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

1.1 Product identifier

Product name : Polish Cleaner

Product code : 103874E

Use of the : Metal polish

Substance/Mixture

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 : Stainless steel care. Spray and wipe manual process

Recommended restrictions

on use

: Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company : Ecolab Ltd.

PO Box 11; Winnington Avenue

Northwich, Cheshire, United Kingdom CW8 4DX

+ 44 (0)1606 74488 ccs@ecolab.com

1.4 Emergency telephone number

Emergency telephone : +441618841235

number +32-(0)3-575-5555 Trans-European

Poison Information Centre

telephone number

: Not Available

Date of Compilation/Revision : 09.01.2018

Version : 2.1

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1 H222
H229
Skin irritation, Category 2 H315
Eye irritation, Category 2 H319

2.2 Label elements

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Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms





Signal Word : Danger

Hazard Statements : H222 Extremely flammable aerosol.

H229 Pressurized container: May burst if heated.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**

P210 Keep away from heat, hot surfaces, sparks,

open flames and other ignition sources. No

smoking.

P211 Do not spray on an open flame or other ignition

source.

P251 Do not pierce or burn, even after use.
P280 Wear protective gloves/ eye protection/ face

protection.

Storage:

P410 + P412 Protect from sunlight. Do not expose to

temperatures exceeding 50 °C/ 122 °F.

2.3 Other hazards

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

| Chemical Name | CAS-No. EC-No. REACH No. | ClassificationREGULATION (EC) No 1272/2008 | Concentration: [%] |
|-----------------|---|--|--------------------|
| 2-butoxyethanol | 111-76-2 203-905-0 01-2119475108-36 | Acute toxicity Category 4; H302 Acute toxicity Category 4; H332 Acute toxicity Category 4; H312 Skin irritation Category 2; H315 Eye irritation Category 2; H319 | >= 30 - < 50 |
| propane | 74-98-6 200-827-9 01-2119486944-21 | Note U Flammable gases Category 1; H220 Gases under pressure | >= 10 - < 20 |

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.

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In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.

Use a mild soap if available. Get medical attention if irritation

develops and persists.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : 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

: High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

: Fire Hazard

Keep away from heat and sources of ignition. Flash back possible over considerable distance.

Extremely flammable aerosol.

Pressurized container: May burst if heated.

Hazardous combustion

products

: Decomposition products may include the following materials:

Carbon oxides

nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

5.3 Advice for firefighters

for firefighters

Special protective equipment : Use personal protective equipment.

Further information : Use water spray to cool unopened containers. 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

: Remove all sources of ignition. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in

sections 7 and 8.

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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 : Eliminate all ignition sources if safe to do so. Stop leak if safe to

do so

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 : Avoid contact with skin and eyes. Use only with adequate

ventilation. Keep away from fire, sparks and heated surfaces. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Contents under

pressure. Do not puncture. Wash hands thoroughly after handling.

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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage

areas and containers

: Keep away from heat and sources of ignition. Keep in a cool, well-ventilated place. Keep away from oxidizing agents. Keep out of

reach of children. Keep container tightly closed. Store in suitable

labeled containers.

Storage temperature : 0 °C to 40 °C

7.3 Specific end uses

Specific use(s) : Stainless steel care. Spray and wipe manual 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 |
|---------------------|----------|---|-------------------------------|--------------------|----------|
| 2-butoxyethanol | 111-76-2 | | TWA | 25 ppm | UKCOSSTD |
| Further information | Sk | Can be absorbed through skin. The assigned substances are those for which | | | |

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| | there are concerns that dermal absorption will lead to systemic toxicity. | | | | |
|---------------------|---|---|--|--|--|
| | | STEL 50 ppm UKCOSSTI | | | |
| Further information | Sk | Can be absorbed through skin. The assigned substances are those for which | | | |
| | | there are concerns that dermal absorption will lead to systemic toxicity. | | | |

Biological occupational exposure limits

| Substance name | CAS-No. | Control parameters | Sampling time | Basis |
|----------------|---------------------------|---|---------------|-------------|
| | Proprietary Ingredient | butoxyacetic acid: 240 Millimoles per mole Creatinine | After shift | GB EH40 BAT |
| | | (Urine) | | |

DNEL

| 2-butoxyethanol | : | End Use: Consumers | |
|-----------------|---|--|--|
| | | Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 3.2 ppm | |
| | | | |

PNEC

| FNEC | |
|-----------------|----------------------|
| 2-butoxyethanol | : Fresh water |
| | Value: 8.8 mg/l |
| | Marine water |
| | Value: 0.88 mg/l |
| | Water |
| | Value: 9.1 mg/l |
| | Fresh water sediment |
| | Value: 8.14 mg/kg |
| | Water |
| | Value: 463 mg/l |
| | Soil |
| | Value: 2.8 mg/kg |
| | Value: 20 mg/kg |
| | Other conditions |
| | |

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.

Eye/face protection (EN 166) : Safety glasses with side-shields

Hand protection (EN 374) : Recommended preventive skin protection

Gloves

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Nitrile rubber butyl-rubber

Breakthrough time: 1 – 4 hours

Minimum thickness for butyl-rubber 0.3 mm for nitrile rubber 0.2

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)

: No special protective equipment required.

Respiratory protection (EN

143, 14387)

: When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, 89/686/EEC), or equivalent, with filter type:AX

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

Appearance : Aerosol.

Colour : colourless

Odour : alcohol-like

pH : 6.0 - 7.0, 100 % Flash point : 76 °C closed cup

Odour Threshold : Not applicable and/or not determined for the mixture Melting point/freezing point : Not applicable and/or not determined for the mixture

Initial boiling point and

boiling range

: > 100 °C

Evaporation rate : Not applicable and/or not determined for the mixture Flammability (solid, gas) : 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 density : 0.807 - 0.847

Water solubility : partly soluble

Partition coefficient: n-

Solubility in other solvents

Relative vapour density

octanol/water

Not applicable and/or not determined for the mixtureNot applicable and/or not determined for the mixture

: Not applicable and/or not determined for the mixture

Auto-ignition temperature : Not applicable and/or not determined for the mixture

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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

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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

exposure

Product

Acute oral toxicity : Acute toxicity estimate : > 2,000 mg/kg

Acute inhalation toxicity : 4 h Acute toxicity estimate : > 20 mg/l

Test atmosphere: vapour

Acute dermal toxicity : Acute toxicity estimate : > 2,000 mg/kg

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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 : 2-butoxyethanol

LD50 rat: 1,500 mg/kg

Potential Health Effects

Eyes : Causes serious eye irritation.

Skin : Causes skin irritation.

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

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

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

Experience with human exposure

Eye contact : Redness, Pain, Irritation

Skin contact : Redness, Irritation

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

No symptoms known or expected.

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

Product

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Toxicity to fish : no data available

Toxicity to daphnia and other : no data available

aquatic invertebrates

Toxicity to algae : no data available

Components

Toxicity to fish : 2-butoxyethanol

96 h LC50: 1,474 mg/l

Components

Toxicity to daphnia and other : 2-butoxyethanol aquatic invertebrates : 2-butoxyethanol 48 h EC50: 690 mg/l

Components

Toxicity to algae : 2-butoxyethanol

72 h EC50: 911 mg/l

12.2 Persistence and degradability

Product

no data available

Components

Biodegradability : 2-butoxyethanol

Result: Readily biodegradable.

propane

Result: Readily biodegradable.

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 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.

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13.1 Waste treatment methods

Product : Where possible recycling is preferred to disposal or incineration. If

> recycling is not practicable, dispose of in compliance 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

: Organic 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 : 1950

14.2 UN proper shipping : AEROSOLS

name

14.3 Transport hazard : 2

class(es)

14.5 Environmental hazards : No 14.6 Special precautions for : None

user

Air transport (IATA)

14.1 UN number : 1950

14.2 UN proper shipping : Aerosols, flammable

name

14.3 Transport hazard : 2.1

class(es)

: No 14.5 Environmental hazards 14.6 Special precautions for : None

user

Sea transport (IMDG/IMO)

14.1 UN number : 1950

14.2 UN proper shipping : AEROSOLS

name

14.3 Transport hazard : 2.1

class(es)

: No 14.5 Environmental hazards

user

14.6 Special precautions for : None

14.7 Transport in bulk : Not applicable.

according to Annex II of MARPOL 73/78 and the IBC

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Code

Section: 15. REGULATORY INFORMATION

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

National Regulations

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

Other regulations : The Chemicals (Hazard Information and Packaging for Supply)

Regulations.

The Control of Substances Hazardous to Health Regulations.

Health and Safety at Work Act.

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

Section: 16. OTHER INFORMATION

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

| Classification | Justification |
|-------------------------|--------------------|
| Aerosols 1, H222 | Calculation method |
| Skin irritation 2, H315 | Calculation method |
| Eye irritation 2, H319 | Calculation method |

Full text of H-Statements

| Extremely flammable gas. |
|--------------------------------|
| Harmful if swallowed. |
| Harmful in contact with skin. |
| Causes skin irritation. |
| Causes serious eye irritation. |
| Harmful if inhaled. |
| |

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; AICS - Australian Inventory of Chemical Substances; 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;

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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; TCSI - Taiwan Chemical Substance 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: Stainless steel care. Spray and wipe manual process

Life Cycle Stage : Widespread use by professional workers

PC31 Polishes and wax blends Product category

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

: Municipal sewage treatment plant

Plant

Contributing scenario controlling worker exposure for:

Process category PROC10 Roller application or brushing

Exposure duration 480 min

Operational conditions and risk management measures

: Indoor

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Local Exhaust Ventilation is not required

General ventilation Ventilation rate per hour 1

Skin Protection : No

Respiratory Protection : No

Contributing scenario controlling worker exposure for:

Process category : PROC11 Non industrial spraying

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 : No

Respiratory Protection : No

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