

**SAFETY DATA SHEET****NOVADAN®****Lime 374****NOVADAN®**

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued 09.05.2019

Revision date 15.12.2020

**1.1. Product identifier**

Product name Lime 374

UFI D0N1-2080-A00T-S394

Article no. 24631

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

Use of the substance / preparation Acidic descaler.

Main intended use PC-CLN-4 Descaling products

Relevant identified uses

- SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- SU22 Professional uses: publicly accessible (administration, education, entertainment, services, craftsmen)
- PC35 Washing and cleaning products (including solvent based products)
- PROC2 Use in closed, continuous process with occasional controlled exposure
- PROC8a Transfer of substance or mixture (charging and discharging) at nondedicated facilities
- ERC8A Wide dispersive indoor use of processing aids in open systems

Uses advised against No specific uses advised against are identified.

**1.3. Details of the supplier of the safety data sheet**

Company name Novadan ApS

Postal address Platinvej 21

Postcode DK-6000

City Kolding

Country Danmark

Telephone number + 45 76 34 84 00

Fax + 45 75 50 43 70

Email	<a href="mailto:sds@novadan.dk">sds@novadan.dk</a>
Website	<a href="http://www.novadan.dk">www.novadan.dk</a>

## 1.4. Emergency telephone number

Emergency telephone	Description: UK: NHS: 111 EI: National Poisons Information Centre, 24/7: 01 809 2166
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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Skin Corr. 1B; H314; Calculation method
Substance / mixture hazardous properties	Eye Dam. 1; H318; Calculation method
Additional information on classification	For further information, please refer to section 11.  The informations stated in this MSDS, applies for the concentrated product. See Sec. 16, for informations regarding recommended user solutions

### 2.2. Label elements

#### Hazard pictograms (CLP)



Composition on the label	Methane sulphonic acid
Signal word	Danger
Hazard statements	H314 Causes severe skin burns and eye damage.
Precautionary statements	P280 Wear protective gloves / protective clothing / eye protection / face protection. P303+P361+P353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / 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 or doctor / physician.

### 2.3. Other hazards

Physicochemical effects	In contact with compounds containing chlorine, toxic gases may form. Generates strong heat in contact with alkaline compounds, risk of bumping.
Health effect	Corrosive to skin and eyes. May cause permanent damage to the eyes, especially if the product is not washed away IMMEDIATELY. See section 11 for additional information on health hazards.
Environmental effects	Substantial amounts of the product may lead to a local change in acidity in small water systems which may have adverse effects on aquatic organisms. This product does not contain any PBT or vPvB substances.
Other hazards	No evidence for endocrine disrupting properties.

## SECTION 3: Composition / information on ingredients

### 3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Methane sulphonic acid	CAS No.: 75-75-2	Skin Corr 1B; H314	5 – 15 %	
	EC No.: 200-898-6	Met. Corr. 1; H290		
	Index No.: 607-145-00-4	Acute tox. 4; H302		
	REACH Reg. No.:	Acute tox. 4; H312		
	01-2119491166-34-xxxx	Eye Dam. 1; H318 STOT SE3; H335		
Citric acid, monohydrate	CAS No.: 5949-29-1	Eye Irrit. 2; H319	1 – 5 %	
	EC No.: 201-069-1			
	REACH Reg. No.:			
	01-2119457026-42-xxxx			
Substance comments	The full text for all hazard statements is displayed in section 16. Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents: The product contains no substances subject to disclosure requirements.			

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General	Remove affected person from source of contamination.
Inhalation	Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions.
Skin contact	Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention if any discomfort continues.
Eye contact	Important! Immediately rinse with water for at least 15 minutes. May cause permanent damage if eye is not immediately irrigated. Make sure to remove any contact lenses from the eyes before rinsing. Immediately transport to hospital or eye specialist. Continue flushing during transport to hospital.
Ingestion	Immediately rinse mouth and drink plenty of water. Call an ambulance. Bring along these instructions. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Do not give victim anything to drink if he is unconscious.
Recommended personal protective equipment for first aid responders	Wear necessary protective equipment. For personal protection, see section 8.

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

Acute symptoms and effects	Strongly corrosive. May cause deep tissue damage. Strongly corrosive. Causes severe burns and serious eye damage. Immediate first aid is imperative.
Delayed symptoms and effects	The etching penetrates deeply into the tissue and is first noticed after a while.

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

Other information

In case of unconsciousness, ingestion or eye contact: Immediately call a doctor / ambulance. Show this safety data sheet.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

### 5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards

This product is not flammable. During fire, gases hazardous to health may be formed. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.

### 5.3. Advice for firefighters

Personal protective equipment

Wear necessary protective equipment. For personal protection, see section 8.

Fire fighting procedures

Reference is made to the company fire procedure. If risk of water pollution occurs, notify appropriate authorities. Avoid breathing fire vapours.

## SECTION 6: Accidental release measures

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

Personal protection measures

Look out! The product is corrosive. Use protective gloves, goggles and suitable protective clothing. In case of inadequate ventilation use suitable respirator. For personal protection, see section 8.

### 6.2. Environmental precautions

Environmental precautionary measures

Avoid discharge into water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.

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

Cleaning method

Dam and absorb spillage with sand, sawdust or other absorbent. Wash contaminated area with water.

### 6.4. Reference to other sections

Other instructions

See section 8 and section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Handling

Avoid contact with skin and eyes. Do not mix with hypochlorite containing products: toxic chlorine vapors may be formed. Use work methods which minimize spreading of vapours, dust, smoke, aerosols, splashes etc. to the extent technically possible.

### Protective safety measures

Advice on general occupational hygiene

Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site.  
Eating, smoking and water fountains prohibited in immediate work area.  
Take off contaminated clothing and personal protective equipment before entering an eating area..

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

Storage

Store in tightly closed original container. Keep away from food, drink and animal feeding stuffs. Store away from: Chlorine and Alkalies.

## Conditions for safe storage

Storage temperature

Value: 0 – 35 °C

Storage stability

Durability: 36 months.

## 7.3. Specific end use(s)

Specific use(s)

The identified uses for this product are detailed in Section 1.2.

# SECTION 8: Exposure controls / personal protection

## 8.1. Control parameters

Control parameters comments

No data recorded.

## DNEL / PNEC

Substance

Methane sulphononic acid

DNEL

**Group:** Professional

**Route of exposure:** Lang sigt (gentages) – Indånding – Lokal effekt

**Value:** 2,89 mg/m<sup>3</sup>

**Reference:** Supplier MSDS

**Group:** Professional

**Route of exposure:** Lang sigt (gentages) – Dermal – Systemisk virkning

**Value:** 19,44 mg/kg

**Reference:** Supplier MSDS

**Group:** Consumer

**Route of exposure:** Lang sigt (gentages) – Dermal – Systemisk virkning

**Value:** 8,33 mg/kg

**Reference:** Supplier MSDS

**Group:** Consumer

**Route of exposure:** Kort sigt (akut) – Indånding – Systemisk virkning

**Value:** 1,44 mg/m<sup>3</sup>

**Reference:** Supplier MSDS

**Group:** Consumer

**Route of exposure:** Lang sigt (gentages) – Indånding – Systemisk virkning

**Value:** 1,44 mg/m<sup>3</sup>

**Reference:** Supplier MSDS

PNEC

**Route of exposure:** Water

**Value:** 0,012 mg/l

**Reference:** Fresh water, Supplier MSDS

**Route of exposure:** Sewage treatment plant STP

**Value:** 100 mg/l

**Reference:** Supplier MSDS

**Route of exposure:** Water

**Value:** 0,0012 mg/l

**Reference:** Sea water, Supplier MSDS Fresh water, Supplier MSDS

**Route of exposure:** Air

**Value:** 0,12 mg/l

**Reference:** Supplier MSDS

**Route of exposure:** Sediment

**Value:** 0,0251 mg/kg

**Reference:** Fresh water, Supplier MSDS Sea water, Supplier MSDS

**Route of exposure:** Soil

**Value:** 0,00183 mg/kg

**Reference:** Supplier MSDS

## 8.2. Exposure controls

### Safety signs



### Precautionary measures to prevent exposure

Technical measures to prevent exposure

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. An eye wash bottle must be available at the work site.

### Eye / face protection

Suitable eye protection

Wear approved safety goggles. EN 166.

### Hand protection

Skin- / hand protection, long term contact

Use protective gloves made of:  
Butyl rubber.  $\geq 0,7$  mm  
Neoprene.  $\geq 0,5$  mm  
EN 374.

Breakthrough time

Value:  $\geq 480$  minute(s)

Hand protection, comments

Manufacturer's directions for use should be observed because of great diversity of types.  
The recommendation is a qualified estimate based on knowledge of the components.

### Skin protection

Additional skin protection measures

Wear apron or protective clothing in case of contact. Wear rubber footwear.

## Respiratory protection

Respiratory protection necessary at

Under normal conditions of use respiration protection should not be required.

## Thermal hazards

Thermal hazards

See section 5.

## Appropriate environmental exposure control

Environmental exposure controls

See section 6.

# SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Colourless.
Odour limit	Comments: Not relevant.
pH	Status: In delivery state Value: < 1,0  Status: In aqueous solution Value: ~ 1,5 Comments: 15°dH Concentration: 5 %
Melting point / melting range	Value: – 6 °C
Boiling point / boiling range	Comments: No data recorded.
Flash point	Comments: Not relevant.
Evaporation rate	Comments: Not relevant.
Flammability	Not relevant.
Explosion limit	Comments: Not relevant.
Vapour pressure	Comments: Not relevant.
Bulk density	Value: ~ 1,05 kg/l
Solubility	Comments: Completely soluble in water.
Partition coefficient: n-octanol/water	Comments: Not relevant.
Auto-ignition temperature	Comments: Not relevant.
Decomposition temperature	Comments: Not relevant.
Viscosity	Comments: Not determined.
Explosive properties	Not explosive.
Oxidising properties	Does not meet the criteria for oxidising.

## 9.2. Other information

### 9.2.2. Other safety characteristics

Comments	No data recorded.
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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### 10.2. Chemical stability

Stability	Stable under normal temperature conditions and recommended use.
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### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Liberates toxic gases when mixed with chlorine containing products. Reacts with alkalis and generates heat. Risk of bumping (splashes).
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### 10.4. Conditions to avoid

Conditions to avoid	Strong alkalis. Chlorine containing products. Corrodes aluminum and other light metals, as well as zinc, brass, lead, tin, etc.
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### 10.5. Incompatible materials

Materials to avoid	Alkali-sensitive metals such as aluminium, tin, lead and zinc and alloys with these metals.
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### 10.6. Hazardous decomposition products

Hazardous decomposition products	During fire, toxic gases (CO, CO <sub>2</sub> , NO <sub>x</sub> ) are formed.
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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Substance	Citric acid, monohydrate
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Acute toxicity	<b>Type of toxicity:</b> Acute <b>Effect tested:</b> LD50 <b>Route of exposure:</b> Oral <b>Value:</b> 3000 mg/kg <b>Animal test species:</b> Rat  <b>Type of toxicity:</b> Acute <b>Effect tested:</b> LD50 <b>Route of exposure:</b> Oral <b>Value:</b> 5400 mg/kg <b>Animal test species:</b> Mice
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Other toxicological data	Toxicological tests on the product has not been performed.
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## Other information regarding health hazards

Assessment of acute toxicity, classification	No evidence for acute toxicity.
Inhalation	Aerosols may be corrosive. Inhalation may cause: Serious damage to the lining of nose, throat and lungs.
Skin contact	Strongly corrosive. May cause deep tissue damage.
Eye contact	Strongly corrosive. Causes severe burns. Immediate first aid is imperative. May cause permanent damage to the eyes, especially if the product is not washed away IMMEDIATELY.
Ingestion	Strongly corrosive. Even small amounts may be fatal. Symptoms are severe burning pains in mouth, throat and stomach.
Sensitisation	No evidence for respiratory nor skin sensitization.
Assessment of germ cell mutagenicity, classification	No evidence for germ cell mutagenicity.
Assessment of carcinogenicity, classification	No evidence for carcinogenicity.
Assessment of reproductive toxicity, classification	No evidence for reproductive toxicity.
Assessment of specific target organ toxicity - single exposure, classification	No evidence for STOT-single exposure.
Assessment of specific target organ toxicity - repeated exposure, classification	No evidence for STOT-repeated exposure.
Assessment of aspiration hazard, classification	No evidence for aspiration hazard.

## 11.2 Other information

Endocrine disruption	No evidence for endocrine disrupting properties.
Other information	No specific symptoms noted.

## SECTION 12: Ecological information

### 12.1. Toxicity

Substance	Methane sulphonic acid
Aquatic toxicity, fish	<b>Value:</b> 10 – 100 mg/l <b>Test duration:</b> 96h <b>Species:</b> Oncorhynchus mykiss <b>Method:</b> LC50, OECD 203 <b>Test reference:</b> Supplier MSDS
Substance	Citric acid, monohydrate
Aquatic toxicity, fish	<b>Value:</b> 440-760 mg/L <b>Test duration:</b> 96h <b>Species:</b> Leuciscus idus <b>Method:</b> LC50

Substance	Methane sulphonic acid
Aquatic toxicity, algae	<b>Value:</b> 10 – 100 mg/l <b>Test duration:</b> 72h <b>Species:</b> Selenastrum capricornutum <b>Method:</b> EC50, OECD 201 <b>Test reference:</b> Supplier MSDS
Substance	Citric acid, monohydrate
Aquatic toxicity, algae	<b>Value:</b> 640 mg/L <b>Test duration:</b> 168h <b>Species:</b> Scenedesmus quadricauda <b>Method:</b> EC0
Substance	Methane sulphonic acid
Aquatic toxicity, crustacean	<b>Value:</b> 10 – 100 mg/l <b>Test duration:</b> 48h <b>Species:</b> Daphnia Magna <b>Method:</b> EC50, OECD 202 <b>Test reference:</b> Supplier MSDS
Substance	Citric acid, monohydrate
Aquatic toxicity, crustacean	<b>Value:</b> 120 mg/L <b>Test duration:</b> 72h <b>Species:</b> Daphnia Magna <b>Method:</b> EC100
Ecotoxicity	<p>Large amounts of the product may affect the acidity (pH-factor) in water with possible risk of harmful effects to aquatic organisms.</p> <p>Not classified as dangerous to the environment.</p>

## 12.2. Persistence and degradability

Persistence and degradability description/evaluation      The product is easily biodegradable.

Substance	Methane sulphonic acid
Biodegradability	<b>Value:</b> > 70 % <b>Method:</b> OECD 301A
Substance	Citric acid, monohydrate
Biodegradability	<b>Value:</b> 97% <b>Method:</b> OECD 301B <b>Test period:</b> 28d

## 12.3. Bioaccumulative potential

Bioaccumulation, evaluation      The product is not bioaccumulating.

## 12.4. Mobility in soil

Mobility	The product is water soluble and may spread in water systems.
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## 12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB  
assessment

Not Classified as PBT/vPvB by current EU criteria.

## 12.6. Endocrine disrupting properties

## 12.7. Other adverse effects

Potential endocrine disruptor

Comments: No evidence for endocrine disrupting properties.

Additional ecological information

None.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Appropriate methods of disposal  
for the chemical

Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point.  
Dispose of waste and residues in accordance with local authority requirements.  
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Appropriate methods of disposal  
for the contaminated packaging

Dispose unused product and the packaging in accordance with local requirements.

EWC waste code

EWC waste code: 0706 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics  
Classified as hazardous waste: Yes

EWL packing

EWC waste code: 0706 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics  
Classified as hazardous waste: Yes

Other information

When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste code applies to product remnants in pure form.

## SECTION 14: Transport information

Dangerous goods

Yes

### 14.1. UN number

ADR/RID/ADN

3265

IMDG

3265

ICAO/IATA

3265

### 14.2. UN proper shipping name

Proper shipping name English  
ADR/RID/ADN

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

Technical name/Danger releasing  
substance English ADR/RID/ADN

Methane sulphonic acid

ADR/RID/ADN

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

Technical name/danger releasing  
substance ADR/RID/ADN

Methane sulphonic acid

IMDG	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name/danger releasing substance IMDG	Methane sulphonic acid
ICAO/IATA	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name/danger releasing substance ICAO/IATA	Methane sulphonic acid

### 14.3. Transport hazard class(es)

ADR/RID/ADN	8
Classification code ADR/RID/ADN	C3
IMDG	8
ICAO/IATA	8

### 14.4. Packing group

ADR/RID/ADN	II
IMDG	II
ICAO/IATA	II

### 14.5. Environmental hazards

IMDG Marine pollutant	No
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### 14.6. Special precautions for user

Special safety precautions for user Not relevant.

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

Product name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
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### Additional information

Hazard label ADR/RID/ADN	8
Hazard label IMDG	8
Hazard label ICAO/IATA	8

### ADR/RID Other information

Tunnel restriction code	E
Transport category	2
Hazard No.	80

### IMDG Other information

EmS	F-A, S-B
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## SECTION 15: Regulatory information

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

Other label information

For professional users only.

As a general rule, persons under 18 years of age are not allowed to work with this product. Users must be carefully instructed in the proper work procedure, the dangerous properties of the product and the necessary safety instructions.

Legislation and regulations

The Management of Health and Safety at Work Regulations 1999 (SI 1999 No. 3242), with amendments.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

Miljøministeriets bekendtgørelse nr. 1309 af 18. December 2012 om affald.

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents.

## 15.2. Chemical safety assessment

Chemical safety assessment performed

No

## SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

Training advice

No particular training or education is required but the user must be familiar with this SDS. Users must be carefully instructed in the proper work procedure, the dangerous properties of the product and the necessary safety instructions.

Additional information

READY-TO-USE MIXTURE: 5% H314 Causes severe skin burns and eye damage.

Information added, deleted or revised

Change to Sections: 1, 2, 7, 8, 11, 12, 13, 14, 16

Version

1

Prepared by

MP