



Jarefin bv ovve bvba  
9051 Sint-Denijs-Westrem

Date printed 19.03.2024, Revision 22.03.2023

Version 1.1. Supersedes version: 1.0

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

### 1.1 Product identifier

**CLEAN-X® Lime Scale Remover RTU**  
**UFI: 0F7M-H4KE-120U-KG7Y**

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

#### 1.2.1 Relevant uses

Decalcifying agent

#### 1.2.2 Uses advised against

None known.

### 1.3 Details of the supplier of the safety data sheet

#### Company

Jarefin bv ovve bvba  
Poolse-Winglaan 90  
9051 Sint-Denijs-Westrem / BELGIUM  
Phone +32 9 228 33 23  
Homepage <https://www.jarefin.be/>  
E-mail [info@unelko.be](mailto:info@unelko.be)

#### Manufacturer

UNELKO CORPORATION  
1616 W. Williams Dr.  
AZ 85027 Phoenix / USA  
Phone +1.480. 991.7272  
Fax 480.483.7674  
Homepage [www.unelko.com](http://www.unelko.com)  
E-mail [info@unelko.com](mailto:info@unelko.com)

#### Address enquiries to

##### Technical information

[info@unelko.be](mailto:info@unelko.be)

##### Safety Data Sheet

[info@unelko.be](mailto:info@unelko.be)

### 1.4 Emergency telephone number

#### Company

+32 9 228 33 23

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Skin Irrit. 2: H315 Causes skin irritation.  
Eye Irrit. 2: H319 Causes serious eye irritation.

### 2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

#### Hazard pictograms



#### Signal word

WARNING

#### Hazard statements

H315 Causes skin irritation.  
H319 Causes serious eye irritation.

#### Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves / eye protection / face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice / attention.

#### Cleaner, 648/2004/CE, contains:

< 5% non-ionic surfactants



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### 2.3 Other hazards

Other hazards

Further hazards were not determined with the current level of knowledge.

## SECTION 3: Composition / Information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

The product is a mixture.

Range [%]	Substance
1 - 5	Citric acid CAS: 77-92-9, EINECS/ELINCS: 201-069-1, EU-INDEX: 607-750-00-3 GHS/CLP: Eye Irrit. 2: H319 - STOT SE 3: H335
1 - < 3	Glycolic acid CAS: 79-14-1, EINECS/ELINCS: 201-180-5 GHS/CLP: Skin Corr. 1B: H314 - Acute Tox. 4: H302

Comment on component parts

For full text of H-statements: see SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.  
Remove affected person from danger area, lay down.

Inhalation

Ensure supply of fresh air.  
Remove the victim into fresh air and keep him calm.  
In the event of symptoms seek medical treatment.  
If breathing is irregular or stopped, administer artificial respiration.  
Consult a doctor immediately.

Skin contact

In case of contact with skin wash off immediately with water.  
Consult a doctor if skin irritation persists.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.

Ingestion

Do not induce vomiting.  
Rinse out mouth and give plenty of water to drink.  
Consult a doctor immediately.  
Never give anything by mouth to an unconscious person.  
In case of spontaneous vomiting, keep the head below the hips to prevent aspiration.

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

Redness  
Cough  
Nausea, vomiting.

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

Treat symptomatically.  
Forward this sheet to your doctor.

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used

Full water jet



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## 5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

Carbon monoxide (CO)

Carbon dioxide (CO<sub>2</sub>)

## 5.3 Advice for firefighters

Use self-contained breathing apparatus.

Collect contaminated firefighting water separately, must not be discharged into the drains.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Wear suitable protective equipment. For personal protection see SECTION 8.

High risk of slipping due to leakage/spillage of product.

Remove persons to safety.

### 6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

### 6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).

Dispose of absorbed material in accordance with the regulations.

### 6.4 Reference to other sections

See SECTION 8+13

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Use only in well-ventilated areas.

Avoid contact with eyes and skin. Use personal protective equipment.

Keep out of reach of children and domestic animals.

Wash face and/or hands before break and end of work.

Do not eat, drink or smoke when using this product.

Take off contaminated clothing and wash before reuse.

Use barrier skin cream.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Do not store with alkalis.

Do not store together with oxidizing agents.

Do not store together with food and animal food/diet.

Keep container tightly closed.

Keep container in a well-ventilated place.

Protect from heat/overheating and from sun.

Store in a dry place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

storage class (TRGS 510)

Storage class 12 (VCI)

### 7.3 Specific end use(s)

See product use, SECTION 1.2



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## SECTION 8: Exposure controls / personal protection

### 8.1 Control parameters

#### Ingredients with occupational exposure limits to be monitored DE (TRGS 900)

Substance
Citric acid
CAS: 77-92-9, EINECS/ELINCS: 201-069-1, EU-INDEX: 607-750-00-3
Exposure limit: 2 mg/m <sup>3</sup> , E, DFG, Y
Factor: 2 (I)

#### Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

not relevant

#### DNEL

Substance
Citric acid, CAS: 77-92-9
There are no DNEL values established for the substance.

#### PNEC

Substance
Citric acid, CAS: 77-92-9
freshwater, 0,44 mg/L
seawater, 0,044 mg/L
sewage treatment plants (STP), 1000 mg/L
sediment (freshwater), 34,6 mg/kg sediment dw
sediment (seawater), 3,46 mg/kg sediment dw
soil, 33,1 mg/kg soil dw

### 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
<b>Eye protection</b>	Safety glasses. (EN 166:2001)
<b>Hand protection</b>	> 0,11 mm, Butyl rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
<b>Skin protection</b>	Protective clothing (EN 340)
<b>Other</b>	Avoid contact with eyes and skin. Do not breathe vapour/spray. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
<b>Respiratory protection</b>	Not required under normal conditions. In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, filter A. (DIN EN 14387)
<b>Thermal hazards</b>	not applicable
<b>Delimitation and monitoring of the environmental exposition</b>	Comply with applicable environmental regulations limiting discharge to air, water and soil.



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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	Liquid
Form	liquid
Color	whitish white
Odor	characteristic
Odour threshold	No information available.
pH-value	3
pH-value [1%]	No information available.
Boiling point or initial boiling point and boiling range [°C]	100
Flash point [°C]	not applicable
Flammability	The product is not combustible.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm <sup>3</sup> ]	1,05
Relative density	No information available.
Bulk density [kg/m <sup>3</sup> ]	not applicable
Solubility in water	soluble
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not applicable
Kinematic viscosity	not relevant
Relative vapour density	No information available.
Melting point [°C]	0
Auto-ignition temperature [°C]	No information available.
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

### 9.2 Other information

none

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known if used as directed.

### 10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

### 10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.  
Reactions with strong acids and alkalies.

### 10.4 Conditions to avoid

No information available.



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#### 10.5 Incompatible materials

See SECTION 10.3.

#### 10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.  
In the event of fire: See SECTION 5.



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## SECTION 11: Toxicological information

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

#### Acute oral toxicity

Product
Based on the available information, the classification criteria are not fulfilled.
Substance
Glycolic acid, CAS: 79-14-1
LD50, oral, Rat, 1950 mg/kg
Citric acid, CAS: 77-92-9
LD50, oral, mouse, 5400 mg/kg

#### Acute dermal toxicity

Product
Based on the available information, the classification criteria are not fulfilled.
Substance
Citric acid, CAS: 77-92-9
LD50, dermal, > 2000 mg/kg

#### Acute inhalational toxicity

Product
Based on the available information, the classification criteria are not fulfilled.
Substance
Glycolic acid, CAS: 79-14-1
LC50, inhalative, Rat, > 5,2 mg/l/4h

#### Serious eye damage/irritation

Irritant  
Calculation method

Substance
Citric acid, CAS: 77-92-9
Eye, Rabbit, OECD 405, irritant

#### Skin corrosion/irritation

Irritant  
Calculation method

Substance
Citric acid, CAS: 77-92-9
dermal, Rabbit, OECD 404, non-irritating

#### Respiratory or skin sensitisation

Based on the available information, the classification criteria are not fulfilled.

#### Specific target organ toxicity — single exposure

Based on the available information, the classification criteria are not fulfilled.

#### Specific target organ toxicity — repeated exposure

Based on the available information, the classification criteria are not fulfilled.

Substance
Citric acid, CAS: 77-92-9
LD50, oral, Rat, 5660 mg/kg bw/day (10d), The effects observed are not sufficient for classification.
NOAEL, oral, Rat, 4000 mg/kg bw/day (10d), The effects observed are not sufficient for classification.



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**Mutagenicity** Based on the available information, the classification criteria are not fulfilled.

Substance
Citric acid, CAS: 77-92-9
in vitro, no adverse effect observed

**Reproduction toxicity** Based on the available information, the classification criteria are not fulfilled.

**Carcinogenicity** Based on the available information, the classification criteria are not fulfilled.

**Aspiration hazard** Based on the available information, the classification criteria are not fulfilled.

**General remarks**  
Toxicological data of complete product are not available.

## 11.2 Information on other hazards

**11.2.1 Endocrine disrupting properties** No information available.

**11.2.2 Other information** none

## SECTION 12: Ecological information

### 12.1 Toxicity

Substance
Glycolic acid, CAS: 79-14-1
LC50, (96h), Pimephales promelas, 164 mg/l
EC50, (48h), Daphnia magna, 141 mg/l
IC50, (72h), Pseudokirchneriella subcapitata, 44 mg/l
EC0, (24h), Bacteria, > 1000 mg/l
Citric acid, CAS: 77-92-9
LC50, (48h), fish, 440 mg/l
LC50, (24h), Daphnia magna, 1535 mg/l
LC50, (8d), Algae, 425 mg/l

### 12.2 Persistence and degradability

**Behaviour in environment compartments** No information available.

**Behaviour in sewage plant** No information available.

**Biological degradability**  
The surfactants contained in this preparation 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.

### 12.3 Bioaccumulative potential

No information available.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

No information available.





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## 12.6 Endocrine disrupting properties

No information available.

## 12.7 Other adverse effects

Ecological data of complete product are not available.

Do not discharge product unmonitored into the environment or into the drainage.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

#### Product

Coordinate disposal with the authorities if necessary.

#### Waste no. (recommended)

070601\*  
200129\*

#### Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Packaging that cannot be cleaned should be disposed of as for product.

#### Waste no. (recommended)

150110\* packaging containing residues of or contaminated by hazardous substances

## SECTION 14: Transport information

### 14.1 UN number or ID number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

### 14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"



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#### 14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

#### 14.4 Packing group

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

#### 14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

#### 14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

#### 14.7 Maritime transport in bulk according to IMO instruments

not applicable



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## SECTION 15: Regulatory information

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

<b>EEC-REGULATIONS</b>	2008/98/EG (2000/532/EC ); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EWG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex I (REACH)	The product is not subject to Annex I restrictions.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances $\geq 0.1\%$ that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains $\geq 0.1\%$ of substances with the following restrictions. 75 According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.
<b>TRANSPORT-REGULATIONS</b>	ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2024)
<b>NATIONAL REGULATIONS (DE):</b>	Hazardous Substances Ordinance - GefStoffV 21.07.2021; Detergent and Cleaning Agents Act - WRMG; Federal Water Act - WHG; Technical Rule for Hazardous Substances - TRGS: 200, 220, 615, 900, 905.
- Water hazard class	1, conf. AwSV, 18.04.2017
- Decree for case of interference, observe limits	not applicable
- Class. according to TA-Luft	5.2.5.
<b>Storage class (TRGS 510)</b>	Storage class 12 (VCI)
- Observe employment restrictions for people	Observe employment restrictions for young people. The product is classified as non-hazardous in the sense of the 2012/18/EU (Seveso III) Directive.
- VOC (2010/75/CE)	not applicable
- Other regulations	TRGS 510: Storage of hazardous substances in non-stationary containers

### 15.2 Chemical safety assessment

For this product a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### 16.1 Hazard statements (SECTION 3)

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H319 Causes serious eye irritation.



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## 16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route  
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses  
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure  
ATE = acute toxicity estimate  
CAS = Chemical Abstracts Service  
CLP = Classification, Labelling and Packaging  
DMEL = Derived Minimum Effect Level  
DNEL = Derived No Effect Level  
EC50 = Median effective concentration  
ECB = European Chemicals Bureau  
EEC = European Economic Community  
EINECS = European Inventory of Existing Commercial Chemical Substances  
EL50 = Median effective loading  
ELINCS = European List of Notified Chemical Substances  
EmS = Emergency Schedules  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
IC50 = Inhibition concentration, 50%  
IMDG = International Maritime Code for Dangerous Goods  
IUCLID = International Uniform Chemical Information Database  
IVIS = In vitro irritation score  
LC50 = Lethal concentration, 50%  
LD50 = Median lethal dose  
LC0 = lethal concentration, 0%  
LOAEL = lowest-observed-adverse-effect level  
LL50 = Median lethal loading  
LQ = Limited Quantities  
MARPOL = International Convention for the Prevention of Marine Pollution from Ships  
NOAEL = No Observed Adverse Effect Level  
NOEC = No Observed Effect Concentration  
PBT = Persistent, Bioaccumulative and Toxic substance  
PNEC = Predicted No-Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals  
STP = Sewage Treatment Plant  
TLV@TWA = Threshold limit value – time-weighted average  
TLV@STEL = Threshold limit value – short-time exposure limit  
VOC = Volatile Organic Compounds  
vPvB = very Persistent and very Bioaccumulative

## 16.3 Other information

### Classification procedure

Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)  
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)

### Modified position

2.2, 12.2

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