Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: **DB1090A0**
Product name **D&CAL SPRAY**
UFI: **FM00-G0J4-3008-96CH**

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

Intended use **Oven cleaner; detergent for cooking surfaces.**

Identified Uses	Industrial	Professional	Consumer
Detergent for ovens and cooking surfaces.	-	ERC: 8a. PROC: 10, 11, 13, 8a. PC: 35. LCS: PW.	-

Uses Advised Against

Any use other than those identified.

1.3. Details of the supplier of the safety data sheet

Name **Unox S.p.A.**
Full address **Via Majorana, 22**
District and Country **35010 Cadoneghe (Padova)**
Italia
tel. +39 049 86 57 511
fax +39 049 86 57 555
e-mail address of the competent person
responsible for the Safety Data Sheet **det.rinse@unox.com**

1.4. Emergency telephone number

For urgent inquiries refer to **3E**
Tel. (+)1-760-476-3961
Access code: 334577
24h/24h

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Skin corrosion, category 1C	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.
Hazard pictograms:

UNOX S.p.A.
D&CAL SPRAY
Revision n. 1
Dated 27/06/2023
Printed on 27/06/2023
Page n. 2/16
First compilation

Signal words: Danger

Hazard statements:

H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Precautionary statements:

P260	Do not breathe mist/vapours/spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P310	Immediately call a POISON CENTER.
P264	Wash hands thoroughly after handling.

Contains: L-(+)-LACTIC ACID
D-GLUCOPYRANOSE, OLIGOMERIC, DECYL OCTYL GLYCOSIDE
AMINES, C12-14 (EVEN NUMBERED)-ALKYLDIMETHYL, N-OXIDES
1-PROPANAMINIUM, 3-AMINO-N (CARBOXYMETHYL)-N,N-DIMETHYL-,N-(C8-18(EVEN NUMBERED) AND C18 UNSATURATED ACYL) DERIVS., HYDROXIDES, INNER SALTS

Ingredients according to Regulation (EC) No. 648/2004

Less than 5%	Phosphonates, Amphoteric surfactants
5% or over but less than 15%	Non-ionic surfactants

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
L-(+)-LACTIC ACID		
INDEX 607-743-00-5	5 ≤ x < 10	Skin Corr. 1C H314, Eye Dam. 1 H318, Eye Dam. 1 H318, EUH071
EC 201-196-2		
CAS 79-33-4		
REACH Reg. 01-2119474164-39-XXXX		
AMINES, C12-14 (EVEN NUMBERED)-ALKYLDIMETHYL, N-OXIDES		
INDEX -	5 ≤ x < 10	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411
EC 931-292-6		LD50 Oral: 1064 mg/kg

CAS 308062-28-4
REACH Reg. 01-2119490061-47-XXXX

CITRIC ACID

INDEX - 5 ≤ x < 10 Eye Irrit. 2 H319, STOT SE 3 H335
EC 201-069-1
CAS 77-92-9
REACH Reg. 01-2119457026-42-XXXX

D-GLUCOPYRANOSE, OLIGOMERIC, DECYL OCTYL GLYCOSIDE

INDEX - 1 ≤ x < 5 Eye Dam. 1 H318
EC 500-220-1
CAS 68515-73-1
REACH Reg. 01-2119488530-36-XXXX

1-PROPANAMINIUM, 3-AMINO-N (CARBOXYMETHYL)-N,N-DIMETHYL-,N-(C8-18(EVEN NUMBERED) AND C18 UNSATURATED ACYL) DERIVS., HYDROXIDES, INNER SALTS

INDEX - 1 ≤ x < 3 Eye Dam. 1 H318, Aquatic Chronic 3 H412
EC 931-333-8 Eye Dam. 1 H318: ≥ 10%, Eye Irrit. 2 H319: ≥ 1%
CAS 61789-40-0
REACH Reg. 01-2119489410-39-XXXX

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.
INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

See section 11.

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

Keep the safety data sheet of the preparation or, failing that, the label available for the medical personnel.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

UNOX S.p.A.
D&CAL SPRAY

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

Frequency of use: up to 5 days/week.
Duration of use: up to 16 minutes/day.
Internal use.

7.2. Conditions for safe storage, including any incompatibilities

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany): 10

7.3. Specific end use(s)

Follow the instructions on the product labeled or on the information sheet.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56

L-(+)-LACTIC ACID

Predicted no-effect concentration - PNEC		
Normal value in fresh water	1,3	mg/l
Normal value of STP microorganisms	10	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	35,4 mg/kg/d						
Inhalation	296 mg/m3	VND			592 mg/m3	VND		

AMINES, C12-14 (EVEN NUMBERED)-ALKYLDIMETHYL, N-OXIDES

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,0335	mg/l
Normal value in marine water	0,00335	mg/l
Normal value for fresh water sediment	5,24	mg/kg
Normal value for marine water sediment	0,524	mg/kg
Normal value for marine water, intermittent release	0,0335	mg/l
Normal value for fresh water, intermittent release	0,0335	mg/l
Normal value for the food chain (secondary poisoning)	0,0111	mg/kg
Normal value for the terrestrial compartment	1,02	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,44 mg/kg bw/d				
Inhalation				1,53 mg/m3				6,2 mg/m3
Skin				5,5 mg/kg bw/d				11 mg/kg bw/d

CITRIC ACID

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	2		4		INHAL

Predicted no-effect concentration - PNEC		
Normal value in fresh water	440	mg/l

Normal value for fresh water sediment	34,6	mg/kg/d
Normal value for marine water sediment	3,46	mg/kg/d
Normal value for the terrestrial compartment	33,1	mg/kg

D-GLUCOPYRANOSE, OLIGOMERIC, DECYL OCTYL GLYCOSIDE

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	0,487	mg/kg
Normal value for marine water sediment	0,048	mg/kg
Normal value for water, intermittent release	0,27	mg/l
Normal value of STP microorganisms	560	mg/l
Normal value for the terrestrial compartment	0,654	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			37,5 mg/kg/d	VND				
Inhalation			VND	420 mg/m3				
Skin			VND	357000 mg/kg/d			VND	595000 mg/kg/d

1-PROPANAMINIUM, 3-AMINO-N (CARBOXYMETHYL)-N,N-DIMETHYL-,N-(C8-18(EVEN NUMBERED) AND C18 UNSATURATED ACYL) DERIVS., HYDROXIDES, INNER SALTS

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,0135	mg/l
Normal value in marine water	0,00135	mg/l
Normal value for fresh water sediment	1	mg/kg
Normal value for marine water sediment	0,1	mg/kg
Normal value of STP microorganisms	3000	mg/l
Normal value for the terrestrial compartment	0,8	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				7,5 mg/kg bw/d				
Inhalation								44 mg/m3
Skin				7,5 mg/kg bw/d				12,5 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

The use of appropriate technical measures should always take priority over personal protection equipment. Provide a good level of general ventilation in the workplace (3 to 5 air changes per hour). The individual protection devices must bear the CE marking that certifies their compliance with the regulations in force.

Provide good general ventilation (ventilation obtained by opening doors and windows): 3-5 air / hour changes (dilution efficiency: 30%).

HAND PROTECTION
Use category III gloves (ref. standard EN 374). For definitive choice of gloves material consider: compatibility, degradation, breakthrough time and permeation. Work gloves wear time depends upon duration and type of wear. Suitable gloves (protection factor 6, permeation time > 480 minutes), material (thickness, mm): nitrile rubber (0,35 mm), butyl rubber (0,5 mm), polychloroprene (0,5 mm), polyvinylchloride (0,5 mm).

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type A filter combined with a type P filter should be worn (see standard EN 14387).
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	straw-coloured	
Odour	characteristic	
Odour threshold	not determined	
Melting point / freezing point	not determined	
Initial boiling point	100 °C	
Flammability	not applicable	
Lower explosive limit	not determined	
Upper explosive limit	not determined	
Flash point	> 100 °C	
Auto-ignition temperature	not determined	
Decomposition temperature	400 °C	Substance:L-(+)-LACTIC ACID
pH	2,80-3,25	
Kinematic viscosity	not determined	
Solubility	soluble in water	
Partition coefficient: n-octanol/water	not applicable	
Vapour pressure	0,038 Pa	Substance:L-(+)-LACTIC ACID
Density and/or relative density	1,01-1,05	
Relative vapour density	not determined	
Particle characteristics	not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Evaporation rate	not determined
Explosive properties	not determined
Oxidising properties	Not applicable

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

L-(+)-LACTIC ACID

Avoid exposure to: high temperatures. 200 °C.

10.5. Incompatible materials

L-(+)-LACTIC ACID

Avoid contact with: oxidising agents,strong bases.

10.6. Hazardous decomposition products

Heated to decomposition: carbon oxides, nitrogen oxides, phosphorus oxides.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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

Metabolism, toxicokinetics, mechanism of action and other information
Information not available

Information on likely routes of exposure
Dermal, inhalation.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
This product is corrosive and causes abrasions of skin surface, accompanied by rubefaction, warmth and sting. In the most serious cases, small vesicles appear, which cause strong sting and pain. Upon contact with eyes, it may cause serious harm, such as cornea opacity, iris lesions, irreversible eye coloration. The vapors and/or powders are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours. Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness. If swallowed, it may cause mouth, throat and oesophagus burns, sickness, diarrhoea, edema, larynx swelling and, consequently, asphyxia. Perforation of the gastro-intestinal tract is also possible.

Interactive effects
None known.

ACUTE TOXICITY

Corrosive to the respiratory tract.

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	Not classified (no significant component)

L-(+)-LACTIC ACID

LD50 (Dermal):	> 2000 mg/kg rabbit
LD50 (Oral):	3543 mg/kg rat
LC50 (Inhalation vapours):	7,94 mg/l/4h rat

AMINES, C12-14 (EVEN NUMBERED)-ALKYLDIMETHYL, N-OXIDES

LD50 (Dermal):	2100 mg/kg rat or rabbit
LD50 (Oral):	1064 mg/kg rat

CITRIC ACID

LD50 (Dermal):	> 2000 mg/kg ratto
LD50 (Oral):	> 2000 mg/kg ratto

D-GLUCOPYRANOSE, OLIGOMERIC, DECYL OCTYL GLYCOSIDE

LD50 (Dermal):	> 2000 mg/kg OECD 402
LD50 (Oral):	> 5000 mg/kg OECD 401

1-PROPANAMINIUM, 3-AMINO-N (CARBOXYMETHYL)-N,N-DIMETHYL-,N-(C8-18(EVEN NUMBERED) AND C18 UNSATURATED ACYL) DERIVS., HYDROXIDES, INNER SALTS

LD50 (Oral):	2335 mg/kg rat

SKIN CORROSION / IRRITATION
Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION
Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION
Does not meet the classification criteria for this hazard class

L-(+)-LACTIC ACID
Buhler test: negative (guinea pig, EPA OPP 81-6).

GERM CELL MUTAGENICITY
Does not meet the classification criteria for this hazard class

L-(+)-LACTIC ACID
Ames test: negative (OECD method 471).

CARCINOGENICITY
Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY
Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE
Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE
Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD
Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

L-(+)-LACTIC ACID

LC50 - for Fish	130 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	130 mg/l/48h Daphnia magna (metodo OECD 202).
EC50 - for Algae / Aquatic Plants	> 2800 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Fish	2,18 mg/l 90 d, Oreochromus mossambica
Chronic NOEC for Algae / Aquatic Plants	1900 mg/l Pseudokirchneriella subcapitata

D-GLUCOPYRANOSE, OLIGOMERIC, DECYL OCTYL GLYCOSIDE

LC50 - for Fish	> 100 mg/l/96h Brachidanio rerio
EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna (OECD 202)
EC50 - for Algae / Aquatic Plants	19,82 mg/l/72h Scenedesmus subspicatus
Chronic NOEC for Fish	1,8 mg/l Brachydanio rerio
Chronic NOEC for Crustacea	2 mg/l Scenedesmus subspicatus

AMINES, C12-14 (EVEN NUMBERED)-ALKYLDIMETHYL, N-OXIDES

LC50 - for Fish	2,67 mg/l/96h Pimephales promelas
EC50 - for Crustacea	3,1 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	0,19 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Algae / Aquatic Plants	0,067 mg/l

1-PROPANAMINIUM, 3-AMINO-N (CARBOXYMETHYL)-N,N-DIMETHYL-,N-(C8-18(EVEN NUMBERED) AND C18 UNSATURATED ACYL) DERIVS., HYDROXIDES, INNER SALTS

LC50 - for Fish	1,1 mg/l/96h

EC50 - for Crustacea	1,9 mg/l/48h
EC50 - for Algae / Aquatic Plants	2,4 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	0,135 mg/l

CITRIC ACID	
LC50 - for Fish	440 mg/l/96h Leuciscus idus
EC50 - for Crustacea	120 mg/l/48h Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	425 mg/l prova statica

12.2. Persistence and degradability

L-(+)-LACTIC ACID
Rapidly degradable

D-GLUCOPYRANOSE, OLIGOMERIC, DECYL OCTYL GLYCOSIDE
Rapidly degradable

AMINES, C12-14 (EVEN NUMBERED)-ALKYLDIMETHYL, N-OXIDES
Rapidly degradable

1-PROPANAMINIUM, 3-AMINO-N (CARBOXYMETHYL)-N,N-DIMETHYL-,N-(C8-18(EVEN NUMBERED) AND C18 UNSATURATED ACYL) DERIVS., HYDROXIDES, INNER SALTS
Rapidly degradable

CITRIC ACID
Rapidly degradable

12.3. Bioaccumulative potential

L-(+)-LACTIC ACID
Irrelevant bioaccumulation.

L-(+)-LACTIC ACID

Partition coefficient: n-octanol/water	-0,54

D-GLUCOPYRANOSE, OLIGOMERIC, DECYL OCTYL GLYCOSIDE

Partition coefficient: n-octanol/water	< 1,77
BCF	< 100

AMINES, C12-14 (EVEN NUMBERED)-ALKYLDIMETHYL, N-OXIDES

Partition coefficient: n-octanol/water	2,7

1-PROPANAMINIUM, 3-AMINO-N (CARBOXYMETHYL)-N,N-DIMETHYL-,N-(C8-18(EVEN NUMBERED) AND C18 UNSATURATED ACYL) DERIVS., HYDROXIDES, INNER SALTS Partition coefficient: n-octanol/water 4,2

CITRIC ACID

Partition coefficient: n-octanol/water	-1,72
BCF	0,01

12.4. Mobility in soil

L-(+)-LACTIC ACID

Partition coefficient: soil/water	< 1,32

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

None known.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

European Waste Code (intact product):
15 01 10* - packaging containing residues of or contaminated by hazardous substances
20 01 29* - detergents containing hazardous substances

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 3265

14.2. UN proper shipping name

ADR / RID:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (L-(+)-LACTIC ACID)
IMDG:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (L-(+)-LACTIC ACID)
IATA:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (L-(+)-LACTIC ACID)

14.3. Transport hazard class(es)

ADR / RID:	Class: 8	Label: 8
IMDG:	Class: 8	Label: 8
IATA:	Class: 8	Label: 8

14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Tunnel restriction code: (E)
	Special provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 856
	Passengers:	Maximum quantity: 5 L	Packaging instructions: 852
	Special provision:	A3, A803	

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product
Point 3

Contained substance

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

Regulation (EC) No. 648/2004

Ingredients according to Regulation (EC) No. 648/2004

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 2: Hazard to waters

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

L-(+)-LACTIC ACID

AMINES, C12-14 (EVEN NUMBERED)-ALKYLDIMETHYL, N-OXIDES

CITRIC ACID

D-GLUCOPYRANOSE, OLIGOMERIC, DECYL OCTYL GLYCOSIDE

1-PROPANAMINIUM, 3-AMINO-N (CARBOXYMETHYL)-N,N-DIMETHYL-,N-(C8-18(EVEN NUMBERED) AND C18 UNSATURATED ACYL) DERIVS., HYDROXIDES, INNER SALTS

This safety data sheet contains one or more Exposure Scenarios in an integrated form. Contents have been included in sections 1.2, 8, 9, 12, 15 and 16 of this safety data sheet.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1C	Skin corrosion, category 1C
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3

Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Use descriptor system:

ERC	**8a**	Widespread use of non- reactive processing aid (no inclusion into or onto article, indoor)
LCS	**PW**	Widespread use by professional workers
PC	**35**	Washing and cleaning products
PROC	**10**	Roller application or brushing
PROC	**11**	Non industrial spraying
PROC	**13**	Treatment of articles by dipping and pouring
PROC	**8a**	Transfer of substance or mixture (charging and discharging) at non- dedicated facilities

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
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UNOX S.p.A.
D&CAL SPRAY

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3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
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22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.