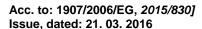
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier: DG Descaler L

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Identified uses / uses advised against: Descaling liquid agent

1.3 Details of the supplier of the safety data sheet:

Distributor: Duo Ghibli

ul. Światowida 6 71-726 Szczecin

Tel.: +48 606 362 590

E-mail address of the person responsible for data sheet: biuro@dgpc.pl

1.4 Emergency telephone number: 112 (general emergency telephone number), 998 (fire-brigade), 999

(ambulance);

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

Acc. to 1272/2008 Skin Irri.2; H315 Eye Dam.1; H318 STOT SE 3; H335

Human health dangers:

Causes serious eye damage. Causes skin irritation. May cause respiratory irritation.

Environmental hazards:

None.

Physic-chemical hazards:

None.

2.2 Label elements:

Pictograms:





Signal Word: Danger

Hazard Statement:

H315 - Causes skin irritation.

H318 – Causes serious eye damage.

H335 - May cause respiratory irritation.

Precautionary Statement:

P271 – Use only outdoors or in a well-ventilated area

P280 – Wear protective gloves/protective clothing/eye protection/face protection

P302+P352 - IF ON SKIN: Wash with plenty of water

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

P310 - Immediately call a POISON CENTER/doctor

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Contain:

Hydrochloric acid (EC: 231-595-7)

Alcohols, C9-11, ethoxylated (CAS: 68439-46-3)

According to Regulation (EC) No 648/2004

Contains: <5% nonionic surfactants, anionic surfactants

2.3 Other hazards:

Mixture doesn't meet the criteria for PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1 Substances:

Not applicable.

3.2 Mixtures:

Hazardous components:

Product identifier	Contains [%]	Classification	
		Hazard Class and Category Code(s)	Hazard Statement Code(s)
Hydrochloric acid CAS No.: - EC No.: 231-595-7 Index No.: 017-002-01-X REACH No.: -	20	Skin Corr. 1B STOT SE 3	H314 H335
sulphamidic acid CAS No.: 5329-14-6 EC No.: 226-218-8 Index No.: 016-026-00-0 REACH No.: -	4	Eye Irrit.2 Skin Irrit.2 Aquatic Chronic 3	H319 H315 H412
2-(2-butoxyethoxy)ethanol; CAS No.: 112-34-5 EC No.: 203-961-6 Index No.: 603-096-00-8 REACH No.: -	3 – 5	Eye Irrit.2	H319
Alcohols, C9-11, ethoxylated CAS No.: 68439-46-3 EC No.: - Index No.: - REACH No.: -	3 – 5	Acute Tox.4 Eye Dam.1	H302 H318

Additional information: For full text of H-statements: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures:

Skin contact:

Remove contaminated clothing, wash affected skin with soap and water, rinse thoroughly with water, in case of irritation, consult a doctor.

Eye contact:

Rinse for several minutes (about 15) with plenty of water, holding eyelids apart. Avoid strong stream, due to the risk of corneal damage, contact your doctor.

Inhalation:

In the event of dizziness or nausea, remove casualty to fresh air, if symptoms persist, obtain medical advice.



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Ingestion:

Do not induce vomiting, rinse your mouth with water, immediately contact your doctor.

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

Skin contact: Causes skin irritation.

Eye contact: Causes serious eye damage.

Respiratory: May cause respiratory irritation, cough, shortness of breath, difficulty breathing.

Gastrointestinal tract: Ingestion may cause irritation of the mucous membranes of mouth, gastrointestinal tract, abdominal pain, stomach cramps, nausea, vomiting, diarrhea, headaches and dizziness - symptoms of food poisoning

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

The decision about how to conduct the physician.

SECTION 5: Firefighting measures

5.1. Extinguishing media:

Suitable extinguishing media: foam, dry powder extinguishers, CO_{2} , water spray. Use appropriate extinguishing method for conditions.

Unsuitable extinguishing media: Water with full jet

5.2 Special hazards arising from the substance or mixture:

During a fire, high temperature, release toxic decomposition products (carbon oxides, nitrogen oxides, hydrogen chloride).

5.3 Advice for firefighters:

Cool containers with water spray, if possible remove from the danger zone. In the event of a fire in a confined space should wear protective clothing and breathing apparatus with compressed air. Do not allow fire-fighting water run-off into surface water, groundwater and sewer.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: notify the appropriate service. Remove from the hazardous area who does not participate in liquidation of failure.

For emergency responders: Ensure adequate ventilation. Use personal protective equipment. Do not breathe vapors.

6.2 Environmental precautions

Prevent from spreading or escaping into drains and reservoirs. Inform local authorities if you fail to provide protection.

6.3 Methods and material for containment and cleaning up

Prevent leakage and absorb with inert, absorbent material (such as sand, earth, vermiculite, diatomaceous earth, etc.). The contaminated material is placed in properly labeled containers for disposal in accordance with applicable regulations.

6.4 Reference to other sections

Disposal considerations – see section 13. Personal precautions – see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Use in well ventilated area. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Avoid breathing vapors. Avoid sources of ignition, heat, hot surfaces and open flames. Work in accordance with the principles of safety and hygiene: Do not eat, drink and smoke at work, wash your hands after use, remove contaminated clothing and protective equipment before entering places for meals. Follow the instructions provided on the label and instructions for use.

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7.2 Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place in properly labeled and tightly closed original container. Avoid direct sunlight and heat sources, hot surfaces and open flames. Store away from strong alkalis and oxidizing agents.

7.3 Specific end use(s): Descaling liquid agent

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

Occupational Exposure Limits (PL):

hydrogen chloride: 5mg/m³ (8h); 10mg/m³ (15min.)

2-(2-butoxyethoxy)ethanol: 67mg/m³ (8h); 100mg/m³ (15min.)

8.2 Exposure controls

Appropriate engineering controls: It is recommended to use proper ventilation.

Individual protection measures, such as personal protective equipment:





Eve protection:

Use safety glasses (according to EN 166)

Skin protection:

Hands:

Use hand protection chosen according to working conditions (latex, butyl rubber, nitrile rubber: PVC), should meet the requirements of the standard EN374.

The selection of suitable gloves does not only depend on the material, but also on the brand and quality resulting from differences in manufacturers. Resistance of the material, the glove can be determined after the tests. The exact time of the destruction of the protective gloves must be determined by the manufacturer.

Other:

Wear protective clothing working - wash regularly.

Respiratory Protection:

Avoid inhalation of vapors.

Thermal hazards:

Not applicable.

Environmental exposure controls:

Prevent the spread in the environment and enter drains and watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

Appearance	Liquid	
Color	Red	
Odour	Characteristic	
Odour threshold	not determined	
рН	1,1	

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Melting point/freezing point	not determined	
Initial boiling point and boiling range	not determined	
Flash point	not determined	
Evaporation rate	not determined	
Flammability	not determined	
Lower flammability or explosive limits	not determined	
Upper flammability or explosive limits	not determined	
Vapour pressure	not determined	
Vapour density	not determined	
Density at 20°C	1,12 – 1,18g/cm ³	
Solubility(ies)	In water: completely soluble	
Partition coefficient: n-octanol/water	not determined	
Self-ignition temperature	not self-igniting	
Decomposition temperature	not determined	
Viscosity;	not determined	
Explosive properties	not determined	
Oxidizing properties	not determined	

9.2 Other information:

None.

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability:

Stable under normal conditions of use, storage and transport.

10.3 Possibility of hazardous reactions

Exothermically reacts with alkalis.

10.4 Conditions to avoid:

Avoid direct sunlight, heat, open flames, hot surfaces.

10.5 Incompatible materials:

Strong bases, strong oxidizing agents, light metals.

10.6 Hazardous decomposition products:

Thermal decomposition products: carbon monoxide, nitrogen oxides, hydrogen chloride.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

(a) acute toxicity: none

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2-(2-butoxyethoxy)ethanol; LD50 (oral, rat): 6560mg/kg LD50 (dermal, rabbit): 4120mg/kg Alcohols, C9-11, ethoxylated LD50 (oral, rat): 200 - 2000mg/kg

(b) skin corrosion/irritation: Causes skin irritation.

(c) serious eye damage/irritation: Causes serious eye damage.

(d) respiratory or skin sensitization: none

(e) germ cell mutagenicity: none

(f) carcinogenicity: none

(g) reproductive toxicity: none

(h) STOT-single exposure: May cause respiratory irritation.

(i) STOT-repeated exposure: none

(i) aspiration hazard: none

Information on likely routes of exposure:

Skin contact: Causes skin irritation.

Eye contact: Causes serious eye damage.

Respiratory: May cause respiratory irritation, cough, shortness of breath, difficulty breathing.

Gastrointestinal tract: Ingestion may cause irritation of the mucous membranes of mouth, gastrointestinal tract, abdominal pain, stomach cramps, nausea, vomiting, diarrhea, headaches and dizziness - symptoms of food poisoning

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Not applicable

Interactive effects:

Not applicable

SECTION 12: Ecological information

12.1 Toxicity:

Alcohols, C9-11, ethoxylated

LC50 >1-<= 10 mg/l. (ISO 7346/2 semi-static)

Bacteria: EC0 >100mg/l. (DIN 38412, Part 27 (ROBRA Test, OECD 209)

12.2 Persistence and degradability:

The surfactant(s) used in this preparation comply(ies) with the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents.

Alcohols, C9-11, ethoxylated

The primary degradation: Biodegrade at least 90%.

The ultimate biodegradation:

Very quickly and easily degrades: the tests made easy degradation, all substances in the product received value >60% BSB/CSB or the formation of CO2, or a >70% reduction in DOC.

It consists in the maximum values set for the term "easy biodegradation" (meth. OECD 301).

2-(2-butoxyethoxy)ethanol;

The product readily biodegradable. BOD 28 = 92% of ThOD

12.3 Bioaccumulative potential

2-(2-butoxyethoxy)ethanol;

Do not assume bioaccumulation potential of the product. Provided bioconcentration factor = 4

12.4 Mobility in soil:

No information available.

12.5 Results of PBT and vPvB assessment:

No information available.

12.6 Other adverse effects:

No information available.



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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal of waste should be addressed by specialized companies, the manner of waste disposal to be agreed with the competent department of environmental terrain. The residue was stored in their original containers. Dispose of in accordance with applicable regulations.

Empty containers should be disposed of in accordance with applicable regulations or to provide to the appropriate landfill.

EU REGULATIONS

Directive 75/442/EEC on waste, Council Directive 91/689/EEC of 12 December 1991 on hazardous waste, Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste

SECTION 14: Transport information

ADR/RID/IMDG/IATA:

14.1 UN number: Not applicable

14.2 UN proper shipping name: Not applicable

14.3 Transport hazard class(es): Not applicable

14.4 Packing group: Not applicable

14.5 Environmental hazards: Not applicable

14.6 Special precautions for user: Not applicable

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

SECTION 15: Regulatory information

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

EU REGULATIONS:

- 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.
- 2. 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)
- 3. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance).
- 4. Commission Directive 2006/8/EC of 23 January 2006 amending, for the purposes of their adaptation to technical progress, Annexes II, III and V to Directive 1999/45/EC of the European Parliament and of the Council concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations (Text with EEA relevance).

15.2 Chemical safety assessment: No chemical safety assessments for the mixture.

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SECTION 16: Other information

Abbreviations and acronyms, list of hazard statements used in the safety data sheet:

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

H335 - May cause respiratory irritation.

H412 – Harmful to aquatic life with long lasting effects

Acute Tox.4 - Acute toxicity cat. 4

Skin Corr. 1B - Skin corrosion cat. 1B

Skin Irrit.2 – Skin irritation cat. 2

Eye Dam.1 – Serious eye damage cat. 1

Eye Irrit.2 - Eye irritation cat. 2

STOT SE 3 – Specific target organ toxicity — single exposure cat. 3 **Aquatic Chronic 3** – Hazardous to the aquatic environment cat. 3

LC50 – Lethal concentration, 50 percent

LD50 - Lethal dose, 50 percent

EC0 – Median effective concentration

PBT – Persistent, Bioaccumulative and Toxic

vPvB - very Persistent and very Bioaccumulative

ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road

RID - Regulation Concerning the International Transport of Dangerous Goods by Rail

IMDG – International Maritime Code for Dangerous Goods

IATA – International Air Transport Association

Training:

This product can be used by workers who have been thoroughly trained in the method of use of this product, they have been informed about the hazardous properties of the product and of the conditions of safe use of this product.

Method of classification: calculation method

RESOURCES

Annex to Regulation (EU) 2015/830. Current legislation (Section 15).

Information Agency for Chemical Substances.

The information contained herein should be considered only as an aid for the safe use of **DG Descaler L**. Since the conditions of storage, transport and use are beyond our control, can not constitute a guarantee in the legal sense. In any case, you must observe the laws and any third party rights. The document does not estimate the risks in the workplace. Product should not be used for purposes other than those specified in Section 1 without first consulting with **Duo Ghibli.**

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