AEB IMPROVEMENT THROUGH BIOTECHNOLOGY

SAFETY DATA SHEET

ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

#1/16

In conformity to Regulation (EU) 2020/878

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

1.1. Product identifier

Product name: ACID CIP

Product code: refer to sales department

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

Descaling acidic detergent

Sectors of use:

Industrial Manufacturing[SU3], Manufacture of food products[SU4]

Product category:

Washing and Cleaning Products (including solvent based products)

Process categories:

Use in batch and other process (syn- thesis) where opportunity for exposure arises[PROC4], Transfer of substance or mixture (charging and discharging) at dedicated facilities[PROC8B], 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. Stati

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 178A Wakaden Street Griffith NSW 2680

T: 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



ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

#2/16

In conformity to Regulation (EU) 2020/878

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 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

Hazard Class and Category Code(s):

Met. Corr. 1, Skin Corr. 1, Eye Dam. 1, Acute Tox. 4

Hazard statement Code(s):

H290 - May be corrosive to metals.

H314 - Causes severe skin burns and eye damage.

H318 - Causes serious eye damage.

H332 - Harmful if inhaled.

The product can be corrosive to metals

Harmful product: do not inhale

Corrosive product: causes severe skin burns and eye damage.

If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

2.2. Label elements

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

Pictogram, Signal Word Code(s): GHS05, GHS07 - Danger

T.



Hazard statement Code(s):

H290 - May be corrosive to metals.

H314 - Causes severe skin burns and eye damage.

H332 - Harmful if inhaled.

Supplemental Hazard statement Code(s):

EUH071 - Corrosive to the respiratory tract.

AEBIMPROVEMENT THROUGH BIOTECHNOLOGY

SAFETY DATA SHEET

ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

#3/16

In conformity to Regulation (EU) 2020/878

Precautionary statements:

Prevention

P260 - Do not breathe vapours/spray.

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

Response

P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Contains:

nitric acid, orthophosphoric acid

Contains (Reg.EC 648/2004): /

2.3. Other hazards

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

Do not ingest. Keep out of reach of children.

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[w/w]	Classification	Index	CAS	EINECS	REACh
Nitric acid (B)	>= 10 < 25%	EUH071; Ox. Liq. 2, H272; Met. Corr. 1, H290; Skin Corr. 1A, H314; Acute Tox. 3, H331 Limits: Skin Corr. 1A, H314 %C >=20; Skin Corr. 1B, H314 5<= %C <20; Ox. Liq. 2, H272 %C >=99; Ox. Liq. 3, H272 65<= %C <99; ATE(mix) inhal = 2,7mg/l/4 h	007-004-00-1	7697-37-2	231-714-2	01-2119487 297-23-XXX X
Orthophosphoric acid (B)	>= 3 < 5%	Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318 Limits: Skin Corr. 1B, H314 %C >=25; Skin Irrit. 2, H315 10<= %C <25; Eye Irrit. 2,	015-011-00-6	7664-38-2	231-633-2	01-2119485 924-24-XXX X



ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

#4/16

In conformity to Regulation (EU) 2020/878

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
		H319 10<= %C <25;				

SECTION 4. First aid measures

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 room, CALL A PHYSICIAN.

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

Take off immediately contaminated clothing.

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

Immediately consult a physician.

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:

Give medicine paraffine oil; do not give milk or animal / vegetal fats in general.

Drink water with egg white; do not give bicarbonate.

Absolutely do not induce vomiting or emesis. Seek medical advice immediately.

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

Ingestion can cause chemical burns in the mouth and throat. Contact with skin may cause burns. In contact with eyes it causes very strong irritation, including redness and tearing. Inhalation can cause respiratory failure of an asthmatic nature; irritation of the mucous membranes and the respiratory tract can cause nausea and difficulty in breathing.

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

Immediately call a POISON CENTER or a doctor.

Call a POISON CENTER or a doctor if you feel unwell.

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.

AEB

SAFETY DATA SHEET

ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

#5/16

In conformity to Regulation (EU) 2020/878

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.

Keep containers cool with water spray

SECTION 6. Accidental release measures

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 (for specifications refer to section 8.2. SDS) 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/clothing and eye/face protection.

In residential areas do not use on large surfaces.

At work do not eat or drink.

See also paragraph 8 below.



ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

#6/16

In conformity to Regulation (EU) 2020/878

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 and away from heat sources. (7-30 ° C)

Manufacture of food products:

Handle with Care. Store in a clean, dry and ventilated place, away from heat sources and direct sunlight. Keep the container tightly closed. (7-30 ° C)

See the annex exposure scenario.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Related to contained substances:

Nitric acid:

Limit value - Eight hours

(ppm)/(mg/m³)

Australia: 2/5.2 Austria: x/x Belgio: x/x

Canada – Ontario: 2/x Canada - Québec: 2/5.2

Denmark: 2/5 European Union: x/x Finland: 0.5/1.3 France: x/x

Germany (AGS): x/x

Hungary: x/x Ireland: x/x Italv: x/x

Japan – JSOH: 2/5.2 Latvia: 0.78/2

New Zealand: 2/5.2 Poland: x/1.4 Romania: x/x Singapore: 2/5.2 South Korea: 2/5

Spain: x/x Sweden: 0.5/1.3 Switzerland: 2/5 The Netherlands: x/x

Turkey: x/x

USA - NIOSH: 2/5 USA - OSHA: 2/5 United Kingdom: x/x

Slovakia: x/x

Limit value - Short term



ACID CIP

Issued on 09/17/2021 - Rel. #7 on 09/17/2021

#7/16

In conformity to Regulation (EU) 2020/878

(ppm)/(mg/m³)

Australia: 4/10 Austria: 1/2.6 Belgio: 1/2.6

Canada – Ontario: 4/x Canada - Québec: 4/10

Denmark: 4/10

European Union: 1/2.6 Finland: 1 (1)/2.6 (1)

France: 1/2.6

Germany (AGS):1 (1)/2.6 (1)

Hungary: x/2.6 Ireland: 1 (1)/2.6 (1)

Italy: 1/2.6

Japan – JSOH: x/x Latvia: 1 (1)/2.6 (1) New Zealand: 4/10 Poland: x/2.6

Romania: 1(1)/2,5(1) Singapore: 4/10 South Korea: 4/10

Spain: 1/2.6

Sweden: 1 (1)/2.6 (1) Switzerland: 2/5 The Netherlands: x/1.3 Turkey: 1 (1)/2.6 (1) USA - NIOSH: 4 (1)/10 (1) USA - OSHA: x/x United Kingdom: 1/2.6

Slovakia: 1/2.6 Remarks

European Union: Bold-type: Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational

Exposure [4] ~ (for references see bibliography)

Finland - Belgium - Germany (AGS)- Latvia - Sweden - Turkey - USA - NIOSH: : (1) 15 minutes average values

France: Italic type: Indicative statutory limit values

Ireland: (1) 15 minutes average period

Poland: nitric acid (V)

Tipo OEL: UE - STEL: 2.6 mg/m3, 1 ppm

Tipo OEL: ACGIH - TWA(8h): 2 ppm - STEL: 4 ppm - Note: URT and eye irr, dental erosion

Argentina: CMP 2 ppm - CMP/CP-CMC-C 4 ppm - PM 63,02 (irritation, corrosion, edema polmon)

Czech Republic: PEL 1 mg/m3 - NPK-P 2,5 mg/m3 - Poznámky: x - Prepocet: 0,382

Portugal: 8 horas x/x Curta duração: 2,6 mg/m3/ 1 ppm

Orthophosphoric acid:

Limit value – Eight hours

(ppm)/(mg/m3) Argentina x/1 Australia: x/1 Austria: x/1 Belgium: x/1

Belgium : x/1
Canada-Ontario: x/1
Canada-Quèbec: x/1
Czech rep.: x/1
Denmark: x/1

European Union: x/1



ACID CIP

Issued on 09/17/2021 - Rel. #7 on 09/17/2021

#8/16

In conformity to Regulation (EU) 2020/878

Finland: x/1 France: 0.2/1

Germany (AGS): x/2 inhalable aerosol Germany (DFG): x/2 inhalable aerosol

Hungary: x/1 Ireland: x/1 Italy: x/1

New Zealand: x/1

People's Republic of China: x/1

Poland: x/1
Portugal: x/1
Singapore: x/1
Slovakia: x/1
South Korea: x/1
Spain: x/1

Sweden: x/1 Switzerland: x/1 The Netherlands: x/1

Turkey: x/1

USA – NIOSH: x/1 USA – OSHA: x/1 United Kingdom: x/1

Limit value - Short Term

(ppm)/(mg/m3)
Argentina: x/3
Australia: x/x
Austria: x/2
Belgium: x/2
Canada-Ontario: x/3
Canada-Quèbec: x/3
Czech rep.: x/2

Denmark: x/2 European Union: x/2 Finland: x/2(1)

France: 0.5/2

Germany (AGS): x/4 inhalable aerosol Germany (DFG): x/4 inhalable aerosol

Hungary: x/2 Ireland: x/2(1) Italv: x/2

New Zealand:x/x

People's Republic of China: x/3(1)

Poland: x/2
Portugal: x/2
Singapore: x/x
Slovakia: x/2
South Korea: x/3
Spain: x/2
Sweden: x/3(1)
Switzerland: x/2
The Netherlands: x/2

Turkey:x/2(1)
USA – NIOSH: x/3(1)
USA – OSHA: x/x
United Kingdom: x/2

Remarks

European Union: Bold-type: Indicative Occupational Exposure Limit Values [2.3] and Limit Values for Occupational



ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

#9/16

In conformity to Regulation (EU) 2020/878

Exposure [4] ~ (for references see bibliography)

Finland: (1) 15 minutes average value

France: Italic type: Indicative satatutory limits value Germany (AGS): (1) 15 minutes average value Germany (DFG): STV 15 minutes value Ireland: (1) 15 minutes reference period

People's Republic of China: (1) 15 minutes average value Sweden: (1) Short-term value, 15 minutes average value

Turkey: (1) 15 minutes average value

USA - NIOSH: (1) 15 minutes average value

- Substance: Nitric acid

DNEL

Local effects Long term Workers inhalation = 1,3 (mg/m3) Local effects Long term Consumers inhalation = 0,65 (mg/m3) Local effects Short term Workers inhalation = 2,6 (mg/m3) Local effects Short term Consumers inhalation = 1,3 (mg/m3)

- Substance: Orthophosphoric acid

DNEL

Local effects Long term Workers inhalation = 1 (mg/m3) Local effects Long term Consumers inhalation = 0,73 (mg/m3) Local effects Short term Workers inhalation = 2 (mg/m3)

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)

Manufacture of food products:

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

Wear protective goggles (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)

(II) Other

During working operation wear protective clothing (generic workwear / antacid, safety shoes or other protective equipment) according to the instructions of the employer.

(c) Respiratory protection

In case of insufficient ventilation or emergency, use mask with gas filters and and inorganic vapors - Grey , Class 3 , B (EN 405) unless otherwise provided by the employer and / or assessments of environmental investigations hygienistic. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements (89/656/EEC, 245/2016 UE), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.



ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

10 / 16

In conformity to Regulation (EU) 2020/878

(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 liquid	
Colour	green	
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	<2,0 (20°C); <2,0 (20°C; sol.5%)	
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	
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	1,20 ± 0,05 (20°C)	
Solubility	in water	
Water solubility	soluble 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	
Explosive properties	not determined as considered not relevant for the characterization of the product	
Oxidising properties	not determined as considered not relevant for the characterization of the product	

AEB

SAFETY DATA SHEET

ACID CIP

Issued on 09/17/2021 - Rel. #7 on 09/17/2021

#11/16

In conformity to Regulation (EU) 2020/878

9.2. Other information

No data available.

SECTION 10. Stability and reactivity

10.1. Reactivity

No reactivity hazards

10.2. Chemical stability

Stable at room temperature and in normal conditions of use. Corrosive to cement. Non-corrosive towards stainless steel, antacid stoneware, glass.

10.3. Possibility of hazardous reactions

Reacts exothermically with water. Reacts vigorously with reducing agents, strong bases, organic materials and chlorides. Reaction with the most common metals can release oxygen.

10.4. Conditions to avoid

Direct heat sources and the provisions of 10.3

10.5. Incompatible materials

Organic substances, reacts with most chemicals. In contact with reducing substances (paper, rags, sawdust) it can cause ignition. In contact with some metals it forms nitrogen oxides NOx. The concentrated product must not be mixed with organic substances (milk, wine, beer, rubber, paper, etc.) as it can develop toxic gas.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11. Toxicological information

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

ATE(mix) oral = ∞ ATE(mix) dermal = ∞ ATE(mix) inhal = 10,9 mg/l/4 h



ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

In conformity to Regulation (EU) 2020/878

(a) acute toxicity: Harmful product: do not inhale Nitric acid: Ingestion - LD50 rat (mg / kg / 24h bw): nd Skin contact - LC50 rat / rabbit (mg / kg / 24h bw): nd

Inhalation - LD50 rat (mg / I / 4h):> 2.65

Orthophosphoric acid: Ingestion-rat LD50 (mg/kg/bw 12h): 2600

Skin contact-LC50 rat/coniglio (mg/kg/bw 12h): 2740

Inhalation-rat LD50 (mg/l/4h): n.a.

(b) skincorrosion/irritation: Corrosive product: causes severe skin burns and eye damage.

Nitric acid: Corrosive

Orthophosphoric acid: Corrosive

Nitric acid: Irritating

Orthophosphoric acid: Irritating

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

Nitric acid: Corrosive

Orthophosphoric acid: Corrosive

Nitric acid: irritating

Orthophosphoric acid: Irritating

(d) respiratoryorskinsensitisation: Nitric acid: Not available

Orthophosphoric acid: Not available

(e) germ cell mutagenicity: Nitric acid: Not mutagenic

Orthophosphoric acid: Non-mutagenic

(f) carcinogenicity: Nitric acid: Non-conclusive data

Orthophosphoric acid: Non-carcinogenic

(g) eproductivetoxicity: Nitric acid: Non-toxic for reproduction

Orthophosphoric acid: Non-toxic for reproduction

(h) specific target organ toxicity (STOT) single exposure: Nitric acid: Not available

Orthophosphoric acid: Not available

(i) specific target organ toxicity (STOT) repeated exposureNitric acid: Not available

Orthophosphoric acid: Not available

(j) aspiration hazard: Nitric acid: Not available

Orthophosphoric acid: Not available

11.2. Information on other hazards

No data available.

SECTION 12. Ecological information

12.1. Toxicity

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

Related to contained substances:

Nitric acid:

Acute toxicity - LC50 fish (mg / I / 96h): 4650

Acute toxicity - EC50 crustaceans (mg / I / 48h); Median lethal pH (48h) 4.4-4.7 for Ceriodaphnia dubia (US EPA quideline). This study shows that the pH rather than the anion (nitrate) is causing the toxic effects in daphnids. This is confirmed by two additional studies with sodium nitrate (24h EC50 8609 mg / L for Daphnia magna, similar to OECD TG 202) and potassium nitrate (48h EC50 490 mg / L for Daphnia magna, no guideline followed). The read-across rationale can be found in the category approach document in Section 13 of IUCLID and is fully incorporated in the CSR.

Acute toxicity ErC50 algae (mg / I / 72-96h): nd

C(E)L50 (mg/I) = 4650

Geowin SDS rel 10 - Use - Industrial

12 / 16

AEB

SAFETY DATA SHEET

ACID CIP

Issued on 09/17/2021 - Rel. #7 on 09/17/2021

13 / 16

In conformity to Regulation (EU) 2020/878

Orthophosphoric acid:

Endpoint: LC50-species: Fish = 75.1 mg/l-h Duration: 96

Endpoint: EC50-species: Daphnia magna > 100 mg/l-h Duration: 48

Endpoint: EC50-species: Algae > 100 mg/l-h Duration: 72

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

12.2. Persistence and degradability

Related to contained substances:

Nitric acid: Not available

Orthophosphoric acid: Not readily biodegradable

12.3. Bioaccumulative potential

Related to contained substances:

Nitric acid:

Not bioaccumilable

Orthophosphoric acid:

Not bioaccumulative

12.4. Mobility in soil

Related to contained substances:

Nitric acid:

Not available

Orthophosphoric acid:

Not available

12.5. Results of PBT and vPvB assessment

No PBT/vPvB ingredient is present

12.6. Endocrine disrupting properties

No data available.

12.7. 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



ACID CIP

Issued on 09/17/2021 - Rel. # 7 on 09/17/2021

14 / 16

In conformity to Regulation (EU) 2020/878

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. Operate according to local or national regulations

SECTION 14. Transport information

14.1. UN number or ID number

ADR/RID/IMDG/ICAO-IATA: 3264

If subject to the following characteristics is ADR exempt:

Combination packagings: per inner packaging 1 L per package 30 Kg

Inner packaging placed in skrink-wrapped or stretch-wrapped trays: per inner packaging 1 L per package 20 Kg



ADR/RID/IMDG: LIQUIDO INORGANICO CORROSIVO, ACIDO, N.A.S. (Acido nitrico e fosforico in miscela) ADR/RID/IMDG: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric and Orthophosphoric acid in mixture) ICAO-IATA: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric and Orthophosphoric acid in mixture)

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO-IATA: Class: 8 ADR/RID/IMDG/ICAO-IATA: Label: 8 ADR: Tunnel restriction code: E

ADR/RID/IMDG/ICAO-IATA: Limited quantities : 1 L

IMDG - EmS: F-A, S-B

14.4. Packing group

ADR/RID/IMDG/ICAO-IATA: II

14.5. Environmental hazards

ADR/RID/ICAO-IATA: Product is not environmentally hazardous

IMDG: Marine polluting agent: No

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

AEB

SAFETY DATA SHEET

ACID CIP

Issued on 09/17/2021 - Rel. #7 on 09/17/2021

15 / 16

In conformity to Regulation (EU) 2020/878

14.7. Maritime transport in bulk according to IMO instruments

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 Reg (UE) 528/2012: see.to 2.2

REGULATION (EU) No 1357/2014 - waste:

HP8 - Corrosive

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

H272 = May intensify fire; oxidiser.

H290 = May be corrosive to metals.

H314 = Causes severe skin burns and eye damage.

H331 = Toxic if inhaled.

H318 = Causes serious eye damage.

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.

Regulation (UE) 528/2012 (Biocides) et seq.

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

Physical hazards: On the basis of experimental data

H314 Skin. Corr. 1A: On the basis of experimental data / Calculation Method

Other hazards: 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

AEB IMPROVEMENT THROUGH BIOTECHNOLOGY

SAFETY DATA SHEET

ACID CIP

Issued on 09/17/2021 - Rel. #7 on 09/17/2021

16 / 16

In conformity to Regulation (EU) 2020/878

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: Environment 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: updating to reg.(UE) 878/2020

SUMI

Safe Use of Mixtures Information





AISE_SUMI_IS_4_2

Version 1.1, August 2018

Industrial uses; Automated task; Semi-automated task; Dedicated equipment

This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet and labels.

General description of the process covered

The SUMI applies to industrial uses where products are used in closed process where opportunity for exposure arises. This Safe Use Information is based on the AISE_SWED_IS_4_2.

Operational Conditions

Maximum duration	480 minutes per day.
Range of application /	Indoor Use.
Process conditions	Process carried out at room temperature.
	In case of dilution, tap water at a maximum temperature of 45°C is used.
Air exchange rate	Provide a basic standard of general ventilation (1 to 3 air changes per
	hour). No LEV required.

Risk Management Measures

Measures related to	Wear suitable gloves.
personal protective equipment (PPE), hygiene and health evaluation	See section 8 of the SDS of this product for specifications.
	Training of workers in relation to proper use and maintenance of PPEs must be ensured.
Environmental	Prevent that undiluted product reaches surface waters.
measures	If appropriate AISE SPERC 8a.1.a.v2 may apply: wide dispersive use
	resulting in release to municipal sewage treatment plant.

Additional good practice advice

Don't eat or drink. Don't smoke. Don't use in proximity of open flame.	
Wash hands after use. Avoid contact with damaged skin. Do not mix with other products.	
Spillage instructions	Dilute with fresh water and mop up.
Hygiene practices	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 product SDS.

Additional information depending on product composition

The label and (when required) the Safety Data Sheet contain additional, product specific information crucial for working safely with mixtures. Please refer to the product label and SDS for information including, but not limited to: product hazard classification, potentially allergenic fragrances, notable ingredients and threshold limit values (when available).

Disclaimer

This is a document for communicating generic conditions of safe use of a product. It is the responsibility of the formulator to link this SUMI to the SDS of a specific product that he is selling.

If a SUMI (or associated SWED) code is mentioned in the SDS of a product, the formulator of that product declares that all substances in the mixture are present in such concentration, that the use of the product within the conditions of the SUMI is safe. When available, this safe use is ensured by evaluating the results of the chemical safety assessments as performed by the raw material suppliers. When no chemical safety assessment has been carried out by the supplier for an ingredient that contributes to the classification of the mixture, the formulator has performed a safety assessment himself.

Following Occupational Health legislation, the employer of workers that use products that are assessed as safe following SUMI conditions remains responsible for communicating relevant use information to employees. When developing workplace instructions for employees, SUMI Sheets should always be considered in combination with the SDS and the label of the product.

This document is provided by A.I.S.E. for general information purposes only. The formulator uses the content of this document at its sole risk.

A.I.S.E. disclaims any liability to any person or entity for any loss, damage no matter of what kind (actual, consequential, punitive or otherwise), injury, claim, liability or other cause of any kind or character based upon or resulting from the use (even partly) of the content of this document.

SUMI

Safe Use of Mixtures Information





AISE_SUMI_IS_8b_1

Version 1.1, August 2018

Transfer and dilution of concentrated product by using dedicated dosing system

This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet and labels.

General description of the process covered

This SUMI applies to industrial uses where products are transferred to or diluted in a dedicated dosing system. This Safe Use Information is based on the AISE_SWED_IS_8b_1_L and AISE_SWED_IS_8b_1_S

Operational Conditions

Maximum duration	60 minutes per day.
Range of application /	Indoor Use.
Process conditions	Process carried out at room temperature.
	In case of dilution, tap water at a maximum temperature of 45°C is used.
Air exchange rate	Provide a basic standard of general ventilation (1 to 3 air changes per
	hour). No LEV required.

Risk Management Measures

Measures related to personal protective equipment (PPE), hygiene and health	Wear suitable gloves. See section 8 of the SDS of this product for specifications.
evaluation	Training of workers in relation to proper use and maintenance of PPEs must be ensured.
Environmental	Prevent that undiluted product reaches surface waters.
measures	If appropriate AISE SPERC 8a.1.a.v2 may apply : wide dispersive use resulting in release to municipal sewage treatment plant.

Additional good practice advice

Don't eat or drink. Don't smoke. Don't use in proximity of open flame.	
Wash hands after use. Avoid contact with damaged skin. Do not mix with other products.	
Spillage instructions	Dilute with fresh water and mop up.
Hygiene practices	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 product SDS.

Additional information depending on product composition

The label and (when required) the Safety Data Sheet contain additional, product specific information crucial for working safely with mixtures. Please refer to the product label and SDS for information including, but not limited to: product hazard classification, potentially allergenic fragrances, notable ingredients and threshold limit values (when available).

Disclaimer

This is a document for communicating generic conditions of safe use of a product. It is the responsibility of the formulator to link this SUMI to the SDS of a specific product that he is selling.

If a SUMI (or associated SWED) code is mentioned in the SDS of a product, the formulator of that product declares that all substances in the mixture are present in such concentration, that the use of the product within the conditions of the SUMI is safe. When available, this safe use is ensured by evaluating the results of the chemical safety assessments as performed by the raw material suppliers. When no chemical safety assessment has been carried out by the supplier for an ingredient that contributes to the classification of the mixture, the formulator has performed a safety assessment himself.

Following Occupational Health legislation, the employer of workers that use products that are assessed as safe following SUMI conditions remains responsible for communicating relevant use information to employees. When developing workplace instructions for employees, SUMI Sheets should always be considered in combination with the SDS and the label of the product.

This document is provided by A.I.S.E. for general information purposes only. The formulator uses the content of this document at its sole risk.

A.I.S.E. disclaims any liability to any person or entity for any loss, damage no matter of what kind (actual, consequential, punitive or otherwise), injury, claim, liability or other cause of any kind or character based upon or resulting from the use (even partly) of the content of this document.

SUMI

Safe Use of Mixtures Information





AISE_SUMI_IS_13_3_G

Version 1.1, August 2018

Industrial uses; Treatment of articles by dipping or pouring

This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet and labels.

General description of the process covered

This SUMI applies to industrial uses where articles are treated by dipping or pouring. This Safe Use Information is based on the AISE_SWED_IS_13_3.

Operational Conditions

Maximum duration	480 minutes per day.
Range of application /	Indoor Use.
Process conditions	Process carried out at room temperature.
	In case of dilution, tap water at a maximum temperature of 45°C is used.
Air exchange rate	Provide a basic standard of general ventilation (1 to 3 air changes per
	hour). No LEV required.

Risk Management Measures

Measures related to	Wear suitable gloves and eye protection.	
personal protective	See section 8 of the SDS of this product for specifications.	
equipment (PPE),		
hygiene and health		
evaluation		
	Training of workers in relation to proper use and maintenance of PPEs	
	must be ensured.	
Environmental	Prevent that undiluted product reaches surface waters.	
measures	If appropriate AISE SPERC 8a.1.a.v2 may apply: wide dispersive use	
	resulting in release to municipal sewage treatment plant.	

Additional good practice advice

Don't eat or drink. Don't smoke. Don't use in proximity of open flame.	
Wash hands after use. Avoid contact with damaged skin. Do not mix with other products.	
Spillage instructions	Dilute with fresh water and mop up.
Hygiene practices	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 product SDS.

Additional information depending on product composition

The label and (when required) the Safety Data Sheet contain additional, product specific information crucial for working safely with mixtures. Please refer to the product label and SDS for information including, but not limited to: product hazard classification, potentially allergenic fragrances, notable ingredients and threshold limit values (when available).

Disclaimer

This is a document for communicating generic conditions of safe use of a product. It is the responsibility of the formulator to link this SUMI to the SDS of a specific product that he is selling.

If a SUMI (or associated SWED) code is mentioned in the SDS of a product, the formulator of that product declares that all substances in the mixture are present in such concentration, that the use of the product within the conditions of the SUMI is safe. When available, this safe use is ensured by evaluating the results of the chemical safety assessments as performed by the raw material suppliers. When no chemical safety assessment has been carried out by the supplier for an ingredient that contributes to the classification of the mixture, the formulator has performed a safety assessment himself.

Following Occupational Health legislation, the employer of workers that use products that are assessed as safe following SUMI conditions remains responsible for communicating relevant use information to employees. When developing workplace instructions for employees, SUMI Sheets should always be considered in combination with the SDS and the label of the product.

This document is provided by A.I.S.E. for general information purposes only. The formulator uses the content of this document at its sole risk.

A.I.S.E. disclaims any liability to any person or entity for any loss, damage no matter of what kind (actual, consequential, punitive or otherwise), injury, claim, liability or other cause of any kind or character based upon or resulting from the use (even partly) of the content of this document.

WORKING ISTRUCTION TABLE



This tab provides instructions for appropriate and safe use of products and proper management of emergency situations for cleaning staff/users.

Attached to MSDS rel#7 del 09/17/2021

Use description	Use in batch and other process (synthesis) where opportunity for exposure arises [PROC4]; Transfer of substance or mixture (charging and discharging) at dedicated facilities [PROC8b]; Treatment of articles by dipping and pouring [PROC13]
Product name	ACID CIP
Classification of the product (100%)	H290 - May be corrosive to metals. H314 - Causes severe skin burns and eye damage. H318 - Causes serious eye damage. H332 - Harmful if inhaled EUH071 - Corrosive to the respiratory tract.
Classification of the diluted product (maximum use	At maximux concentration of use (5%) the product is classified:
concentration)	H314 - Causes severe skin burns and eye damage. H318 - Causes serious eye damage. EUH071 - Corrosive to the respiratory tract.
Handling of the product (100%)	Avoid contact and inhalation of vapors Wear protective gloves/clothing and eye/face protection. At work do not eat or drink.
Handling of the diluted product	Avoid contact and inhalation of vapors Wear protective gloves/clothing and eye/face protection. At work do not eat or drink.
DPI required concentrated use, spillage)	Chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3), safety glasses (EN 166).
Diluited product	Chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3), safety glasses (EN 166).

In case of emergency (accidents involving exposure to the product) Accidental release large quantities measures: concentrated product	Immediately inform the customer. Immediately inform the employer. Contact Poisons Centres tel. number in 1.4 section of the MSDS Wear gloves, mask, glasses and protective clothing (for specifications refer to section 8.2 . SDS). Possibly absorb it with inert materia or sucked it. After wiping up, wash with water the area and materials involved
Diluited product	Wear gloves, mask, glasses and protective clothing (for specifications refer to section 8.2 . SDS). Possibly absorb it with inert materia or sucked it. After wiping up, wash with water the area and materials involved
Storage of the product	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.
In case of accidents, emergency or fire	Immediately inform the customer. Follow company emergency instruction.