SAFETY DATA SHEET

ADIX Liquid

Issued on 06/01/2018 - Rel. #7 on 06/01/2018

#1/14

In conformity to Regulation (EU) 2015/830

SECTION 1. Identification of the substance/mixture and of the company/enterprise

1.1. Product identifier

Product name: ADIX Liquid

Product code: refer to sales department

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

Additive for alkaline detergents

Sectors of use:

Industrial Manufacturing[SU3], Public domain (administration, education, entertainment, services, craftsmen)[SU22] Product category:

Washing and Cleaning Products (including solvent based products)

Process categories:

Use in closed process, no likelihood of exposure[PROC1], Use in closed, continuous process with occasional controlled exposure[PROC2], Transfer of substance or preparation (charging/discharging) from/to ves- sels/large containers at non-dedicated facilities[PROC8A], Treatment of articles by dipping and pouring[PROC13]

Not recommended uses

Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

AEB SpA - Via Vittorio Arici 104 S.Polo - 25134 Brescia (BS) Italy

Tel. +39.030.2307.1 Fax +39.030.2307281

E-mail: info@aeb-group.com - Internet: www.aeb-group.com E-mail tecnico competente/technical dept.: sds@aeb-group.com

AEB USA 111 N Cluff Avenue Lodi CA 95240 (USA)

Tel: +1 2096258139 Fax: +1 2092248953

Email: info@aebusa.com - Internet: www.aeb-group.com

AEB AFRICA (PTY) LTD

18 Track Crescent, Cor. Station Road

Montague Gardens 7441 Cape Town (South Africa)

Tel.: +27 215512700 - Fax: +27 (0) 215511919

Email: info@aeb.co.za - Internet: www.aeb-group.com

AEB OCEANIA PTY LTD

113 Hanwood Avenue

Hanwood

NSW 2680 (Australia) Tel: +61 1300 704 971

Email: aeboceania@aeb-group.com - Internet: www.aeb-group.com

Produced by AEB SpA Via Vittorio Arici 104 S. Polo 25134 Brescia

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In conformity to Regulation (EU) 2015/830

1.4. Emergency telephone number

AEB SpA

Centralino/Switchboard: +39.030.2307.1 - (h 8.30-12.00 13.30-18.00 GMT +1; Lingua/Language: Italiano, English)

AEB BIOCHEMICAL USA

Switchboard: +1 2096258139 (GMT -8; Language: English)

AEB AFRICA (PTY) LTD

Switchboard: +27 215512700 (GMT +1; Language: English, Afrikaans)

AEB OCEANIA PTY LTD

Switchboard: +61 1300 704 971 (GMT +9; Language: English)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:

GHS05, GHS07, GHS09

Hazard Class and Category Code(s):

Skin Irrit. 2, Eye Dam. 1, Aquatic Acute 1

Hazard statement Code(s):

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H400 - Very toxic to aquatic life. (Acute toxicity M-factor = 1)

If brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema. If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

The product is dangerous for the environment as it is very toxic to aquatic organisms

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):

GHS05, GHS09 - Danger

Hazard statement Code(s):

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H400 - Very toxic to aquatic life. (Acute toxicity M-factor = 1)

Supplemental Hazard statement Code(s):

not applicable

Precautionary statements:

Prevention







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P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response

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.

P332+P313 - If skin irritation occurs: Get medical advice/attention.

Disposal

P501 - Dispose of contents/container to local/regional/national/international regulations

Contains:

Alkyl polyglucoside C8 - 10, AMINE ALKOXYLATE (POLYMER), Phosphonic polymer, TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE

Contains (Reg.EC 648/2004):

15% < 30% non-ionic surfactants, < 5% phosphonates, cationic surfactants

2.3. Other hazards

The substance / mixture does NOT contain substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII

The use of this chemical agent involves the obligation of "risk assessment" by the employer in accordance with the provisions of Dlgs n. 81. April 9, 2008. Workers exposed to this chemical agent should not be subject to health surveillance if the results of the risk assessment show that, depending on the type and quantity of dangerous chemical agent and method and frequency of exposure to the agent, there is only a "moderate Risk" for the health and safety of workers and that the measures laid down in the Decree are sufficient to reduce the risk.

For professional use only

SECTION 3. Composition/information on ingredients

3.1 Substances

Irrilevant

3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration	Classification	Index	CAS	EINECS	REACh
AMINE ALKOXYLATE (POLYMER)	> 10 <= 20%	Skin Irrit. 2, H315				
Phosphonic polymer	>= 3 <= 5%	Met. Corr. 1, H290; Eye Dam. 1, H318				
Trimethyl-3-[(1-oxo-10-undecenyl) amino]propylammonium methyl sulphate	> 1 <= 5%	Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Acute 1, H400 Acute toxicity M-factor = 10		94313-91-4	304-990-8	01-2120736 263-59-XXX X
Alkyl polyglucoside C8 - 10	> 1 <= 5%	Eye Dam. 1, H318		68515-73-1	500-220-1	01-2119488 530-36-XXX X

SECTION 4. First aid measures

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4.1. Description of first aid measures

Inhalation:

Ventilate the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area. If you feel unwell seek medical advice.

Direct contact with skin (of the pure product).:

Take off immediately contaminated clothing.

Wash immediately with plenty of running water and possibly with soap, the areas of the body that have, or are only suspected to have, come in contact with the product.

In case of contact with skin, wash immediately with water.

Direct contact with eyes (of the pure product).:

Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately

Do not use eye drops or ointments of any kind before the examination or advice from an oculist.

Ingestion:

Not hazardous. It's possible to give activated charcoal in water or medicinal mineral vaseline oil.

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

Contact with eyes may cause intense irritation, including redness and tearing. Contact with skin causes irritation and redness

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

If skin irritation occurs: Get medical advice/attention.

SECTION 5. Firefighting measures

5.1. Extinguishing media

Suggested extinguishing media:

Water spray, CO2, foam, dry chemical, depending on the materials involved in the fire.

Extinguishing media to avoid:

Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus

Safety helmet and full protective clothing.

The water spray can be used to protect the people involved in the extinction.

You may also use self-contained breathing apparatus, especially when working in confined and poorly ventilated areas and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)

Keep containers cool with water spray

SECTION 6. Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:

Leave the area surrounding the spill or release. Do not smoke Wear mask, gloves and protective clothing.

6.1.2 For emergency responders:

Eliminate all unguarded flames and possible sources of ignition. No smoking.

Privide a sufficient ventilation.

Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spills with earth or sand.

If the product has entered a watercourse, sewers or has contaminated soil or vegetation, notify the authorities.

Dispose of the waste material in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 Containment:

Rapidly recover the product, wear a mask and protective clothing

Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert materia or sucked it.

Prevent it from entering the sewer system.

6.3.2 Cleaning up:

After wiping up, wash with water the area and materials involved

6.3.3 Other information:

None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact and inhalation of vapors

Wear protective gloves/protective clothing/eye protection/face protection.

At work do not eat or drink.

See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabelled containers.

Keep containers upright and safe by avoiding the possibility of falls or collisions.

Store in a cool and dry place, away from heat sources and direct exposure to sunlight.

7.3. Specific end use(s)

Industrial Manufacturing:

Handle with extreme caution.

Store in a well ventilated place away from heat sources.

Public domain (administration, education, entertainment, services, craftsmen):

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Handle with care. Store in a ventilated area and away from heat, keep the container tightly closed.

See the annex exposure scenario.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

- Substance: Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate

DNEL

Systemic effects Long term Workers inhalation = 10,1 (mg/m3)

Systemic effects Long term Workers dermal = 2,9 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 2,5 (mg/m3)

Systemic effects Long term Consumers dermal = 1.4 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 1,43 (mg/kg bw/day)

PNEC

Sweet water = 0,00032 (mg/I)

Sea water = 0.000032 (mg/I)

STP = 3.2 (mg/l)

- Substance: Alkyl polyglucoside C8 - 10

DNEL

Systemic effects Long term Workers inhalation = 420 (mg/m3)

Systemic effects Long term Workers dermal = 595000 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 124 (mg/m3)

Systemic effects Long term Consumers dermal = 357000 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 35,7 (mg/kg bw/day)

PNEC

Sweet water = 0,176 (mg/I)

sediment Sweet water = 1516 (mg/kg/sediment)

Sea water = 0.0176 (mg/I)

sediment Sea water = 0,152 (mg/kg/sediment)

intermittent emissions = 0,27 (mg/l)

STP = 560 (mg/l)

8.2. Exposure controls









Appropriate engineering controls:

Industrial Manufacturing:

No specific monitoring foreseen (act according to good practice and specific rules for the type of risk associated)

Public domain (administration, education, entertainment, services, craftsmen):

No specific monitoring foreseen (act according to good practice and specific rules for the type of risk associated)

8.2.2 Individual protection measures:

(a) Eye / face protection

When handling the pure product use safety glasses (EN 166).

(b) Skin protection

(i) Hand protection

When handling the pure product use chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3)



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(ii) Other

When handling the pure product, wear full protective clothing (generic workwear / antacid, safety shoes S3-EN ISO 20345) or other protective equipment, according to the instructions of the RSPP

(c) Respiratory protection

Not needed for normal use.

During manual operations in case of insufficient ventilation, use mask with gas filters and organic vapors - Brown , Class 3 , B (EN 143) unless otherwise provided by the employer and / or assessments of environmental investigations hygienistic

(d) Thermal hazards No hazard to report

Environmental exposure controls:

Use according to good working practices and avoid to disperse the product into the environment.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Appearance	clear amber liquid	
Odour	not determined as considered not relevant for the characterization of the product	
Odour threshold	not determined as considered not relevant for the characterization of the product	
pH	7.0 ± 0.5 (1%, 20 ° C)	
Melting point/freezing point	not determined as considered not relevant for the characterization of the product	
Initial boiling point and boiling range	not determined as considered not relevant for the characterization of the product	
Flash point	not determined as considered not relevant for the characterization of the product	ASTM D92
Evaporation rate	not determined as considered not relevant for the characterization of the product	
Flammability (solid, gas)	not determined as considered not relevant for the characterization of the product	
Upper/lower flammability or explosive limits	not determined as considered not relevant for the characterization of the product	
Vapour pressure	not determined as considered not relevant for the characterization of the product	
Vapour density	not determined as considered not relevant for the characterization of the product	
Relative density	1.05 ± 0.05 (20 ° C)	
Solubility	in water	
Water solubility	miscible in all proportions	
Partition coefficient: n-octanol/water	not determined as considered not relevant for the characterization of the product	
Auto-ignition temperature	not determined as considered not relevant for the characterization of the product	
Decomposition temperature	not determined as considered not relevant for the characterization of the product	
Viscosity	not determined as considered not relevant for the characterization of the product	



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Physical and chemical properties	Value	Determination method
	not determined as considered not relevant for the characterization of the product	
J	not determined as considered not relevant for the characterization of the product	

9.2. Other information

No data available.

SECTION 10. Stability and reactivity

10.1. Reactivity

No reactivity hazards

10.2. Chemical stability

No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions

There are no hazardous reactions

10.4. Conditions to avoid

Nothing to report

10.5. Incompatible materials

Can generate flammable gases on contact with metals Inorganic Sulfides, nitrides, elementary, strong reducing agents. Can generate toxic gases in contact with inorganic sulfides, strong reducing agents.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

ATE(mix) oral = ∞ ATE(mix) dermal = ∞ ATE(mix) inhal = ∞

(a) acute toxicity: AMINE ALKOXYLATE (POLYMER): Practically non-toxic to a single ingestion.

Experimental/calculated data:

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LD50 rat (oral): > 5,000 mg/kg

Rat LD50 (dermal): not determined

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Inhalation: may cause irritation to the respiratory system

Ingestion: may be harmful if swallowed, avoid ingestion. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Alkyl polyglucoside C8 - 10: Practically non-toxic to individual skin contact and/or single ingestion

Oral rat LD50 value: > 2000 mg/kg

Dermal LC50 rat/rabbit value: > 2000

(b) skin corrosion/irritationIf brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema.

AMINE ALKOXYLATE (POLYMER): Non-corrosive

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Non-corrosive

Alkyl polyglucoside C8 - 10: Non-corrosive AMINE ALKOXYLATE (POLYMER): Irritating

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Irritating

Alkyl polyglucoside C8 - 10: Slightly irritating

(c) serious eye damage/irritation: If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

AMINE ALKOXYLATE (POLYMER): Non-corrosive

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Corrosive

Alkyl polyglucoside C8 - 10: Corrosive

AMINE ALKOXYLATE (POLYMER): Non-irritating

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Irritating

Alkyl polyglucoside C8 - 10: Irritiante

(d) respiratory or skin sensitization: AMINE ALKOXYLATE (POLYMER): Not available

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Non-sensitizing

Alkyl polyglucoside C8 - 10: Non-sensitizing

(e) germ cell mutagenicity: AMINE ALKOXYLATE (POLYMER): Non-mutagenic

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Non-mutagenic

Alkyl polyglucoside C8 - 10: Non-mutagenic

(f) carcinogenicity: AMINE ALKOXYLATE (POLYMER): Non-carcinogenic

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Non-carcinogenic

Alkyl polyglucoside C8 - 10: Non-carcinogenic

(g) reproductive toxicity: AMINE ALKOXYLATE (POLYMER): Non-toxic for reproduction

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Not available

Alkyl polyglucoside C8 - 10: Non-toxic for reproduction

(h) specific target organ toxicity (STOT) single exposure: AMINE ALKOXYLATE (POLYMER): Not available

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Not available

Alkyl polyglucoside C8 - 10: Not available

(i) specific target organ toxicity (STOT) repeated exposureAMINE ALKOXYLATE (POLYMER): Not available

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Not available

Alkyl polyglucoside C8 - 10: Not available

(j) aspiration hazard: AMINE ALKOXYLATE (POLYMER): Not available

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Not available

Alkyl polyglucoside C8 - 10: Not available

SECTION 12. Ecological information

12.1. Toxicity

Related to contained substances:

AMINE ALKOXYLATE (POLYMER):

Ittiotossicità:



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CL0 (48 h) 2,000 mg/l, Leuciscus idus

Aquatic invertebrates: LC50 (48 h), Daphnia

not determined

Aquatic plants:

EC50 (72 h), algae

not determined

Microorganisms/effects on activated sludge:

CE10 > 5,000 mg/l, activated sludge (DEV-L2)

Polimero fosfonico

**** Not translated ****

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate:

LC50 > 251 mg/l (Brachydanio rerio, 96 hrs)

EC50/96hr/48hr/24 HR: 136 mg/l (Daphnia magna, 48 hrs) 1.3 mg/l (Algae Pseud. subcapit., 72 hrs)

C(E)L50 (mg/l) = 136 Acute toxicity M-factor = 10

Alkyl polyglucoside C8 - 10:

Ittiotossicità:

LC50 > 100 mg/l (DIN EN ISO 7346-2)

Aquatic invertebrates:

EC50 > 100 mg/l (OECD-guideline 202, part 1)

Aquatic plants:

EC50 > 10-100 mg/l (Directive 88/302/EEC, part C, p 89)

Microorganisms/effects on activated sludge:

Ce0 > 100 mg/l (OECD-guideline 209)

Ce0 > 100 mg/l (DIN 38412 part 8)

Chronic toxicity on fish:

NOEC > 1-10 mg/l (OECD Guideline 204)

Chronic toxicity to aquatic invertebrates:

NOEC > 1-10 mg/l (OECD-guideline 202, part 2)

The product is dangerous for the environment as it is very toxic to aquatic organisms following acute exposure.

Use according to good working practices and avoid to disperse the product into the environment.

12.2. Persistence and degradability

Related to contained substances:

AMINE ALKOXYLATE (POLYMER):

Readily biodegradable

Polimero fosfonico

**** Not translated ****

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate:

Readily biodegradable

Alkyl polyglucoside C8 - 10:

Evaluation of biodegradability and delete (H2O):

Readily biodegradable (according to OECD criteria).

Disposal considerations:

(Annex III, part A) The surfactant (s) contained in this formulation is (are) subject (s) to the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents. All the supporting data shall be kept available to the competent authorities of the Member States and will be provided to the authorities at their request or at the request of a



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manufacturer of the formula.

12.3. Bioaccumulative potential

Related to contained substances: AMINE ALKOXYLATE (POLYMER): Not bioaccumulative

Polimero fosfonico
**** Not translated ****

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Not available

Alkyl polyglucoside C8 - 10:

Assessment of bioaccumulation potential:

You don't have to wait for a build up in organisms.

12.4. Mobility in soil

============

Related to contained substances:

AMINE ALKOXYLATE (POLYMER):

Evaluation transport between environmental compartments:

Volatility: the substance does not evaporate into the atmosphere from the surface of the water.

Adsorption in soil: A soil absorption to the solid phase is possible

Polimero fosfonico
**** Not translated ****

Trimethyl-3-[(1-oxo-10-undecenyl)amino]propylammonium methyl sulphate: Not available

Alkyl polyglucoside C8 - 10:

Evaluation transport between environmental compartments:

The substance does not evaporate into the atmosphere from the surface of the water.

The soil solid phase absorption is possible.

12.5. Results of PBT and vPvB assessment

The substance / mixture does NOT contain substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII

12.6. Other adverse effects

No adverse effects

Regulation (EC) No 2006/907 - 2004/648

The (I) surfactant (s) content (s) in this preparation complies (comply) with (i) the biodegradability criteria as laid down in Regulation CE/648/2004 on detergents. All data are held at the disposal of the competent authorities of Member States and will be provided, at their direct request or at the request of a detergent manufacturer, to those authorities.



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13.1. Waste treatment methods

Do not reuse empty containers. Dispose of them in accordance with the regulations in force, Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.

Recover if possible. Send to authorized discharge plants or for incineration under controlled conditions. Operate according to local and National rules in force

SECTION 14. Transport information

14.1. UN number

ADR/RID/IMDG/ICAO-IATA: 3082



If subject to the following characteristics is ADR exempt: Combination packagings: per inner packaging 5 L per package 30 Kg Inner packaging placed in skrink-wrapped or stretch-wrapped trays: per inner packaging 5 L per package 20 Kg

14.2. UN proper shipping name

ADR/RID/IMDG: MATERIA PERICOLOSA PER L'AMBIENTE, LIQUIDA, N.A.S. ADR/RID/IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ICAO-IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO-IATA: Class: 9

ADR/RID/IMDG/ICAO-IATA: Label: 9+Ambiente

ADR: Tunnel restriction code: --

ADR/RID/IMDG/ICAO-IATA: Limited quantities: 5 L

IMDG - EmS: F-A, S-F

14.4. Packing group

ADR/RID/IMDG/ICAO-IATA: III

14.5. Environmental hazards

ADR/RID/ICAO-IATA: Product is environmentally hazardous

IMDG: Marine polluting agent: Yes

14.6. Special precautions for user

The transport must be carried out by authorized vehicles for the transport of dangerous goods in accordance with the requirements of the applicable Edition of the agreement A.D.R. and national provisions. The transport must be carried out in the original packaging and in packages that are made from materials resistant to content and not likely to generate with this dangerous reactions. The process of loading and unloading of dangerous goods have received adequate training on the risks presented by prepared and on possible procedures to be taken in the event of emergency situations

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14.7. Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Transport in bulk is not foreseen

SECTION 15. Regulatory information

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

Restrictions relating to the product or contained substances (All. XVII Reg. EC 1907/2006): not applicable Substances in Candidate List (art. 59 Reg. EC 1907/2006): the product does not contain SVHC Substances subject to authorisation (Ann. XIV Reg. CEC 1907/2006): the product does not contain SVHC Reg. EC 648/04: see 2.2

Reg. (EU) n. 1169/2011: see 2.2

Seveso category:

E1 - ENVIRONMENTAL HAZARDS

REGULATION (EU) No 1357/2014 - waste: HP4 - Irritant — skin irritation and eye damage HP14 - Ecotoxic

15.2. Chemical safety assessment

No chemical safety assessment was carried out by the supplier

SECTION 16. Other information

16.1. Other information

Description of hazard statements set out in paragraph 3

H315 = Causes skin irritation.

H290 = May be corrosive to metals.

H318 = Causes serious eye damage.

H400 = Very toxic to aquatic life.

Classification based on data of all mixture components

Main normative references:

Reg. (CE) n. 1907 del 18/12/06 REACH (Registration, Evaluation and Authorisation of CHemicals) et seq.

Reg. (CE) 1272/2008 CLP (Classification Labelling and Packaging) et seq.

Regulation (EC) n. 648 of 31/03/04 (on detergents) et seq.

Regulation (UE) n. 1169/2011 (on the provision of food information to consumers)

Directive 2012/18/EU (on the control of major-accident hazards involving dangerous substances) et seq.

Procedure used to classify under CLP mixture (Reg . EC 1272/2008):

Training required: This document must be submitted to the employer to determine the possible need for appropriate training for workers to ensure protection of human health and the environment.

n.a.: not applicable n.d.: not available

ADR: Accord europèen relative au transport International des merchandises dangereuses par route (European

Agreement concerning the International Carriage of Dangerous Goods by Road)



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Issued on 06/01/2018 - Rel. #7 on 06/01/2018

#14/14

In conformity to Regulation (EU) 2015/830

ATE: Acute Toxicity Estimat
BFC: BioconCentration Factor
BOD: Biochemical Oxigen Demand
CAS: Chemical Abstract Service number

CAP: Centre AntiPoison

CE/EC number EINECS (European Inventory of existing Commercial Substances) e ELINCS (European List of notified

Chemical Substances)

CL50/LC50: Lethal Concentration 50

DL50/LD50: Lethal Dose 50 COD: Chemical Oxygen Demand DNEL: Derived No Effect Level

EC50: half maximal Effective Concentration

ERC: Enviroment Release Classes

EU/UE: European Union

IATA: International Air Transport Association ICAO: International Civil Aviation Organization IMDG: International Maritime Dangerous Goods code

Kow: Octanol water partition coefficient NOEC: No Observed Effect Concentration OEL: Occupational Exposure Limit

PBT: Persistent Bioaccumulative and Toxic

PC: Product Categories

PNEC: Predicted No Effect Concentration

PROC: Process Categories

RID: Règlement concernent le transport International ferroviaire des merchandises dangereuses (Regulations concerning International rail transport of dangerous goods)

STOT: Target Organ Systemic Toxicity STOT (RE): Repeated Exposure

STOT (SE): Single Exposure STP: Sewage Treatment Plants

SU: Sector of Use

SVCH: Substance of Very High Concern

TLV: Threshold Limit Value

vPvB: Very Persistent Very Bioaccumulative

References and Sources:

- ECHA Registered Substances:
- https://echa.europa.eu/web/guest/information-on-chemicals/registered-substances
- SDS supplier
- GESTIS DNEL Database: http://www.dguv.de/ifa/gestis/gestis-dnel-datenbank/index-2.isp
- GESTIS International Limit Value: http://limitvalue.ifa.dguv.de

This msds was made in good faith by AEB technical Office on the basis of the information available at the date of the last revision. The person in charge must regularly inform the employees about the specific risks they encounter when using this substance/product. The information contained here relate only to the substance/the preparation indicated and may not apply if the product is used improperly or in combination with others. Nothing contained herein shall be construed as a guarantee, either express or implied. It is the responsibility of the user to ensure the opportunities and completeness of the information contained herein for their own particular use.

*** this tab annuls and replaces any previous edition. (IIXX)

Changes to the previous edition: labeling variation. Rev 6 not available.

SAFETY DATA SHEET

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In conformity to Regulation (EU) 2015/830

SECTION 1. Identification of the substance/mixture and of the company/enterprise

1.1. Product identifier

Product name: ADIX Liquid

Product code: refer to sales department

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

Additive for alkaline detergents

Sectors of use:

Industrial Manufacturing[SU3], Public domain (administration, education, entertainment, services, craftsmen)[SU22] Product category:

Washing and Cleaning Products (including solvent based products)

Process categories:

Use in closed process, no likelihood of exposure[PROC1], Use in closed, continuous process with occasional controlled exposure[PROC2], Transfer of substance or preparation (charging/discharging) from/to ves- sels/large containers at non-dedicated facilities[PROC8A], Treatment of articles by dipping and pouring[PROC13]

Not recommended uses

Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

AEB SpA - Via Vittorio Arici 104 S.Polo - 25134 Brescia (BS) Italy

Tel. +39.030.2307.1 Fax +39.030.2307281

E-mail: info@aeb-group.com - Internet: www.aeb-group.com E-mail tecnico competente/technical dept.: sds@aeb-group.com

AEB USA 111 N Cluff Avenue Lodi CA 95240 (USA)

Tel: +1 2096258139 Fax: +1 2092248953

Email: info@aebusa.com - Internet: www.aeb-group.com

AEB AFRICA (PTY) LTD

18 Track Crescent, Cor. Station Road Montague Gardens 7441

Cape Town (South Africa)

Tel.: +27 215512700 - Fax: +27 (0) 215511919

Email: info@aeb.co.za - Internet: www.aeb-group.com

AEB OCEANIA PTY LTD

113 Hanwood Avenue

Hanwood

NSW 2680 (Australia) Tel: +61 1300 704 971

Email: aeboceania@aeb-group.com - Internet: www.aeb-group.com

Produced by AEB SpA Via Vittorio Arici 104 S. Polo 25134 Brescia

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In conformity to Regulation (EU) 2015/830

1.4. Emergency telephone number

AEB SpA

Centralino/Switchboard: +39.030.2307.1 - (h 8.30-12.00 13.30-18.00 GMT +1; Lingua/Language: Italiano, English)

AEB BIOCHEMICAL USA

Switchboard: +1 2096258139 (GMT -8; Language: English)

AEB AFRICA (PTY) LTD

Switchboard: +27 215512700 (GMT +1; Language: English, Afrikaans)

AEB OCEANIA PTY LTD

Switchboard: +61 1300 704 971 (GMT +9; Language: English)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:

GHS05, GHS07, GHS09

Hazard Class and Category Code(s):

Skin Irrit. 2, Eye Dam. 1, Aquatic Acute 1

Hazard statement Code(s):

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H400 - Very toxic to aquatic life. (Acute toxicity M-factor = 1)

If brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema. If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

The product is dangerous for the environment as it is very toxic to aquatic organisms

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s): GHS05, GHS09 - Danger

Hazard statement Code(s):

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H400 - Very toxic to aquatic life. (Acute toxicity M-factor = 1)

Supplemental Hazard statement Code(s):

not applicable

Precautionary statements:

Prevention







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P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response

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.

P332+P313 - If skin irritation occurs: Get medical advice/attention.

Disposal

P501 - Dispose of contents/container to local/regional/national/international regulations

Contains:

Alkyl polyglucoside C8 - 10, AMINE ALKOXYLATE (POLYMER), Phosphonic polymer, TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE

Contains (Reg.EC 648/2004):

15% < 30% non-ionic surfactants, < 5% phosphonates, cationic surfactant

2.3. Other hazards

The substance / mixture does NOT contain substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII

The use of this chemical agent involves the obligation of "risk assessment" by the employer in accordance with the provisions of Dlgs n. 81. April 9, 2008. Workers exposed to this chemical agent should not be subject to health surveillance if the results of the risk assessment show that, depending on the type and quantity of dangerous chemical agent and method and frequency of exposure to the agent, there is only a "moderate Risk" for the health and safety of workers and that the measures laid down in the Decree are sufficient to reduce the risk.

For professional use only

SECTION 3. Composition/information on ingredients

3.1 Substances

Irrilevant

3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration	Classification	Index	CAS	EINECS	REACh
AMINE ALKOXYLATE (POLYMER)	> 10 <= 20%	Skin Irrit. 2, H315				
Phosphonic polymer	>= 3 <= 5%	Met. Corr. 1, H290; Eye Dam. 1, H318				
TRIMETHYL-3-C(1-OXO-10-UND ECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE	> 1 <= 5%	Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Acute 1, H400 Acute toxicity M-factor = 10		94313-91-4	304-990-8	
Alkyl polyglucoside C8 - 10	> 1 <= 5%	Eye Dam. 1, H318		68515-73-1	500-220-1	01-2119488 530-36-XXX X

SECTION 4. First aid measures

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In conformity to Regulation (EU) 2015/830

4.1. Description of first aid measures

Inhalation:

Ventilate the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area. If you feel unwell seek medical advice.

Direct contact with skin (of the pure product).:

Take off immediately contaminated clothing.

Wash immediately with plenty of running water and possibly with soap, the areas of the body that have, or are only suspected to have, come in contact with the product.

In case of contact with skin, wash immediately with water

Direct contact with eyes (of the pure product).:

Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately

Do not use eye drops or ointments of any kind before the examination or advice from an oculist.

Inaestion:

Not hazardous. It's possible to give activated charcoal in water or medicinal mineral vaseline oil.

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

Contact with eyes may cause intense irritation, including redness and tearing. Contact with skin causes irritation and redness

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

If skin irritation occurs: Get medical advice/attention.

SECTION 5. Firefighting measures

5.1. Extinguishing media

Suggested extinguishing media:

Water spray, CO2, foam, dry chemical, depending on the materials involved in the fire.

Extinguishing media to avoid:

Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus

Safety helmet and full protective clothing.

The water spray can be used to protect the people involved in the extinction.

You may also use self-contained breathing apparatus, especially when working in confined and poorly ventilated areas and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)

Keep containers cool with water spray

SECTION 6. Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:

Leave the area surrounding the spill or release. Do not smoke

Wear mask, gloves and protective clothing.

6.1.2 For emergency responders:

Eliminate all unguarded flames and possible sources of ignition. No smoking.

Privide a sufficient ventilation.

Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spills with earth or sand.

If the product has entered a watercourse, sewers or has contaminated soil or vegetation, notify the authorities.

Dispose of the waste material in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 Containment:

Rapidly recover the product, wear a mask and protective clothing

Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert materia or sucked it.

Prevent it from entering the sewer system.

6.3.2 Cleaning up:

After wiping up, wash with water the area and materials involved

6.3.3 Other information:

None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact and inhalation of vapors

Wear protective gloves/protective clothing/eye protection/face protection.

At work do not eat or drink.

See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabelled containers.

Keep containers upright and safe by avoiding the possibility of falls or collisions.

Store in a cool and dry place, away from heat sources and direct exposure to sunlight.

7.3. Specific end use(s)

Industrial Manufacturing:

Handle with extreme caution.

Store in a well ventilated place away from heat sources.

Public domain (administration, education, entertainment, services, craftsmen):



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Handle with care. Store in a ventilated area and away from heat, keep the container tightly closed.

See the annex exposure scenario.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

- Substance: TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE DNFL

Systemic effects Long term Workers inhalation = 10,1 (mg/m3)

Systemic effects Long term Workers dermal = 2,9 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 2,5 (mg/m3)

Systemic effects Long term Consumers dermal = 1,4 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 1,43 (mg/kg bw/day)

PNEC

Sweet water = 0,00032 (mg/l)

Sea water = 0,000032 (mg/l)

STP = 3.2 (mg/l)

- Substance: Alkyl polyglucoside C8 - 10

DNEL

Systemic effects Long term Workers inhalation = 420 (mg/m3)

Systemic effects Long term Workers dermal = 595000 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 124 (mg/m3)

Systemic effects Long term Consumers dermal = 357000 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 35,7 (mg/kg bw/day)

PNEC

Sweet water = 0,176 (mg/l)

sediment Sweet water = 1516 (mg/kg/sediment)

Sea water = 0.0176 (mg/I)

sediment Sea water = 0,152 (mg/kg/sediment)

intermittent emissions = 0,27 (mg/l)

STP = 560 (mg/l)

8.2. Exposure controls









Appropriate engineering controls:

Industrial Manufacturing:

No specific monitoring foreseen (act according to good practice and specific rules for the type of risk associated)

Public domain (administration, education, entertainment, services, craftsmen):

No specific monitoring foreseen (act according to good practice and specific rules for the type of risk associated)

8.2.2 Individual protection measures:

(a) Eye / face protection

When handling the pure product use safety glasses (EN 166).

- (b) Skin protection
- (i) Hand protection

When handling the pure product use chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3)



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(ii) Other

When handling the pure product, wear full protective clothing (generic workwear / antacid, safety shoes S3-EN ISO 20345) or other protective equipment, according to the instructions of the RSPP

(c) Respiratory protection

Not needed for normal use.

During manual operations in case of insufficient ventilation, use mask with gas filters and organic vapors - Brown , Class 3 , B (EN 143) unless otherwise provided by the employer and / or assessments of environmental investigations hygienistic

(d) Thermal hazards No hazard to report

Environmental exposure controls:

Use according to good working practices and avoid to disperse the product into the environment.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Appearance	clear amber liquid	
Odour	not determined as considered not relevant for the characterization of the product	
Odour threshold	not determined as considered not relevant for the characterization of the product	
рН	7.0 ± 0.5 (1%, 20 ° C)	
Melting point/freezing point	not determined as considered not relevant for the characterization of the product	
Initial boiling point and boiling range	not determined as considered not relevant for the characterization of the product	
Flash point	not determined as considered not relevant for the characterization of the product	ASTM D92
Evaporation rate	not determined as considered not relevant for the characterization of the product	
Flammability (solid, gas)	not determined as considered not relevant for the characterization of the product	
Upper/lower flammability or explosive limits	not determined as considered not relevant for the characterization of the product	
Vapour pressure	not determined as considered not relevant for the characterization of the product	
Vapour density	not determined as considered not relevant for the characterization of the product	
Relative density	1.05 ± 0.05 (20 ° C)	
Solubility	in water	
Water solubility	miscible in all proportions	
Partition coefficient: n-octanol/water	not determined as considered not relevant for the characterization of the product	
Auto-ignition temperature	not determined as considered not relevant for the characterization of the product	
Decomposition temperature	not determined as considered not relevant for the characterization of the product	
Viscosity	not determined as considered not relevant for the characterization of the product	



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Physical and chemical properties	Value	Determination method
1 1 1	not determined as considered not relevant for the characterization of the product	
]	not determined as considered not relevant for the characterization of the product	

9.2. Other information

No data available.

SECTION 10. Stability and reactivity

10.1. Reactivity

No reactivity hazards

10.2. Chemical stability

No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions

There are no hazardous reactions

10.4. Conditions to avoid

Nothing to report

10.5. Incompatible materials

Can generate flammable gases on contact with metals Inorganic Sulfides, nitrides, elementary, strong reducing agents. Can generate toxic gases in contact with inorganic sulfides, strong reducing agents.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

 $ATE(mix) oral = \infty$

ATE(mix) dermal = ∞

ATE(mix) inhal = ∞

(a) acute toxicity: AMINE ALKOXYLATE (POLYMER): Practically non-toxic to a single ingestion.

Experimental/calculated data: LD50 rat (oral): > 5,000 mg/kg

Rat LD50 (dermal): not determined

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TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Inhalation: may cause irritation to the respiratory system

Ingestion: may be harmful if swallowed, avoid ingestion. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Alkyl polyglucoside C8 - 10: Practically non-toxic to individual skin contact and/or single ingestion

Oral rat LD50 value: > 2000 mg/kg

Dermal LC50 rat/rabbit value: > 2000

(b) skin corrosion/irritationIf brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema.

AMINE ALKOXYLATE (POLYMER): Non-corrosive

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Non-corrosive

Alkyl polyglucoside C8 - 10: Non-corrosive

AMINE ALKOXYLATE (POLYMER): Irritating

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Irritating

Alkyl polyglucoside C8 - 10: Slightly irritating

(c) serious eye damage/irritation: If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

AMINE ALKOXYLATE (POLYMER): Non-corrosive

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Corrosive

Alkyl polyglucoside C8 - 10: Corrosive

AMINE ALKOXYLATE (POLYMER): Non-irritating

TRIMETHYL-3-C(1-OXO-10-UNDÉCENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Irritating Alkyl polyglucoside C8 - 10: Irritiante

(d) respiratory or skin sensitization: AMINE ALKOXYLATE (POLYMER): Not available

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Non-sensitizing Alkyl polyglucoside C8 - 10: Non-sensitizing

(e) germ cell mutagenicity: AMINE ALKOXYLATE (POLYMER): Non-mutagenic

TRÍMETHYL-3-C(1-OXO-10-UNDECENYL)AMINÒ PROPYLÁMMONIUM METHYL SULPHATE: Non-mutagenic Alkyl polyglucoside C8 - 10: Non-mutagenic

(f) carcinogenicity: AMINE ALKOXYLATE (POLYMER): Non-carcinogenic

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Non-carcinogenic Alkyl polyglucoside C8 - 10: Non-carcinogenic

(g) reproductive toxicity: AMINE ALKOXYLATE (POLYMER): Non-toxic for reproduction

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Not available Alkyl polyglucoside C8 - 10: Non-toxic for reproduction

(h) specific target organ toxicity (STOT) single exposure: AMINE ALKOXYLATE (POLYMER): Not available TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Not available Alkyl polyglucoside C8 - 10: Not available

(i) specific target organ toxicity (STOT) repeated exposureAMINE ALKOXYLATE (POLYMER): Not available TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Not available Alkyl polyglucoside C8 - 10: Not available

(j) aspiration hazard: AMINE ALKOXYLATE (POLYMER): Not available

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Not available Alkyl polyglucoside C8 - 10: Not available

SECTION 12. Ecological information

12.1. Toxicity

Related to contained substances: AMINE ALKOXYLATE (POLYMER): Ittiotossicità: CL0 (48 h) 2,000 mg/l, Leuciscus idus Aquatic invertebrates: LC50 (48 h), Daphnia



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not determined Aquatic plants: EC50 (72 h), algae not determined Microorganisms/effects on activated sludge: CE10 > 5,000 mg/l, activated sludge (DEV-L2)

Phosphonic polymer:

Acute toxicity - LC50 fish (mg / I / 96h):

Acute toxicity - crustaceans EC50 (mg/1/48h): n.d.

Acute toxicity ErC50 algae (mg / I / 72-96h): n.d.

Chronic toxicity - NOEC fish (mg / I): n.d.

Chronic toxicity - crustaceans NOEC (mg / I): n.d.

Chronic toxicity NOEC algal (mg / l): n.d.

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE:

LC50 > 251 mg/l (Brachydanio rerio, 96 hrs)

EC50/96hr/48hr/24 HR: 136 mg/l (Daphnia magna, 48 hrs) 1.3 mg/l (Algae Pseud. subcapit., 72 hrs)

C(E)L50 (mg/I) = 136 Acute toxicity M-factor = 10

Alkyl polyglucoside C8 - 10:

Ittiotossicità:

LC50 > 100 mg/l (DIN EN ISO 7346-2)

Aquatic invertebrates:

EC50 > 100 mg/l (OECD-guideline 202, part 1)

Aquatic plants:

EC50 > 10-100 mg/l (Directive 88/302/EEC, part C, p 89)

Microorganisms/effects on activated sludge:

Ce0 > 100 mg/l (OECD-guideline 209)

Ce0 > 100 mg/l (DIN 38412 part 8)

Chronic toxicity on fish:

NOEC > 1-10 mg/l (OECD Guideline 204)

Chronic toxicity to aquatic invertebrates:

NOEC > 1-10 mg/l (OECD-guideline 202, part 2)

The product is dangerous for the environment as it is very toxic to aquatic organisms following acute exposure.

Use according to good working practices and avoid to disperse the product into the environment.

12.2. Persistence and degradability

Related to contained substances: AMINE ALKOXYLATE (POLYMER): Readily biodegradable

Phosphonic polymer: 50% (OECD 302 B)

COD (Std. Method 5220 D): 480 mg / g

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE:

Alkyl polyglucoside C8 - 10:

Readily biodegradable

Evaluation of biodegradability and delete (H2O):

Readily biodegradable (according to OECD criteria).

Disposal considerations:



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(Annex III, part A) The surfactant (s) contained in this formulation is (are) subject (s) to the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents. All the supporting data shall be kept available to the competent authorities of the Member States and will be provided to the authorities at their request or at the request of a manufacturer of the formula.

12.3. Bioaccumulative potential

Related to contained substances: AMINE ALKOXYLATE (POLYMER): Not bioaccumulative

Phosphonic polymer:

not available

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Not available

Alkyl polyglucoside C8 - 10:

Assessment of bioaccumulation potential:

You don't have to wait for a build up in organisms.

12.4. Mobility in soil

Related to contained substances:

AMINE ALKOXYLATE (POLYMER):

Evaluation transport between environmental compartments:

Volatility: the substance does not evaporate into the atmosphere from the surface of the water.

Adsorption in soil: A soil absorption to the solid phase is possible

Phosphonic polymer:

not available

TRIMETHYL-3-C(1-OXO-10-UNDECENYL)AMINO PROPYLAMMONIUM METHYL SULPHATE: Not available

Alkyl polyglucoside C8 - 10:

Evaluation transport between environmental compartments:

The substance does not evaporate into the atmosphere from the surface of the water.

The soil solid phase absorption is possible.

12.5. Results of PBT and vPvB assessment

The substance / mixture does NOT contain substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII

12.6. Other adverse effects

No adverse effects

Regulation (EC) No 2006/907 - 2004/648

The (I) surfactant (s) content (s) in this preparation complies (comply) with (i) the biodegradability criteria as laid down



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in Regulation CE/648/2004 on detergents. All data are held at the disposal of the competent authorities of Member States and will be provided, at their direct request or at the request of a detergent manufacturer, to those authorities.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.

Recover if possible. Send to authorized discharge plants or for incineration under controlled conditions. Operate according to local and National rules in force

SECTION 14. Transport information

14.1. UN number

ADR/RID/IMDG/ICAO-IATA: 3082



If subject to the following characteristics is ADR exempt:

Combination packagings: per inner packaging 5 L per package 30 Kg

Inner packaging placed in skrink-wrapped or stretch-wrapped trays: per inner packaging 5 L per package 20 Kg

14.2. UN proper shipping name

ADR/RID/IMDG: MATERIA PERICOLOSA PER L'AMBIENTE, LIQUIDA, N.A.S. (bis(2-ethylhexyl) adipate in miscela) ADR/RID/IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis(2-ethylhexyl) adipate in mixture)

ICAO-IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis(2-ethylhexyl) adipate in mixture)

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO-IATA: Class: 9

ADR/RID/IMDG/ICAO-IATA: Label: 9+Ambiente

ADR: Tunnel restriction code: --

ADR/RID/IMDG/ICAO-IATA: Limited quantities: 5 L

IMDG - EmS : F-A, S-F

14.4. Packing group

ADR/RID/IMDG/ICAO-IATA: III

14.5. Environmental hazards

ADR/RID/ICAO-IATA: Product is environmentally hazardous IMDG: Marine polluting agent: Yes

14.6. Special precautions for user

The transport must be carried out by authorized vehicles for the transport of dangerous goods in accordance with the requirements of the applicable Edition of the agreement A.D.R. and national provisions. The transport must be carried out in the original packaging and in packages that are made from materials resistant to content and not likely to generate with this dangerous reactions. The process of loading and unloading of dangerous goods have received adequate training on the risks presented by prepared and on possible procedures to be taken in the event of emergency situations

SAFETY DATA SHEET

ADIX Liquid

Issued on 06/01/2018 - Rel. #7 on 06/01/2018

#13/14

In conformity to Regulation (EU) 2015/830

14.7. Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Transport in bulk is not foreseen

SECTION 15. Regulatory information

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

Restrictions relating to the product or contained substances (All. XVII Reg. EC 1907/2006): not applicable Substances in Candidate List (art. 59 Reg. EC 1907/2006): the product does not contain SVHC Substances subject to authorisation (Ann. XIV Reg. CEC 1907/2006): the product does not contain SVHC Reg. EC 648/04: see 2.2 Reg. (EU) n. 1169/2011: see 2.2

Seveso category:

E1 - ENVIRONMENTAL HAZARDS

REGULATION (EU) No 1357/2014 - waste: HP4 - Irritant — skin irritation and eye damage HP14 - Ecotoxic

15.2. Chemical safety assessment

No chemical safety assessment was carried out by the supplier

SECTION 16. Other information

16.1. Other information

Description of hazard statements set out in paragraph 3

H315 = Causes skin irritation.

H290 = May be corrosive to metals.

H318 = Causes serious eye damage.

H400 = Very toxic to aquatic life.

Classification based on data of all mixture components

Main normative references:

Reg. (CE) n. 1907 del 18/12/06 REACH (Registration, Evaluation and Authorisation of CHemicals) et seq.

Reg. (CE) 1272/2008 CLP (Classification Labelling and Packaging) et seq.

Regulation (EC) n. 648 of 31/03/04 (on detergents) et seq.

Regulation (UE) n. 1169/2011 (on the provision of food information to consumers)

Directive 2012/18/EU (on the control of major-accident hazards involving dangerous substances) et seq.

Procedure used to classify under CLP mixture (Reg. EC 1272/2008): calculation method

Training required: This document must be submitted to the employer to determine the possible need for appropriate training for workers to ensure protection of human health and the environment.

n.a.: not applicable

AEBIMPROVEMENT THROUGH BIOTECHNOLOGY

SAFETY DATA SHEET

ADIX Liquid

Issued on 06/01/2018 - Rel. #7 on 06/01/2018

#14/14

In conformity to Regulation (EU) 2015/830

n.d.: not available

ADR: Accord europèen relative au transport International des merchandises dangereuses par route (European

Agreement concerning the International Carriage of Dangerous Goods by Road)

ATE: Acute Toxicity Estimat
BFC: BioconCentration Factor
BOD: Biochemical Oxigen Demand
CAS: Chemical Abstract Service number

CAP: Centre AntiPoison

CE/EC number EINECS (European Inventory of existing Commercial Substances) e ELINCS (European List of notified

Chemical Substances)

CL50/LC50: Lethal Concentration 50

DL50/LD50: Lethal Dose 50 COD: Chemical Oxygen Demand DNEL: Derived No Effect Level

EC50: half maximal Effective Concentration

ERC: Enviroment Release Classes

EU/UE: European Union

IATA: International Air Transport Association ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods code

Kow: Octanol water partition coefficient NOEC: No Observed Effect Concentration OEL: Occupational Exposure Limit

PBT: Persistent Bioaccumulative and Toxic

PC: Product Categories

PNEC: Predicted No Effect Concentration

PROC: Process Categories

RID: Règlement concernent le transport International ferroviaire des merchandises dangereuses (Regulations

concerning International rail transport of dangerous goods)

STOT: Target Organ Systemic Toxicity STOT (RE): Repeated Exposure STOT (SE): Single Exposure STP: Sewage Treatment Plants

SU: Sector of Use

SVCH: Substance of Very High Concern

TLV: Threshold Limit Value

vPvB: Very Persistent Very Bioaccumulative

References and Sources:

- ECHA Registered Substances:
- https://echa.europa.eu/web/guest/information-on-chemicals/registered-substances
- SDS supplier
- GESTIS DNEL Database: http://www.dguv.de/ifa/gestis/gestis-dnel-datenbank/index-2.jsp
- GESTIS International Limit Value: http://limitvalue.ifa.dguv.de

This msds was made in good faith by AEB technical Office on the basis of the information available at the date of the last revision. The person in charge must regularly inform the employees about the specific risks they encounter when using this substance/product. The information contained here relate only to the substance/the preparation indicated and may not apply if the product is used improperly or in combination with others. Nothing contained herein shall be construed as a guarantee, either express or implied. It is the responsibility of the user to ensure the opportunities and completeness of the information contained herein for their own particular use.

*** this tab annuls and replaces any previous edition. (IIXX)

Changes to the previous edition: labeling variation. Rev 6 not available.



AISE GEIS.1.1.a.v1



Version: 1.0, May 2014

Using a professional product in a closed system

Operational conditions	
Maximum duration	480 minutes per day.
Process conditions	Process is carried out at room temperature.
	No LEV needed; good general ventilation at workplace is sufficient.

Risk management measures

Conditions and measures related to personal protection equipment

No PPE necessary.

(PPE), hygiene and health evaluation

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the SDS of the used product.

Enviromental measures

Prevent that the undiluted product reaches surface waters.

Properties of product composition

In Section 2 of the SDS of products and on the label the classification of the undiluted product is provided.

The classification of a product is based on the classified ingredients in the products. All ingredients contributing to the classification of the mixture are mentioned in Section 3 of the SDS.

Relevant limit values of the ingredients on which the exposure assessment is based, are stated in Section 8 of the SDS.

This product may contain sensitizing ingredients, that may cause an allegric reaction in certain people. Section 2 of the SDS states these ingredients, when applicable to the product.

Use descrip	tors
SU 22	Professional use
PC 35	Washing and cleaning product
PROC 1	Use in closed process, no likelihood of exposure
ERC 8a	Wide dispersive indoor use of processing aids in open systems
	If appropriate AISE SpERC 8a.1.a.v2 may apply: Wide dispersive use in "Down the drain" cleaning and maintenance products that are treated by a municipal STP.

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AEB ES.1.1.a.v1

Version: 1.0, May 2014

Using a professional product in a closed system

Operational conditions		
Maximum duration	480 minutes per day.	
Process conditions	Process is carried out at room temperature.	
	No LEV needed; good general ventilation at workplace is sufficient.	

Risk management measures

Conditions and measures related to personal protection equipment

No PPE necessary.

(PPE), hygiene and health evaluation

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the SDS of the used product.

Enviromental measures

Prevent that the undiluted product reaches surface waters.

Properties of product composition

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Use descri	ptors	
SU 3	Industrial uses	
PC 35	Washing and cleaning product	
PROC 1	Use in closed process, no likelihood of exposure	
ERC 8a	Wide dispersive indoor use of processing aids in open systems	
	If appropriate AISE SpERC 8a.1.a.v2 may apply: Wide dispersive use in "Down the drain" cleaning and maintenance products that are treated by a municipal STP.	

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AISE GEIS.2.1.a.v1



Version: 1.0, May 2014

Using a professional product in a semi closed system

Operational conditions	
Maximum duration	480 minutes per day.
Process conditions	Process is carried out at room temperature.
	No LEV needed; good general ventilation at workplace is sufficient.
Risk management measures	
Conditions and measures related to personal protection equipment	No PPE necessary.

(PPE), hygiene and health evaluation

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the SDS of the used product.

Enviromental measures

Prevent that the undiluted product reaches surface waters.

Properties of product composition

In Section 2 of the SDS of products and on the label the classification of the undiluted product is provided.

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Relevant limit values of the ingredients on which the exposure assessment is based, are stated in Section 8 of the SDS.

This product may contain sensitizing ingredients, that may cause an allegric reaction in certain people. Section 2 of the SDS states these ingredients, when applicable to the product.

Use descri	Use descriptors	
SU 22	Professional use	
PC 35	Washing and cleaning product	
PROC 2	Use in closed, continuous process with occasional controlled exposure	
ERC 8a	Wide dispersive indoor use of processing aids in open systems	
	If appropriate AISE SpERC 8a.1.a.v2 may apply: Wide dispersive use in "Down the drain" cleaning and maintenance products that are treated by a municipal STP.	

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AEB ES.2.1.a.v1

Version: 1.0, May 2014

Using a professional product in a semi closed system

Operational conditions	
Maximum duration	480 minutes per day.
Process conditions	Process is carried out at room temperature.
	No LEV needed; good general ventilation at workplace is sufficient.
Risk management measures	
Conditions and measures related to personal protection equipment	No PPE necessary.

(PPE), hygiene and health evaluation

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the SDS of the used product.

Enviromental measures

Prevent that the undiluted product reaches surface waters.

Properties of product composition

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SU 3	Industrial uses	
PC 35	Washing and cleaning product	
PROC 2	Use in closed, continuous process with occasional controlled exposure	
ERC 8a	Wide dispersive indoor use of processing aids in open systems	
	If appropriate AISE SpERC 8a.1.a.v2 may apply: Wide dispersive use in "Down the drain" cleaning and maintenance products that are treated by a municipal STP.	

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AISE GEIS.8a.1.a.v1

Version: 1.0, May 2014



Transfer of professional product to a container (bottle/bucket/machine)

Operational conditions	
Maximum duration	50 minutes per day.
Process conditions	Process is carried out at room temperature.
	In case of dilution, tap water at a maximum temperature of 45 degrees Celcius is used.
	No LEV needed; good general ventilation at workplace is sufficient.

Risk management measures	
Conditions and measures related to personal protection equipment	Use gloves and safety goggles. See Section 8 of the SDS of this product for specifications.
(PPE), hygiene and health evaluation	
	Training of the worker in relation to proper use and maintenance of the PPE must be ensured.

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the SDS of the used product.

Enviromental measures

Prevent that the undiluted product reaches surface waters.

Properties of product composition

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This product may contain sensitizing ingredients, that may cause an allegric reaction in certain people. Section 2 of the SDS states these ingredients, when applicable to the product.

Use descrip	Use descriptors	
SU 22	Professional use	
PC 35	Washing and cleaning product	
PROC 8a	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
ERC 8a	Wide dispersive indoor use of processing aids in open systems	
	If appropriate AISE SpERC 8a.1.a.v2 may apply: Wide dispersive use in "Down the drain" cleaning and maintenance products that are treated by a municipal STP.	

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AEB ES.8a.1.a.v1

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	No LEV needed; good general ventilation at workplace is sufficient.

Risk management measures	
	Use gloves and safety goggles. See Section 8 of the SDS of this product for specifications.
	Training of the worker in relation to proper use and maintenance of the PPE must be ensured.

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	8! 8 !
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the SDS of the used product.

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SU 3	Industrial uses	
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AISE GEIS.13.1.a.v1

Version: 1.0, May 2014



Treatment of articles by dipping or pouring with a professional products

Operational conditions	
Maximum duration	50 minutes per day.
Process conditions	Process is carried out at room temperature.
	In case of dilution, tap water at a maximum temperature of 45 degrees Celcius is used.
	No LEV needed; good general ventilation at workplace is sufficient.

Risk management measures	
Conditions and measures related to personal protection equipment (PPE), hygiene and health evaluation	Use gloves and safety goggles. See Section 8 of the SDS of this product for specifications.
	Training of the worker in relation to proper use and maintenance of the PPE must be ensured.

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet and use good occupational hygiene practices as specified in Section 7 of the SDS of the used product.

Enviromental measures

Prevent that the undiluted product reaches surface waters.

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Use descrip	Use descriptors	
SU 22	Professional use	
PC 35	Washing and cleaning product	
PROC 13	Treatment of articles by dipping and pouring	
ERC 8a	Wide dispersive indoor use of processing aids in open systems	
	If appropriate AISE SpERC 8a.1.a.v2 may apply: Wide dispersive use in "Down the drain" cleaning and maintenance products that are treated by a municipal STP.	

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Use descriptors		
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