

Safety Data Sheet

according to Regulation (EC) No 1907/2006

universal bio

Revision date: 23.09.2022

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

universal bio

Product code:

70015

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

Use of the substance/mixture

DESCALERS

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name:	düring ag	
Street:	Brunnenwiesenstrasse 14	
Place:	CH-8108 Dällikon	
Telephone:	+41 44 847 27 47	Telefax: +41 44 844 38 90
e-mail:	info@dueringag.ch	

Supplier

Company name:	düring trade gmbh
Street:	Bösendorferstrasse 7
Place:	A-1010 Wien

1.4. Emergency telephone number: +41 44 251 51 51

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin Corr. 1; H314
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

L-(+)-lactic acid
methanesulphonic acid

Signal word: Danger

Pictograms:



Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P102	Keep out of reach of children.
P280	Wear protective gloves and eye/face protection.
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.

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

P310 Immediately call a doctor.

P501 Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Chemical characterization

Mixtures in aqueous solution

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
79-33-4	L-(+)-lactic acid; (2S)-2-hydroxypropanoic acid			10 - < 15 %
	201-196-2	607-743-00-5	01-2119474164-39	
	Skin Corr. 1C, Eye Dam. 1; H314 H318 EUH071			
75-75-2	methanesulphonic acid			1 - < 5 %
	200-898-6	607-145-00-4	01-2119491166-34	
	Met. Corr. 1, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, STOT SE 3; H290 H312 H302 H314 H318 H335			

Full text of H and EUH statements: see section 16.

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
79-33-4	201-196-2	L-(+)-lactic acid; (2S)-2-hydroxypropanoic acid dermal: LD50 = > 2000 mg/kg; oral: LD50 = 3543 mg/kg	10 - < 15 %
75-75-2	200-898-6	methanesulphonic acid dermal: LD50 = 2000 mg/kg; oral: LD50 = 1158 mg/kg	1 - < 5 %

Labelling for contents according to Regulation (EC) No 648/2004

< 5 % amphoteric surfactants.

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

When in doubt or if symptoms are observed, get medical advice. First aider: Pay attention to self-protection!

After inhalation

Provide fresh air. If experiencing respiratory symptoms: Call a doctor.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. Do not allow a neutralisation agent to be drunk. Immediately call a doctor.

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

The following symptoms may occur: Gastric perforation.

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

Treat symptomatically.

SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable extinguishing media

 Carbon dioxide (CO₂), Extinguishing powder, Water spray jet, Foam
Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Non-flammable.

In case of fire may be liberated: Pyrolysis products, toxic.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Evacuate area.

For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment.

For emergency responders

Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Stop leak if safe to do so. Cover drains.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Other information

Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Do not use for injecting or spraying. Use personal protection equipment.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Further information on handling

Additional information: Follow the instructions for use on the label. www.durgol.com

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep only in the original container.

Hints on joint storage

Do not store together with: Oxidising agent, Alkali (lye).

Further information on storage conditions

Protect against: Frost, heat.

7.3. Specific end use(s)

DESCALERS

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
79-33-4	L-(+)-lactic acid; (2S)-2-hydroxypropanoic acid		
Worker DNEL, long-term	inhalation	local	592 mg/m ³
Worker DNEL, acute	inhalation	local	592 mg/m ³
Consumer DNEL, acute	inhalation	local	296 mg/m ³
Consumer DNEL, acute	oral	systemic	35,4 mg/kg bw/day
75-75-2	methanesulphonic acid		
Worker DNEL, long-term	inhalation	systemic	6,76 mg/m ³
Worker DNEL, long-term	dermal	systemic	19,44 mg/kg bw/day
Worker DNEL, long-term	inhalation	local	2,89 mg/m ³
Consumer DNEL, long-term	inhalation	systemic	1,44 mg/m ³
Consumer DNEL, long-term	oral	systemic	8,33 mg/kg bw/day
Consumer DNEL, long-term	inhalation	local	8,33 mg/m ³
Consumer DNEL, acute	inhalation	local	1,73 mg/m ³

PNEC values

CAS No	Substance	
Environmental compartment	Value	
79-33-4	L-(+)-lactic acid; (2S)-2-hydroxypropanoic acid	
Freshwater sediment	1,3 mg/l	
Micro-organisms in sewage treatment plants (STP)	10 mg/l	
75-75-2	methanesulphonic acid	
Freshwater	0,012 mg/l	
Freshwater (intermittent releases)	0,12 mg/l	
Marine water	0,0012 mg/l	
Freshwater sediment	0,0251 mg/kg	
Micro-organisms in sewage treatment plants (STP)	100 mg/l	
Soil	0,00183 mg/kg	

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation.

Individual protection measures, such as personal protective equipment
Eye/face protection

Tightly sealed safety glasses.

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Hand protection

Wear suitable gloves. Ensure that direct skin contact is avoided.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Body protection: not required.

Ensure that direct skin contact is avoided.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at: vapour-, aerosol or mist formation, exceeding exposure limit values.

Thermal hazards

No information available.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	characteristic
Odour threshold:	not determined
Melting point/freezing point:	approx. 0 °C
Boiling point or initial boiling point and boiling range:	approx. 100 °C
Flammability	
Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	< 2
Water solubility:	completely miscible
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Density:	not determined
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information

Other safety characteristics

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

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10.3. Possibility of hazardous reactions

Exothermic reaction with: Oxidising agent, Alkali (lye).
 Reacts with: Formation of: Carbon dioxide (CO₂).

10.4. Conditions to avoid

Frost, heat.

10.5. Incompatible materials

Oxidising agent, Alkali (lye).

10.6. Hazardous decomposition products

In case of fire may be liberated: Pyrolysis products, toxic.

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) 23632,7 mg/kg; ATE (dermal) 40816,3 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
79-33-4	L-(+)-lactic acid; (2S)-2-hydroxypropanoic acid				
	oral	LD50 mg/kg	3543	Rat	Manufacturer EPA OPP 81-1
	dermal	LD50 mg/kg	> 2000	Rabbit	Manufacturer EPA OPP 81-2
75-75-2	methanesulphonic acid				
	oral	LD50 mg/kg	1158	Rat	Manufacturer OECD 401
	dermal	LD50 mg/kg	2000	Rabbit	Manufacturer

Irritation and corrosivity

Causes severe skin burns and eye damage.
 Causes serious eye damage.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

oral, Skin contact, Eye contact, Inhalation.

11.2. Information on other hazards
Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

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SECTION 12: Ecological information
12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
79-33-4	L-(+)-lactic acid; (2S)-2-hydroxypropanoic acid					
	Acute fish toxicity	LC50 320 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	Manufacturer	EPA-660/3-75-00-9
	Acute algae toxicity	ErC50 mg/l ca. 3500	72 h	Pseudokirchneriella subcapitata	Manufacturer	OECD 201
	Acute crustacea toxicity	EC50 250 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	OECD 202
	Crustacea toxicity	NOEC 18 mg/l	2 d	Daphnia magna (Big water flea)	Manufacturer	
	Acute bacteria toxicity	(EC50 mg/l) > 88,2	3 h	Activated sludge	Manufacturer	OECD 209
75-75-2	methanesulphonic acid					
	Acute fish toxicity	LC50 73 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	Manufacturer	OECD 203
	Acute algae toxicity	ErC50 mg/l 12 - 24	72 h	Selenastrum capricornutum	Manufacturer	OECD 202
	Acute crustacea toxicity	EC50 260 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	OECD 201

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
79-33-4	L-(+)-lactic acid; (2S)-2-hydroxypropanoic acid			
	Biochemical oxygen demand	450 mg/g	5	Manufacturer
	Readily biodegradable (according to OECD criteria).			
75-75-2	methanesulphonic acid			
	OECD 301F	84 - 90 %	28	
	Readily biodegradable (according to OECD criteria).			
	Dissolved organic carbon (DOC): OECD 301A	100 %	28	
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
79-33-4	L-(+)-lactic acid; (2S)-2-hydroxypropanoic acid	ca. -0,65
75-75-2	methanesulphonic acid	2,38

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

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12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Damaging effect on aquatic ecosystems possible due to change in the pH value.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

List of Wastes Code - residues/unused products

200130 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents other than those mentioned in 20 01 29

List of Wastes Code - used product

200130 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents other than those mentioned in 20 01 29

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

Non-contaminated packages may be recycled.

Cleaning agent Recommended material: Water.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:

UN 3265

14.2. UN proper shipping name:

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (L-(+)-lactic acid; (2S)-2-hydroxypropanoic acid, methanesulphonic acid)

14.3. Transport hazard class(es):

8

14.4. Packing group:

II

Hazard label:

8



Classification code:

C3

Special Provisions:

274

Limited quantity:

1 L

Excepted quantity:

E2

Transport category:

2

Hazard No:

80

Tunnel restriction code:

E

Inland waterways transport (ADN)

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14.1. UN number or ID number: UN 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (L-(+)-lactic acid; (2S) -2-hydroxypropanoic acid, methanesulphonic acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Classification code: C3
 Special Provisions: 274
 Limited quantity: 1 L
 Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (L-(+)-lactic acid; (2S) -2-hydroxypropanoic acid, methanesulphonic acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Marine pollutant: -
 Special Provisions: 274
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-A, S-B
 Segregation group: 1 - acids

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (L-(+)-lactic acid; (2S) -2-hydroxypropanoic acid, methanesulphonic acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Special Provisions: A3 A803
 Limited quantity Passenger: 0.5 L
 Passenger LQ: Y840
 Excepted quantity: E2
 IATA-packing instructions - Passenger: 851
 IATA-max. quantity - Passenger: 1 L
 IATA-packing instructions - Cargo: 855
 IATA-max. quantity - Cargo: 30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning Corrosive.

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14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

2010/75/EU (VOC): < 0,1 %

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

Regulation (EC) No. 648/2004 [Detergents regulation].

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

For this mixture a chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

CAS: Chemical Abstracts Service

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Regulations concerning the international carriage of dangerous goods by rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

IMDG: International Maritime Code for Dangerous Goods

EmS: Emergency Schedules

MFAG: Medical First Aid Guide

IATA: International Air Transport Association

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ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 VOC: Volatile Organic Compounds
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data

Relevant H and EUH statements (number and full text)

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.
- EUH071 Corrosive to the respiratory tract.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)