemical substances and chemical preparations (Journal of Law No 173, item 1679) and Ordinance of the Minister of Health from 9th November 2004 changing the ordinance on labelling of chemical substances and chemical preparations (Journal of Law No 260, item 2595):

Marketing name: **GRAN REX**

Warning signs:



IRRITATING

Signs indicating type of hazard:

R36/38 – Irritating to eyes and skin

Signs indicating conditions of safe usage:

S26 – in case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28 – After contact with skin, wash immediately with plenty of water.

S37/39 - Wear suitable gloves and eye/face protection.

S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S46 – If swallowed, seek medical advice immediately and show this container or label.

S1/2 – Keep locked up and out of the reach of children

ONLY FOR PROFESSIONAL USE

This Material Substance Data Sheet was prepared on the basis on following regulations:

- Act from 11th January 2001 on chemical substances and chemical preparations (Journal of Law No 11, item 84) with further amendments.

- Ordinance of the Minister of Health from 28th September 2005 on hazardous substances record ant their classification and symbols (Journal of Law No 201, item 1674 and 1675).

- Ordinance of the Minister of Health from 3rd July 2002 on Material and Hazardous Substances Safety Data Sheet (Journal of Law No 140, item 1171) and Ordinance of the Minister of Health from 14th December 2004 changing the ordinance on Material and Hazardous Substances Safety Data Sheet (Journal of Law No 2, item 8).

- Ordinance of the Minister of Health from 2nd September 2003 on criteria and classification of chemical substances and chemical preparations (Journal of Law No 171, item 1665 and 166) and Ordinance of the Minister of Health from 29th October 2004 changing the ordinance on criteria and classification of chemical substances and chemical preparations (Journal of Law No 243, item 2440).

- Ordinance of the Minister of Health from 2nd September 2003 on labeling of chemical substances and chemical preparations (Journal of Law No 2003, No 173, item 1679) and Ordinance of the Minister of Health from 9th November 2004 changing the ordinance on labeling of chemical substances and chemical preparations (Journal of Law 2004, No 260, item 2595).

- Ordinance of the Minister of Health from 14th August 2002 on obligation of handing-over the Material Substance Data Sheets non classified as hazardous (Journal of Law No 142, item 1194).

- Ordinance of the Minister of Health from 17th January 2003 on information on hazardous substances which do not required handing-over the Material Substance Data Sheet (Journal of Law No 19, item 1701).

- Act from 26th June 1974, Labor Code (Journal of Law.. No 21, 1998r, item 94).

- Ordinance of the Minister of Economy and Labor from 5th July 2004 on limitation of the prohibition and production conditions, turnover and use of hazardous substances or substances containing their products (Journal of Law No 11, item 1762) and Ordinance of the Minister Economy and Labour from 21st February 2005 Journal of Law No 39, item 1796, from 4th July 2006. Journal Of Law 2006, No 127, item 887 , from 11th December 2006. Journal of Law 2006, No 239, item 1731 , from 29th December 2006. Journal of Law 2007, No 1, item 1) changing the ordinance on limitation of the prohibition and production conditions, turnover and use of hazardous substances or substances containing their products.

- Directive (EC) no 648/2004 of European Parliament and Council from 31st March 2004 on detergents and Directive of European Commission (EC) No 907/2006 changing the directive (EC) no 648/2004 of European Parliament and Council on

GRAN REX

detergents in order to adjustment of its attachments III and VII.

- Directive (EC) no 1907/2006 of European Parliament and Council from 18th December 2006 on register, assessment and issue permissions and using the limitation of chemicals (REACH), establishing the European Chemicals Agency, changing the directive 1999/45/EC and annulling the directive (EEC) Council No 793/93 and directive of Commission 9EC) no 1488/94, as also Directive of Council 76/769/EEC and directive of Commission 91/155/EEC, 93/67/EEC, 93/105/EEC and 2002/21/EC

16. OTHER INFORMATION

Aforementioned information are worked out on the basis of the current state of art and product as it is used. Data concerning this product are presented in order to comply with the security requirements and not to guarantee its special properties. In case when use conditions are not under producer's control, the responsibility for safety use lies on user.

The employer is obliged to inform all employees, who have a contact with this product, on hazardous and personal protection listed in this Material Substances Data Sheet.

This Material Safety Data Sheet is worked out on the basis of Materials Safety Data Sheets attached to the preparation composition by producers and on the basis of regulations on hazardous substances and chemical preparations.

The classification was made on the basis of maximum concentration of hazardous substances.

The full text of any R phrases referred to under headings 2 and 3 of the Safety Data Sheets.

T - Toxic

C – Corrosive

Xi – Irritating

N – Dangerous for the environment

R23/25 – Toxic by inhalation and if swallowed

R34 – Causes burns

R35 – Causes severe burns

R36 – Irritating to eyes

R38 – Irritating to skin

R41 – Risk of serious damage to eyes

R42/43 – May cause sensitization by inhalation and skin contact

R50 – Very toxic to aquatic organisms

Detail principles of use the product are on Technical Data Sheet on www.tenzi.pl

Trainings: Persons dealing with the hazardous substances marketing should be trained with regard to operating, and health and safety. Drivers should be trained and obtain proper certification in accordance to ADR regulations.

The product is submitted to **Inspector of Chemical Substances and Preparations.**

Date of expiry in normal conditions – 36 months from the production date.

PZH attested, number HŻ/01565/02/2007

Amendments to the last version:

- General update. Update on MSDS available on www.tenzi.pl

This Material Safety Data Sheet is uniform document containing 7 pages.

Made by: Monika Rzepkowska.

Skarbimierzyce 06.07.2010