Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	:	Topmatic Promagic
UFI	:	AFRK-KAP4-Y00M-FH52
Product code	:	109849E
Use of the Substance/Mixture	:	Machine Warewashing Detergent
Substance type:	:	Mixture
		For professional users only.
Product dilution information	:	No dilution information provided.

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

Identified uses	:	Dishwash and rinse aid product; Automatic process
Recommended restrictions on use	:	Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company	:	Ecolab a.s Innspurten 9 Postboks 6440-Etterstad, N-0605 Oslo Norway +47 22 68 18 00 NO-kundeservice@ecolab.com

1.4 Emergency telephone number

Emergency telephone number	:	+4785295496 +32-(0)3-575-5555 Trans-European
Poison Information Centre telephone number	:	+47 22 59 13 00

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Version : 1.0

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin corrosion, Category 1	H314
Serious eye damage, Category 1	H318
Chronic aquatic toxicity, Category 3	H412

The classification of this product is based only on its extreme pH value (in accordance with current European legislation).

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

Hazard Statements :
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH031 Contact with acids liberates toxic gas.

Precautionary Statements :

Prevention:

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

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.

P310 Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:
silicic acid (h2sio3), dipotassium salt
disodium metasilicate
sodium hypochlorite

2.3 Other hazards

Mixing this product with acid or ammonia releases chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification REGULATION (EC) No 1272/2008	Concentration : [%]
silicic acid (h2sio3), dipotassium salt	10006-28-7 233-001-1 EXEMPTED	Acute toxicity Category 4; H302 Skin corrosion Category 1B; H314 Serious eye damage Category 1; H318	>= 3 - < 5
disodium metasilicate	6834-92-0 229-912-9 01-2119449811-37	Skin corrosion Category 1B; H314 Specific target organ toxicity - single exposure Category 3; H335	>= 1 - < 2.5
sodium hypochlorite	7681-52-9	Nota B Skin corrosion Sub-category 1B;	>= 1 - < 2.5

	231-668-3 01-2119488154-34	H314 Serious eye damage Category 1; H318 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 1; H410 Serious eye damage/eye irritation Category 1 10 - 100 % Serious eye damage/eye irritation Category 2A 5 - < 10 % Skin corrosion/irritation Category 1B 10 - 100 % Skin corrosion/irritation Category 2 5 - < 10 % EUH031 5 - 100 % M = 10 M(Chronic) = 1	

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If conscious, give 2 glasses of water. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during : Exposure to decomposition products may be a hazard to health.

firefighting

Hazardous combustion products	:	Depending on combustion properties, decomposition products may include following materials: Not applicable.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Advice for emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions	:	Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	:	Do not ingest. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not breathe spray, vapour. Mixing this product with acid or ammonia releases chlorine gas. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear

full Personal Protective Equipment (PPE).

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Do not store near acids. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : 0 °C to 35 °C

7.3 Specific end uses

Specific use(s) : Dishwash and rinse aid product; Automatic process

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
chlorine	7782-50-5	TWA	0.5 ppm 1.5 mg/m3	FOR-2011-12-06-1358
		T	1 ppm 3 mg/m3	FOR-2011-12-06-1358
		STEL	0.5 ppm 1.5 mg/m3	2006/15/EC
Further information		Indicative		

Contains no substances with occupational exposure limit values.

DNEL

disodium metasilicate	:	End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 1.49 mg/kg End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 6.22 mg/m3

PNEC

disodium metasilicate	:	Fresh water Value: 7.5 mg/l Marine water Value: 1 mg/l Intermittent use/release Value: 7.5 mg/l

		Sewage treatment plant Value: 1000 mg/l

8.2 Exposure controls

Appropriate engineering controls

Engineering measures	:	Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Individual protection measures

Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.
Eye/face protection (EN 166)	:	Safety goggles Face-shield
Hand protection (EN 374)	:	Recommended preventive skin protection Gloves Nitrile rubber butyl-rubber Breakthrough time: 1 – 4 hours Minimum thickness for butyl-rubber 0.7 mm for nitrile rubber 0.4 mm or equivalent (please refer to the gloves manufacturer/distributor for advise). Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin and body protection (EN 14605)	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing including appropriate safety shoes
Respiratory protection (EN 143, 14387)	:	None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, (EU) 2016/425), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.

Environmental exposure controls

General advice	:	Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	light yellow
Odour	:	Chlorine

pH	:	12.5 - 14.0, 100 %
Particle characteristics		
Assessment	:	not applicable
Particle size	:	not applicable
Particle Size Distribution	:	not applicable
Dustiness	:	not applicable
Specific surface area	:	not applicable
Surface charge/Zeta potential	:	not applicable
Shape	:	not applicable
Crystallinity	:	not applicable
Surface treatment /Coatings	:	not applicable
Flash point	:	Not applicable.
Odour Threshold	:	Not applicable and/or not determined for the mixture
Melting point/freezing point	:	Not applicable and/or not determined for the mixture
Boiling point, initial boiling point and boiling range	:	Not applicable and/or not determined for the mixture
Evaporation rate	:	Not applicable and/or not determined for the mixture
Flammability	:	Not applicable and/or not determined for the mixture
Upper explosion limit	:	Not applicable and/or not determined for the mixture
Lower explosion limit	:	Not applicable and/or not determined for the mixture
Vapour pressure	:	Not applicable and/or not determined for the mixture
Relative vapour density	:	Not applicable and/or not determined for the mixture
Density and / or relative density	:	1.32 - 1.42
Water solubility	:	soluble
Solubility in other solvents	:	Not applicable and/or not determined for the mixture
Partition coefficient: n-octanol/water (log value)	:	Not applicable and/or not determined for the mixture
Auto-ignition temperature	:	Not applicable and/or not determined for the mixture
Thermal decomposition	:	Not applicable and/or not determined for the mixture
Viscosity, kinematic	:	Not applicable and/or not determined for the mixture
Explosive properties	:	Not applicable and/or not determined for the mixture
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Not applicable and/or not determined for the mixture

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Mixing this product with acid or ammonia releases chlorine gas.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Acids

10.6 Hazardous decomposition products

Depending on combustion properties, decomposition products may include following materials:
Not applicable.

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Product

Acute oral toxicity	:	Acute toxicity estimate : > 2,000 mg/kg
Acute inhalation toxicity	:	There is no data available for this product.
Acute dermal toxicity	:	There is no data available for this product.
Skin corrosion/irritation	:	There is no data available for this product.
Serious eye damage/eye irritation	:	There is no data available for this product.
Respiratory or skin sensitization	:	There is no data available for this product.
Carcinogenicity	:	There is no data available for this product.
Reproductive effects	:	There is no data available for this product.
Germ cell mutagenicity	:	There is no data available for this product.
Teratogenicity	:	There is no data available for this product.
STOT - single exposure	:	There is no data available for this product.
STOT - repeated exposure	:	There is no data available for this product.

Aspiration toxicity : There is no data available for this product.

Components

Acute oral toxicity : silicic acid (h2sio3), dipotassium salt LD50 rat: 1,152 mg/kg

disodium metasilicate LD50 rat: 500 mg/kg

sodium hypochlorite LD50 rat: 5,230 mg/kg

Components

Acute dermal toxicity : silicic acid (h2sio3), dipotassium salt LD50 rat: > 5,000 mg/kg

sodium hypochlorite LD50 rabbit: > 10,000 mg/kg

Potential Health Effects

Eyes : Causes serious eye damage.

Skin : Causes severe skin burns.

Ingestion : Causes digestive tract burns.

Inhalation : May cause nose, throat, and lung irritation.

Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact : Redness, Pain, Corrosion

Skin contact : Redness, Pain, Corrosion

Ingestion : Corrosion, Abdominal pain

Inhalation : Respiratory irritation, Cough

11.2 Information on other hazards

Further information : no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Environmental Effects : Harmful to aquatic life with long lasting effects.

Product

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Components

Toxicity to fish : silicic acid (h2sio3), dipotassium salt
96 h LC50: 210 mg/l

disodium metasilicate
96 h LC50 Fish: 210 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : sodium hypochlorite
48 h EC50 Aquatic Invertebrate: 0.071 mg/l

12.2 Persistence and degradability

Product

no data available

Components

Biodegradability : silicic acid (h2sio3), dipotassium salt
Result: Not applicable - inorganic

disodium metasilicate
Result: Not applicable - inorganic

sodium hypochlorite
Result: Not applicable - inorganic

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

12.7 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product	:	Do not contaminate storm water drains, natural waterways or soil with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.
Guidance for Waste Code selection	:	Inorganic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number or ID number	:	Not dangerous goods
14.2 UN proper shipping name	:	Not dangerous goods
14.3 Transport hazard class(es)	:	Not dangerous goods
14.4 Packing group	:	Not dangerous goods
14.5 Environmental hazards	:	Not dangerous goods
14.6 Special precautions for user	:	Not dangerous goods

Air transport (IATA)

14.1 UN number or ID number	:	Not dangerous goods
14.2 UN proper shipping name	:	Not dangerous goods
14.3 Transport hazard class(es)	:	Not dangerous goods
14.4 Packing group	:	Not dangerous goods
14.5 Environmental hazards	:	Not dangerous goods
14.6 Special precautions for user	:	Not dangerous goods

Sea transport (IMDG/IMO)

14.1 UN number or ID number	:	Not dangerous goods
14.2 UN proper shipping name	:	Not dangerous goods
14.3 Transport hazard	:	Not dangerous goods

class(es)

14.4 Packing group	:	Not dangerous goods
14.5 Environmental hazards	:	Not dangerous goods
14.6 Special precautions for user	:	Not dangerous goods
14.7 Maritime transport in bulk according to IMO instruments	:	Not dangerous goods

Section: 15. REGULATORY INFORMATION

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

according to Detergents Regulation EC 648/2004	:	15 % or over but less than 30 %: Phosphates less than 5 %: Chlorine-based bleaching agents
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	:	Not applicable.
Candidate List of Substances of Very High Concern for Authorisation	:	Not applicable.

National Regulations

Take note of Dir 94/33/EC on the protection of young people at work.

Registration number	:	23311
Other regulations	:	Health and Safety at Work Act.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out on the product.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Skin corrosion 1, H314	Based on product data or assessment
Serious eye damage 1, H318	Based on product data or assessment
Chronic aquatic toxicity 3, H412	Calculation method

Full text of H-Statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Prepared by : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Annex: Exposure Scenarios

Exposure Scenario: Dishwash and rinse aid product; Automatic process

Life Cycle Stage	:	Widespread use by professional workers	
Product category	:	**PC35**	Washing and cleaning products (including solvent based products)

Contributing scenario controlling environmental exposure for:

Environmental release category	:	**ERC8a**	Wide dispersive indoor use of processing aids in open systems
Daily amount per site	:	7.5 kg	
Type of Sewage Treatment Plant	:	Municipal sewage treatment plant	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC8a**	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Exposure duration	:	60 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour	1
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC3**	Use in closed batch process (synthesis or formulation)
Exposure duration	:	480 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour	1
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	