



De' Longhi Appliances S.r.l.

EcoDecalk

Revision 2

Revision date 28/10/2016

Printed on 28/11/2016

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Safety Data Sheet

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

1.1. Product identification

Code: ---
Name: EcoDecalk

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

Description/Use COFFEE MACHINE DESCALER

1.3. Information on the supplier of the safety data sheet

Company name: De'Longhi Appliances S.r.l.
Address: via Lodovico Seitz, 47
City and Country: 31100 Treviso (TV) ITALY
tel. +39 0422 4131
fax +39 0422 413736

1.4. Phone number for emergencies

For urgent information contact: +39 0422 4131 Mon - Fri 8:00am – 6:00pm
Email: msds.helpdesk.delonghi@delonghigroup.com

Poison Centre (24/24h)

UK
+44 28 90 63 2032 (Belfast)
+44 121 507 4123 (Birmingham)
+44 131 242 1383 (Edinburgh)
+44 191 2606182/+44 191 2606180 (Newcastle)
+44 292 071 55 54 (Penarth)

Australia
+61 7 363 68 148 (Brisbane)
+61 394 96 4509 (Heidelberg)
+61 893 46 1943 (Nedlands)
+61 2 9845 3969 (Sydney)

New Zealand
+64 3 479 7227 (Dunedin)

South Africa
+27 514 013 090 (Bloemfontein)
+27 21 658 53 08 (Rondebosch)
+27 21 931 61 29 (Tygerberg)

SECTION 2. Hazard identification

2.1. Classification of the substance or mixture.

The product is classified as dangerous pursuant to the provisions of regulation (EC) (CE) 1272/2008 (CLP) (as amended). Accordingly, the product requires a safety data sheet in fulfilment of the provisions of Regulation (EC) 1907/2006 as amended.
Any additional information on personal and/or environmental health risks are provided in sections 11 and 12 of this data sheet.

2.1.1. Regulation 1272/2008 (CLP) as amended.



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Classification and identification of hazards:

Eye Dam. 1
Skin Irrit. 2

H318
H315

2.2. Label elements

Hazard labelling according to (EC) Regulation 1272/2008 (CLP) and subsequent amendments and additions.



Warnings:

Hazard

H318 Causes serious eye damage.
H315 Causes skin irritation.

P102 Keep out of reach of children.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/eye goggles/face protection.
P302+P352 IF ON SKIN: wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P501 Dispose of contents/container in compliance with local regulations.

2.3. Other hazards.

Information not available

SECTION 3 Composition/information on ingredients.

3.2. Mixtures.

Contains:

Identification	Conc. %.	Classification 1272/2008 (CLP).
LACTIC ACID CAS. 79-33-4 CE. 201-196-2 Reach No 01-2119474164-39-0000. -	30 - 50	Eye Dam. 1 H318, Skin Irrit. 2 H315

SECTION 4 First-aid measures.

General information: consult a physician. Show this safety data sheet to the doctor in attendance.

4.1. Description of first-aid measures.

Not specifically required. Nevertheless, use of good industrial hygiene practices is recommended.

EYES: wash immediately and abundantly with water for at least 15 min.

Consult a physician.

SKIN: wash abundantly with water and soap. Remove any contaminated clothing. If the irritation persists, consult a physician. Wash the contaminated garments before using them again.

INHALATION: take the individual outdoors. If breathing is difficult, consult a physician.

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SWALLOWING: consult a physician. Only induce vomiting if a physician tells you to do so. Do not administer anything orally if the individual is unconscious and if not authorised by a physician.

4.2. Main symptoms and effects, both acute and delayed.

No episodes of damage to health ascribable to the product are known.
For symptoms and effects due to contained substances see chap. 11.

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

Follow the instructions provided by the physician.

SECTION 5 Fire-fighting measures.

The product is not flammable or combustible. In case of fire, use appropriate fire extinguisher for surrounding environment.

5.1. Fire-extinguishing methods.

SUITABLE FIRE-EXTINGUISHING METHODS

Traditional fire-extinguishing methods are applicable: carbon dioxide, foam, powder and water spray.

UNSUITABLE FIRE-EXTINGUISHING METHODS

None in particular.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.3. Recommendations for fire-fighters.

GENERAL INFORMATION

Cool the containers with water jets to prevent the product from decomposing and potentially harmful substances from developing. Always wear equipment provided with fire-fighting protection devices. Collect fire extinguishing water that must not be discharged into drains. Dispose of the contaminated fire extinguishing water and fire residues according to the standards in force.

EQUIPMENT

Wear normal fire-fighting clothes, such as self-contained, open-circuit compressed air breathing apparatus (EN 137), flame resistant clothing (EN 659) and fire-fighter boots (HO A29 or A30).

SECTION 6 Accidental release measures.

6.1. Personal precautions, protective equipment and procedures in case of emergency.

6.1.1 For anyone who is not directly involved:

Keep a distance and wait for the designated emergency staff to intervene and place the area where the release occurred in safe conditions.

6.1.2 For anyone who is directly involved:

Wear personal protective equipment (including personal protective equipment, as set forth in section 8 of the safety data sheet) in order to prevent contaminating skin, eyes and personal clothing.

In case of vapours or powders dispersed in the air, use respiratory protective equipment. These instructions apply to both staff involved in processing and emergency interventions.

6.2. Environmental precautions.

Prevent the product from getting into sewer systems, surface water, phreatic zones.

6.3. Containment and reclamation methods and materials.

Control with earth or inert material. Collect most of the material and eliminate the remainder with jets of water. The disposal of contaminated material must be carried out in accordance with the provisions of point 13.

6.4. Reference to other sections.

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

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SECTION 7 Handling and storage.

7.1. Precautions for safe handling.

Avoid contact with eyes and skin. Do not inhale vapours.

Handle the product after having consulted all other sections of this safety data sheet. Do not dispose of in the environment. Do not eat, drink, or smoke during use.

7.2. Safe storage conditions, including any incompatibility.

Store the product in clearly labelled containers. Store the containers away from any incompatible material; refer to section 10.

7.3. Special end-uses.

Information not available

SECTION 8 Exposure control/personal protection.

8.1. Control parameters.

Lactic Acid: DNEL cannot be determined.

8.2. Exposure controls.

Considering that the use of suitable technical measures must always have the priority in terms of personal protection equipment, provide good ventilation in the work place through efficient local extraction. The personal protective equipment must fulfil the regulations in force provided below.

HAND PROTECTION

protect hands with category III work gloves (ref. Directive 89/686/EEC and standard EN 374) made of PVC, neoprene, nitrile or similar. Consider the following for the definitive choice of work glove materials: degradation, rupture time and permeation. With preparations, work glove strength must be tested prior to use, as it cannot be predicted. Glove wear time depends on the duration of exposure.

EYE PROTECTION

Wear a visor-view hood or protective visor worn with hermetic safety goggles (ref. standard EN 166).

SKIN PROTECTION

Wear category II professional use long-sleeved work clothes and safety footwear (ref. Directive 89/686/EEC and standard EN 344). Wash with water and soap after removing the protective clothing.

RESPIRATORY PROTECTION

If the limit value is exceeded (if provided) for one or more substances contained in the product, in reference to daily exposure in the workplace or to a fraction established by the company prevention and protection service, wear a mask with type B filter or universal with class (1, 2 or 3) selected based on the maximum concentration of use (ref. Standard EN 141).

The use of protective equipment for the respiratory tract, such as the aforementioned masks, is compulsory when there are no technical measures implemented to limit the worker's exposure. The protection provided by the masks is nevertheless limited.

If the substance in question is odourless or if its odour detection threshold exceeds the exposure limit and in case of emergency, i.e. when the exposure levels are unknown or the oxygen concentration in the work environment is below 17% in volume, wear an open-circuit compressed-air breathing apparatus (ref. standard EN 137) or a fresh air hose breathing apparatus for use with full mask, semi mask or mouthpiece (ref. standard EN 138).

Provide an eye washing system and emergency shower.

ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions from production processes, including from ventilation equipment, should be controlled with the aim of observing standards on environmental protection.

SECTION 9 Physical and chemical properties.

9.1. Information on essential physical and chemical properties.

Physical State

liquid



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Colour	colourless
Smell	characteristic
Odour threshold.	Not available.
pH.	2,5 ÷ 2,8 (at 20°C) approximately
Melting and freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.
Flammability point.	> 60 °C.
Evaporation rate	Not available.
Solids and gas flammability	Not applicable because the product is liquid. [see guide lines "Endpoint specific guidance R.7.1.10 Flammability Version 2.4 – February 2014"]
Lower flammability limit.	Not available.
Upper flammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour Density	Not available.
Relative density.	1.10 Kg/l approximately
Solubility	water soluble
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidizing properties	Not available.

9.2. Other information.

VOC (Directive 1999/13/EC) :	0
VOC (volatile carbon) :	0

SECTION 10 Stability and reactivity.

10.1. Reactivity.

There are no particular risks of reaction with other substances under normal use conditions. Avoid contact with strong bases and strong oxidants

10.2. Chemical stability.

The product is stable under normal use and storage conditions.

10.3. Possibility of hazardous reactions.

Hazardous reactions under normal use and storage conditions are not predictable.

10.4. Conditions to avoid.

None in particular. Nonetheless, always observe the usual precautions required with chemical products.

10.5. Incompatible materials.

Strong oxidising agents.

10.6. Hazardous decomposition products

Information not available

SECTION 11 Toxicological information.

Nothing worthwhile of mention.



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11.1. Information on toxicological effects.

Without any experimental toxicological data on the product itself, any health hazards posed by the product have been assessed based on the properties of the substances it contains, according to the criteria set forth in the reference standard for classification. Therefore, consider the concentration of any individual hazardous substances reported in sec. 3 to assess the toxicological effects caused by exposure to the product.

This product can cause serious eye lesions and can cause corneal opacity, iris lesions, irreversible eye colouration.

Acute effects: contact with the skin leads to irritation with rash, oedema, dryness and peeling. Vapour inhalation can cause moderate irritation to the upper respiratory tract. Swallowing can cause health ailments, which include abdominal pain with burning, nausea and vomiting.

a) acute toxicity;

Data referring to the hazardous components:

LACTIC ACID

LD50 (Oral): 3730 mg/Kg acute-rat

LD50 (Dermal): > 2000 mg/Kg acute-rabbit.

b) irritation;

The product causes skin irritation and serious eye damage.

c) corrosiveness;

The product is not corrosive

d) sensitisation;

The product is not sensitising

e) repeated dose toxicity;

No data available

f) carcinogenicity;

The product is not carcinogenic.

IARC: No component in this product contained at levels of more than or equal to 0.1% is identified as a known or identified carcinogenic by IARC.

g) mutagenicity;

The product is not mutagenic

h) reproductive toxicity.

The product is not toxic to the reproduction system.

SECTION 12 Ecological information.

Use according to good working practices. Do not dispose of in the environment. Inform the competent authorities in the event the product reaches waterways or sewers or it contaminates soil or vegetation.

12.1. Toxicity.

LACTIC ACID

LC50 Brachydanio rerio (fish) (96h): 320 mg/l.

LD50 Daphnia Magna (48h): 240 mg/l.

12.2. Persistence and degradability

Information not available

12.3. Bioaccumulation potential

Information not available

12.4. Mobility in soil.

Information not available

12.5. PBT and vPvB assessment results.

According to the available data, the product does not contain PBT or vPvB substances in percentage higher than 0.1%.

12.6. Other adverse effects.

Information not available

SECTION 13 Disposal considerations.



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13.1. Methods of waste treatment.

Re-use, if possible. The product residues are considered special hazardous waste. The hazard levels of the waste that contains any amount this product must be assessed based on legislation in force.

The exhaust product must be consigned to an authorised waste disposal company, in compliance with national and local laws.

Do not dispose of in the soil, sewers or waterways.

CONTAMINATED PACKAGES

Contaminated packages must be recovered or disposed of in compliance with waste management national standards.

SECTION 14 Transport information.

The product must not be considered hazardous pursuant to the provisions applying to the transport of dangerous goods by road (ADR), by rail (RID), by sea (IMDG Code) or by air (IATA).

14.1. UN number: not applicable

14.2. UN shipping name: not applicable

14.3. Transport hazard classes: not applicable

14.4. Packing group: not applicable

14.5. Environmental hazards: not applicable

14.6. Special precautions for user: not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: not applicable

SECTION 15 Regulatory information.

15.1. Standards and legislation on health, safety and the environment specific to the substance or mixture.

Seveso category. None.

Restrictions relative to the product or to the substances contained according to Annex XVII EC Regulation 1907/2006.

Product.

Point. 3

Substances in Candidate List (Art. 59 REACH). None.

Substances subject to authorisation (Annex XIV - REACH). None.

Substances subject to export notification EC Reg. 649/2012:

Substances Under the Rotterdam Convention Regulations: None.

Substances Under the Stockholm Convention Regulations: None.

Healthcare controls. Any workers exposed to this chemical agent, that is hazardous to the health, must receive health supervision, carried out according to the provisions of art. 41 of Lgs. D. 81 of April 9, 2008 unless the safety and health risks of the worker have been assessed as irrelevant, according to art. 224, paragraph 2.

15.2. Chemical Safety Assessment

No chemical safety assessment of the mixture has been drawn up. There is a CSR for the hazardous components.

SECTION 16 Other information.

Text indicating the hazards (H) reported in sections 2-3 of the data sheet:

Eye Dam. 1 Serious eye damage, category 1

Skin Irrit. 2 Skin irritation, category 2

H318 Causes serious eye damage.

H315 Causes skin irritation.



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KEY:

- ADR: European agreement concerning the transport of dangerous goods by road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Concentration that gives effect to 50% of the population tested
- CE NUMBER: ESIS (Existing Substances Information System) Identification Number
- CLP: EC Regulation No.1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally harmonized system of classification and labelling of chemicals
- IATA DGR: Regulations for the transport of dangerous goods by the International Air Transport Association
- IC50: Immobilization Concentration 50% of the population tested.
- IMDG: International maritime code on the transport of dangerous goods
- IMO: International Maritime Organisation
- INDEX NUMBER: Identification number in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic according to REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation No.1907/2006
- RID: Regulations for the international carriage of dangerous goods by rail
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative according to Reach.

GENERAL BIBLIOGRAPHY:

1. Directive 1999/45/EC and subsequent amendments
2. Directive 67/548/EEC and subsequent amendments and updates
3. Regulation (EC) 1907/2006 of the European Parliament (REACH)
4. Regulation (EC) 1272/2006 of the European Parliament (CLP)
5. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
6. EC Regulation No.453/2010 of the European Parliament
7. Regulation (EC) 286/2011 of the European Parliament (II Atp. CLP)
8. The Merck Index. Ed. 10
9. Handling Chemical Safety
10. Niosh - Registry of Toxic Effects of Chemical Substances
11. INRS - Fiche Toxicologique
12. Patty - Industrial Hygiene and Toxicology
13. N.I. Sax - Dangerous properties of Industrial Materials-7 Ed., 1989
14. ECHA Agency website
15. safety data sheets of the components

Note for the user:

The information contained in this data sheet is based on the knowledge available to us when the latest version was issued. Users must make sure the information is suitable and exhaustive in relation to the specific use of the product.

This document must not be considered a guarantee on any specific property of the product.

As the use of this product is not subject to our direct control, users must comply, under their own responsibility, with current hygiene and safety laws and provisions. We accept no responsibility for improper use.

Provide suitable information to the personnel in charge of using chemicals.

Amendments in relation to the previous revision.

Amendments have been made to the following sections:

02 / 03 / 09 / 16.



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Attached to the Safety Data Sheet

Exposure scenario relative to hazardous component "Lactic Acid", taken from the relative safety data sheet.

The Generic Exposure Scenario GES1 refers to the following categories of use:

- 1) Agriculture, forestry and fishing
- 2) Mining activities
- 3) Mining activities (except for offshore industries)
- 4) Industrial production
- 5) Cellulose, paper and paper product manufacture
- 6) Manufacture of large scale chemical products
- 7) Manufacture of fine chemical products
- 8) Manufacture of plastic materials
- 9) Building and construction
- 10) Health care services
- 11) Formulation of preparations and / or repackaging
- 12) Manufacture of food products

Generic Exposure Scenario GES1:

production, transport and use of lactic acid

Lactic acid is a non-toxic substance which is a basic metabolic and energy component in practically every life-form, from bacteria to primates. It is not classified as hazardous to the environment (ecotoxicity) nor does it pose a physical hazard to man. It is classified as hazardous to health as it can cause irritation of the skin (Xi; R38 - GHS: Category 2) and eyes (Xi; R41 - GHS: Category 1). The potential irritation to skin and eyes from lactic acid is due to the pH; in buffered aqueous solutions up to 70%, lactic acid is not irritating.

Based on the above, it is not compulsory to perform the risk and environmental exposure assessment. Lactic acid does not have an *endpoint* relative to dose-effect on human health; therefore, no quantitative estimate of the risk is either required or possible.

Lactic acid is classified as an irritant for eyes and skin. In application of the current classification and labelling requirements for preparations, the mixtures are not required to be classified and labelled as irritants for the skin if the lactic acid content is less than 10%, while mixtures with a lactic acid content of less than 5% are not required to be classified and labelled as irritants for eyes.

No products are manufactured with a lactic acid content of more than 5%; for this reason, no product intended for final use can be classified as pure lactic acid.


On the other hand, any product with a relevant lactic acid content, including aqueous solutions, which can have a lactic acid content of more than 5%, must be classified and labelled as an irritant.

In **all** production, storage and transport contexts and processes, regardless of use, where lactic acid is handled pure, diluted or in formulations with a content that is equal to or greater than 5% (for example, in case of potential exposure of workers to hazardous substances and preparations), the due risk management measures are already prescribed and applied, and exclude any possibility of exposure to skin and eyes to the lactic acid.

In **all** identified downstream uses where lactic acid, in pure or diluted form, or contained in formulations at an amount that is equal to or greater than 5%, is handled (for example, when receiving lactic acid after transportation, for storage, when adding lactic acid to production processes, when preparing, handling and storing dilutions or intermediate formulations with a lactic acid content of less than 5%), the risk management measures are already prescribed and applied and exclude any possibility for skin and eyes of being exposed to the lactic acid (for example, in case of potential exposure of workers to hazardous substances and preparations).

Taking into account the above, the following Generic Exposure Scenario has been established for all identified uses of lactic acid:

- no hazards to the environment have been identified and therefore no exposure assessments are required;
- the only identified hazards for human exposure are irritation of the skin and eyes. Taking due risk management measures into account, exposure to lactic acid or dilutions is not possible and therefore, exposure is equal to 0.

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Generic Exposure Scenario GES1: production, transport and downstream use of lactic acid (pure or in mixture of $\geq 5\%$)

SECTION 1

Exposure scenario number

Brief title of the exposure scenario

TITLE

GES1

Production, transport and downstream use of lactic acid (pure or in mixture of $\geq 5\%$)

List of use descriptors

Sectors of use: 1, 2a, 2b, 3, 4, 6b, 8, 9, 10, 19, 20, 21,22

Chemical product category (market sectors): 0, 1, 2, 3, 4, 8, 9a, 9b, 9c, 12, 13, 14, 15, 17, 19, 20, 21, 24, 25, 28, 29, 31, 32, 34, 35, 36, 37, 38, 39

Process category: 0, 1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 24, 26

Environmental release category: 1, 2, 3, 4, 5, 6a, 6b, 6d, 7, 8a, 8b, 8d, 8e,8f,9a,9b,10b

Category for substances in articles (relative to the following life cycles): 0, 02, 1, 2, 13

SECTION 2 OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

2.1. Environmental exposure control

Not applicable

2.2. Exposure control for workers

Product characteristics

Physical state

Concentration of the substance in the mixture/preparation or in the article

Liquid at standard temperatures and pressures; vapour tension < 1 Pa

In the product, the concentration of the substance can even reach 100% (unless stated otherwise)

Duration and frequency of use

Daily exposure for up to 8 hours (unless stated otherwise)

Other operating conditions that affect worker exposure

It is assumed that suitable standard hygiene measures have been implemented in the work place

Area of use

Use in indoor facilities and outdoors

Technical conditions and measures to control spreading from the source to the worker

Avoid temperatures exceeding 200°C.

Ensure suitable ventilation, especially in confined spaces

Control scenarios

Risk management measures

General measures (irritant for the skin)

Avoid direct contact with the skin.

General measures (irritant for the eyes)

Identify the potential areas of indirect contact with the skin.

Wear protective gloves (in fulfilment of standards EN374) if contact with the skin is considered probable.

Immediately clean up any spillage/contamination when they happen.

In case of contact, immediately wash exposed skin.

Provide suitable information for workers to prevent / minimise risks due to exposure; report any skin problems that arise.

For activities posing a high probability of spreading particles of the substance (for example, spray techniques), it may be necessary to implement additional skin protection measures, such as impermeable clothing and protective masks.

In case of airborne spread of the substance or mixture, use a breathing apparatus.

Use safety goggles with side shields for eye protection, in accordance with the requisites set forth in standards EN 166.

General measures applicable to all activities

None

SECTION 3



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ESTIMATE OF EXPOSURE AND REFERENCE TO ITS SOURCE

ENVIRONMENT

L-(+)- Lactic Acid is not classified as hazardous to the environment.

No quantitative estimate was carried out in terms of exposure for the environment.

HEALTH

L-(+)-Lactic Acid is classified as an irritant for eyes and skin; this means that, in accordance with Chapter E of the REACH regulation, a qualitative characterisation is carried out on the risk due to exposure of skin and eyes.

No quantitative estimate was carried out in terms of exposure of skin and eyes.

SECTION 4

ENVIRONMENT

WORKERS

GUIDE FOR THE DOWNSTREAM USER TO ASSESS WHETHER TO OPERATE WITHIN THE LIMITS DEFINED BY THE EXPOSURE SCENARIO

Not applicable

The available hazard data does not make it possible to establish derived no-effect levels (DNEL) for the irritating effects on skin and eyes. The risk management measures are defined based on a qualitative characterisation of the risk.

The available hazard data does not make it necessary to establish DNELs for other possible health effects. Workers are advised to refer to the professional exposure limits set forth in the regulation in force, or other equivalent values.

If additional risk / operating condition management measures are adopted, the workers must ensure that they are implemented at an equal level, at least.