ARPAX A1

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

1.1 Product identifier: **ARPAX A1**
Substance type: CLP Mixture

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

Use of the Substance/Mixture : CLEANER

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

COMPANY IDENTIFICATION
Ecolab Ltd.
PO Box 11; Winnington Avenue
Northwich, Cheshire,, CW8 4DX, United Kingdom
TEL: + 44 (0)1606 74488

LOCAL COMPANY IDENTIFICATION
Ecolab Ltd.
PO Box 11; Winnington Avenue
Northwich, Cheshire,, CW8 4DX, United Kingdom
TEL: + 44 (0)1606 74488

For Product Safety information please contact: msdseame@nalco.com

1.4 Emergency telephone number:

Emergency telephone number : Trans-European
+441618841235
+32-(0)3-575-5555 Trans-European Address European Economic Area HQ

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Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226
Skin irritation, Category 2	H315
Eye irritation, Category 2	H319
Specific target organ toxicity - single exposure, Category 3Central Nervous System	H336

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Warning

Hazard Statements :	H226	Flammable liquid and vapour.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.

Precautionary Statements : **Prevention:**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/ eye protection/ face protection.

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.	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
1-Butoxy-2-Propanol	5131-66-8 225-878-4 01-2119475527-28	Skin irritation Category 2; H315 Eye irritation Category 2; H319	30 - < 50
Diethanolamine	111-42-2 203-868-0 01-2119488930-28	** Acute toxicity Category 4; H302 Skin irritation Category 2; H315 Serious eye damage Category 1; H318 Specific target organ toxicity - repeated exposure Category 2; H373	0.1 - < 0.25
2-methoxypropanol	1589-47-5 216-455-5	*** Flammable liquids Category 3; H226 Skin irritation Category 2; H315 Serious eye damage Category 1; H318 Reproductive toxicity Category 1B; H360D Specific target organ toxicity - single exposure Category 3; H335	0.1 - < 0.25
Substances with a workplace exposure limit :			
1-Methoxy-2-Propanol	107-98-2 203-539-1 01-2119457435-35	Flammable liquids Category 3; H226 Specific target organ toxicity - single exposure Category 3; H336	30 - < 50

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

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

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.

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.

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

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.

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 : Foam
Carbon dioxide
Dry powder
Other extinguishing agent suitable for Class B fires
For large fires, use water spray or fog, thoroughly drenching the burning material.

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.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Hazardous combustion products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : 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 : Ensure adequate ventilation.
Remove all sources of ignition.

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 : Eliminate all ignition sources if safe to do so.
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 : Avoid contact with skin and eyes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from fire, sparks and heated surfaces. Do not breathe spray, vapour. Wash hands thoroughly after handling. Use only with adequate ventilation.

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 labelled containers.

Suitable material : Keep in properly labelled containers.

7.3 Specific end uses

Specific use(s) : CLEANER

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
1-Methoxy-2-Propanol	107-98-2	TWA	100 ppm 375 mg/m3	UKCOSSTD
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.		
		STEL	150 ppm 560 mg/m3	UKCOSSTD
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.		

DNEL

Diethanolamine	:	End Use: Workers Exposure routes: Dermal Potential health effects: long term - systemic 0.13 mg/kg
		End Use: Workers Exposure routes: Inhalation Potential health effects: long-term - local Value: 1 mg/m3
1-Methoxy-2-Propanol	:	End Use: Workers Exposure routes: Inhalation Potential health effects: short-term - local Value: 553.5 mg/m3
		End Use: Workers Exposure routes: Dermal Potential health effects: long term - systemic
		End Use: Workers Exposure routes: Inhalation Potential health effects: long term - systemic Value: 369 mg/m3

PNEC

Diethanolamine	:	Fresh water Value: 0.0022 mg/l
		Marine water Value: 0.00022 mg/l
		Intermittent release Value: 0.022 mg/l
		STP Value: 100 mg/l
		Sediment Value: 0.019 mg/kg
		Soil Value: 0.00108 mg/kg
1-Methoxy-2-Propanol	:	Fresh water Value: 10 mg/l
		Marine water Value: 1 mg/l

		Intermittent release Value: 100 mg/l
		STP Value: 100 mg/l
		Fresh water sediment Value: 52.3 mg/kg
		Marine sediment Value: 5.2 mg/kg
		Soil Value: 5.49 mg/kg

8.2 Exposure controls

Appropriate engineering controls

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
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) : Wear suitable protective clothing.

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, (EU) 2016/425), or equivalent, with filter type:A-P

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	:	liquid
Colour	:	Clear, blue
Odour	:	characteristic
Flash point	:	46 °C
pH	:	7 - 8, (20 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	0.90 - 0.95
Solubility(ies)		
Water solubility	:	soluble in cold water, soluble in hot water
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

9.2 Other information

no data available

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

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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

Toxicity

Product

Acute oral toxicity	: There is no data available for this product.
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 : 1-Butoxy-2-Propanol
LD50 rat: 2,500 mg/kg

Diethanolamine
LD50 rat: 755 mg/kg

1-Methoxy-2-Propanol
LD50 rat: > 5,000 mg/kg
LD50 rat: 4,016 mg/kg

Components

Acute inhalation toxicity : 1-Methoxy-2-Propanol
LC50 rat: 27.3 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Components

Acute dermal toxicity : 1-Butoxy-2-Propanol
LD50 rat: 2,193 mg/kg

Diethanolamine
LD50 rabbit: 8,180 mg/kg

1-Methoxy-2-Propanol
LD50 rabbit: > 13,000 mg/kgLD50 rat: > 2000

Potential Health Effects

Eyes : Causes serious eye irritation.

Skin : Causes skin irritation.

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

Inhalation : Inhalation may cause central nervous system effects.

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 : Dizziness, Drowsiness

Further information : no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Product

Environmental Effects : This product has no known ecotoxicological effects.

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 : 1-Methoxy-2-Propanol
96 h LC50 Fish: > 1,000 mg/l
96 h LC50 Rainbow Trout: >= 1,000 mg/l
Method: OECD 203

Components

Toxicity to daphnia and other aquatic invertebrates : 1-Butoxy-2-Propanol
48 h EC50: > 1,000 mg/l

Diethanolamine
48 h EC50 Daphnia: 65.5 mg/l

1-Methoxy-2-Propanol
48 h LC50 Daphnia magna: 21,100 - 25,900 mg/l
Method: Other guidelines

Components

Toxicity to algae : 1-Methoxy-2-Propanol
7 d EC50 Green Algae (Pseudokirchneriella subcapitata, previously Selenastrum capricornutum): > 1,000 mg/l
Method: Other guidelines

Components

Toxicity to bacteria : 1-Methoxy-2-Propanol
3 h IC50 Sewage Microorganisms: > 1,000 mg/l
Method: OECD 209

12.2 Persistence and degradability

Product

no data available

Components

Biodegradability : 1-Butoxy-2-Propanol
Result: Readily biodegradable.

Diethanolamine
Result: Readily biodegradable.

2-methoxypropanol
Result: no data available

1-Methoxy-2-Propanol
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.

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.
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:	UN 1993
14.2 UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (1-Methoxy-2-Propanol)

14.3 Transport hazard class(es): 3
14.4 Packing group: III
14.5 Environmental hazards: No
14.6 Special precautions for user: Not applicable.

Air transport (IATA)
14.1 UN number: UN 1993
14.2 UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (1-Methoxy-2-Propanol)
14.3 Transport hazard class(es): 3
14.4 Packing group: III
14.5 Environmental hazards: No
14.6 Special precautions for user: Not applicable.

Sea transport (IMDG/IMO)
14.1 UN number: UN 1993
14.2 UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (1-Methoxy-2-Propanol)
14.3 Transport hazard class(es): 3
14.4 Packing group: III
14.5 Environmental hazards: No
14.6 Special precautions for user: Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

Section: 15. REGULATORY INFORMATION

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

INTERNATIONAL CHEMICAL CONTROL LAWS

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
Flammable liquids 3, H226	Based on product data or assessment
Skin irritation 2, H315	Calculation method
Eye irritation 2, H319	Calculation method
Specific target organ toxicity - single exposure 3, H336	Calculation method

Full text of H-Statements

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360D	May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

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; 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

Sources of key data used to compile the Safety Data Sheet	:	IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer. The possible key literature references and data sources which may have been used in conjunction with the consideration of expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERIcards, Non European official regulatory data and other data sources.
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.