

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

### 1.1 Product identifier

Trade name Lochinvar Descale Liquid  
Alternative number(s) Article number: 0311434

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

Relevant identified uses washing and cleaning products (including solvent based products)  
professional use  
Uses advised against Do not use for private purposes (household).

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

Lochinvar Ltd.  
8 Lombard Way  
Banbury, Oxfordshire OX16 4TJ  
United Kingdom

Telephone: +44 (0) 1295 269 981  
e-mail: info@lochinvar.ltd.uk

### 1.4 Emergency telephone number

Emergency information service +31 (0)40-2942500  
This number is only available during the following  
office hours: Mon-Fri 09:00 AM - 05:00 PM

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	1	Skin Corr. 1	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16.

### 2.2 Label elements

Labelling

- Signal word danger

- Pictograms

GHS05



- Hazard statements

H314 Causes severe skin burns and eye damage.

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## - Precautionary statements

- P260 Do not breathe mist/vapours.  
P280 Wear protective gloves/eye 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].  
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/doctor.

## - Supplemental hazard information

- EUH071 Corrosive to the respiratory tract.

## - Hazardous ingredients for labelling

L-(+)-lactic acid, phosphoric acid ... %

**2.3 Other hazards**

## Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0,1\%$ .

## Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not relevant (mixture)

**3.2 Mixtures**

## Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
L-(+)-lactic acid	CAS No 79-33-4  EC No 201-196-2  Index No 607-743-00-5	25 – < 50	Skin Corr. 1C / H314 Eye Dam. 1 / H318
phosphoric acid ... %	CAS No 7664-38-2  EC No 231-633-2  Index No 015-011-00-6	5 – < 10	Met. Corr. 1 / H290 Skin Corr. 1B / H314 Eye Dam. 1 / H318
Citric acid	CAS No 77-92-9  EC No 201-069-1  Index No 607-750-00-3	5 – < 10	Eye Irrit. 2 / H319 STOT SE 3 / H335

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
phosphoric acid ... %	Skin Corr. 1B; H314: $C \geq 25\%$ Skin Irrit. 2; H315: $10\% \leq C < 25\%$ Eye Dam. 1; H318: $C \geq 25\%$ Eye Irrit. 2; H319: $10\% \leq C < 25\%$	-	-	

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**Remarks**

For full text of abbreviations: see SECTION 16

**SECTION 4: First aid measures****4.1 Description of first aid measures****General notes**

Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

**Following inhalation**

Provide fresh air.

**Following skin contact**

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.

**Following eye contact**

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Call a doctor.

**Following ingestion**

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. IF exposed or concerned: Call a doctor.

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

Following eye contact. Following skin contact. Localised redness. Irritability. Causes tears.

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

none

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

Non-combustible

**Unsuitable extinguishing media**

Not useful, not meaningful, not applicable

**5.2 Special hazards arising from the substance or mixture**

none

**Hazardous combustion products**

No known hazardous decomposition products

**5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Wear self-contained breathing apparatus. Chemical protection suit.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wearing of 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.

**6.2 Environmental precautions**

Keep away from drains, surface and ground water.

**6.3 Methods and material for containment and cleaning up****Advice on how to contain a spill**

Bunding

**Advice on how to clean up a spill**

Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

### 6.4 Reference to other sections

Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

- Handling of incompatible substances or mixtures

Do not mix with alkali.

- Keep away from

Caustic solutions

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Keep away from food, drink and animal feedingstuffs.

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

Control of effects

Protect against external exposure, such as  
frost

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

See section 16 for a general overview.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	orthophosphoric acid	7664-38-2	WEL		1		2				EH40/2005

#### Notation

Ceiling-C ceiling value is a limit value above which exposure should not occur

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

### 8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

### Eye/face protection



Wear eye/face protection.

### Skin protection

#### - Hand protection



Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. 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.

#### - Type of material

CR: chloroprene (chlorobutadiene) rubber, IIR: isobutene-isoprene (butyl) rubber, FKM: fluoro-elastomer, Nitrile

#### - Material thickness

>0.5mm

#### - Breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### - Other protection measures

Wash hands thoroughly after handling.

### Respiratory protection

Use local and general ventilation.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	red
Odour	characteristic
Melting point/freezing point	0 °C at 1,013 hPa
Boiling point or initial boiling point and boiling range	100 °C at 1,013 hPa
Flammability	non-combustible
Lower and upper explosion limit	not relevant
Flash point	not relevant
Auto-ignition temperature	not applicable
Decomposition temperature	not relevant
pH (value)	1 (in aqueous solution: 100 vol%, 20 °C) 2.4 (in aqueous solution: 1 vol%) (acid)
Kinematic viscosity	not determined

### Solubility(ies)

Water solubility	miscible in any proportion
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### Partition coefficient

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Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	not determined
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**Density and/or relative density**

Density	1.2 g/cm <sup>3</sup> at 20 °C
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)
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**9.2 Other information**

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
	there is no additional information

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

**10.2 Chemical stability**

See below "Conditions to avoid".

**10.3 Possibility of hazardous reactions**

No known hazardous reactions.

**10.4 Conditions to avoid**

There are no specific conditions known which have to be avoided.

**10.5 Incompatible materials**

Oxidisers

**10.6 Hazardous decomposition products**

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

Test data are not available for the complete mixture.

**Classification procedure**

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**Classification acc. to GHS****Acute toxicity**

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful in contact with skin.

**Skin corrosion/irritation**

Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation**

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Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Other information

Corrosive to the respiratory tract.

**11.2 Information on other hazards**

There is no additional information.

**SECTION 12: Ecological information****12.1 Toxicity**

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
L-(+)-lactic acid	79-33-4	EC50	130 mg/l	aquatic invertebrates	48 h
L-(+)-lactic acid	79-33-4	ErC50	3.5 g/l	algae	72 h
phosphoric acid ... %	7664-38-2	EC50	>100 mg/l	aquatic invertebrates	48 h
phosphoric acid ... %	7664-38-2	ErC50	>100 mg/l	algae	72 h

Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
L-(+)-lactic acid	79-33-4	EC50	>88.2 mg/l	microorganisms	3 h
phosphoric acid ... %	7664-38-2	EC50	>1,000 mg/l	microorganisms	3 h

**12.2 Persistence and degradability**

The surfactant contained in this preparation complies with the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents. The relevant substances of the mixture are readily biodegradable.

**12.3 Bioaccumulative potential**

Data are not available.

**12.4 Mobility in soil**

Data are not available.

**12.5 Results of PBT and vPvB assessment**

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0,1\%$ .

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**12.6 Endocrine disrupting properties**

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

**12.7 Other adverse effects**

Data are not available.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

Waste treatment of containers/packagings

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

**Remarks**

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

**SECTION 14: Transport information****14.1 UN number or ID number**

ADR/RID	UN 1760
IMDG-Code	UN 1760
ICAO-TI	UN 1760

**14.2 UN proper shipping name**

ADR/RID	CORROSIVE LIQUID, N.O.S.
IMDG-Code	CORROSIVE LIQUID, N.O.S.
ICAO-TI	Corrosive liquid, n.o.s.
Technical name (hazardous ingredients)	L-(+)-lactic acid, phosphoric acid ... %

**14.3 Transport hazard class(es)**

ADR/RID	8
IMDG-Code	8
ICAO-TI	8

**14.4 Packing group**

ADR/RID	III
IMDG-Code	III
ICAO-TI	III

**14.5 Environmental hazards**

non-environmentally hazardous acc. to the dangerous goods regulations

**14.6 Special precautions for user**

Provisions for dangerous goods (ADR) should be complied within the premises.

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

The cargo is not intended to be carried in bulk.

**Information for each of the UN Model Regulations****Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) -**



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### Additional information

Classification code C9

Danger label(s) 8



Special provisions (SP) 274

Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L

Transport category (TC) 3

Tunnel restriction code (TRC) E

Hazard identification No 80

Emergency Action Code 2X

### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) - Additional information

Classification code C9

Danger label(s) 8



Special provisions (SP) 274

Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L

Transport category (TC) 3

Hazard identification No 80

### International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant -

Danger label(s) 8



Special provisions (SP) 223, 274

Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L

EmS F-A, S-B

Stowage category A

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Danger label(s) 8



Special provisions (SP) A3

Excepted quantities (EQ) E1

Limited quantities (LQ)

1 L

### SECTION 15: Regulatory information

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

##### Relevant provisions of the European Union (EU)

##### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

##### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

none of the ingredients are listed

##### Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

##### National regulations (GB)

##### List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

#### 15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

### SECTION 16: Other information

#### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.1	Alternative number(s): PR010	Alternative number(s): Article number: 0311434	yes
1.2	Relevant identified uses: professional use	Relevant identified uses: washing and cleaning products (including solvent based products) professional use	yes
1.4	Emergency information service: This number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM	Emergency information service: +31 (0)40-2942500 This number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM	yes
2.2		- Precautionary statements: change in the listing (table)	yes
2.3	Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$ .	Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$ .	yes
2.3	Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$ .	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$ .	yes
3.2		Description of the mixture: change in the listing (table)	yes
3.2		Description of the mixture: change in the listing (table)	yes
3.2		Remarks: For full text of abbreviations: see SECTION 16	yes
4.1	General notes: Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist,	General notes: Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist,	yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
	seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).	seek medical advice.	
4.2	Most important symptoms and effects, both acute and delayed: Symptoms and effects are not known to date.	Most important symptoms and effects, both acute and delayed: Following eye contact. Following skin contact. Localised redness. Irritability. Causes tears.	yes
6.2	Environmental precautions: Keep away from drains, surface and ground water. Other information relating to spills and releases. Dilute with plenty of water.	Environmental precautions: Keep away from drains, surface and ground water.	yes
6.3	Other information relating to spills and releases: Avoid contact with contaminated tools and objects. Place in appropriate containers for disposal.		yes
12.5	Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$ .	Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$ .	yes
12.6	Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$ .	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$ .	yes
15.1	Restrictions according to GB REACH, Annex 17		yes
15.1		Dangerous substances with restrictions (GB REACH, Annex 17): change in the listing (table)	yes
16		Abbreviations and acronyms: change in the listing (table)	yes
16		List of relevant phrases (code and full text as stated in section 2 and 3): change in the listing (table)	yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule

Abbr.	Descriptions of used abbreviations
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
Met. Corr.	Substance or mixture corrosive to metals
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

# Safety Data Sheet

acc. to according to Regulation (EC) No. 1907/2006 (REACH)

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Code	Text
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.