

NOVADAN®	SAFETY DATA SHEET	NOVADAN®
Citronsyre		

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	18.12.2019
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Revision date	25.10.2021
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1.1. Product identifier

Product name	Citronsyre
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Synonyms	E330
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Article no.	41338, 56052
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1.2. Relevant identified uses of the substance or mixture and uses advised against

Product group	Descaling agent.
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Main intended use	PC-CLN-4 Descaling products
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Secondary uses	PC-TEC-OTH Other products for chemical or technical processes
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Relevant identified uses	SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites PC35 Washing and cleaning products (including solvent based products) PROC2 Use in closed, continuous process with occasional controlled exposure ERC9A Wide dispersive indoor use of substances in closed systems
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Uses advised against	No specific uses advised against are identified.
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1.3. Details of the supplier of the safety data sheet

Producer

Company name	Novadan ApS
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Postal address	Platinvej 21
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Postcode	DK-6000
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City	Kolding
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Country	Danmark
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Telephone number	+ 45 76 34 84 00
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Fax	+ 45 75 50 43 70
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Email	sds@novadan.dk
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Website www.novadan.dk

1.4. Emergency telephone number

Emergency telephone Description: UK: NHS: 111
 EI: National Poisons Information Centre, 24/7: 01 809 2166

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]

Eye Irrit. 2; H319; Calculation method

Substance / mixture hazardous properties

For further information, please refer to section 11.

2.2. Label elements

Hazard pictograms (CLP)



Signal word

Warning

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

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.

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

Dust has an irritating effect on moist skin. Inhalation of dust may irritate the respiratory system. 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
Citric acid, monohydrate	CAS No.: 5949-29-1 EC No.: 201-069-1 REACH Reg. No.: 01-2119457026-42-xxxx	Eye Irrit. 2; H319	60 - 100 %	
Substance comments	The full text for all hazard statements is displayed in section 16.			

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Remove affected person from source of contamination.
Inhalation	Fresh air. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothes and rinse skin thoroughly with water. Get medical attention if irritation persists after washing.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring these instructions.
Ingestion	Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Get medical attention if any discomfort continues.
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	Irritating to eyes.
Delayed symptoms and effects	No known long term effects.

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

Other information	If unconscious: Call an ambulance/physician immediately. Show this Safety Data Sheet.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
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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.
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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	Wear necessary protective equipment. Avoid contact with eyes. Avoid inhalation of dust. For personal protection, see section 8.
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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.
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6.3. Methods and material for containment and cleaning up

Cleaning method	Collect spillage with shovel, broom or the like. Wash contaminated area with water.
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6.4. Reference to other sections

Other instructions	See section 8 and section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Avoid inhalation of dust. Avoid contact with eyes. Use work methods which minimize spreading of vapours, dust, smoke, aerosols, splashes etc. to the extent technically possible.
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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: Alkalis. Water reactive storage. Store the product away from direct sunlight in opaque containers.
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Conditions for safe storage

Storage temperature	Value: 10 - 30 °C
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Storage stability	Durability: 36 months.
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7.3. Specific end use(s)

Specific use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure controls / personal protection

8.1. Control parameters

DNEL / PNEC

Summary of risk management measures, human	Data lacking.
Summary of risk management measures, environment	Data lacking.

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.

Eye / face protection

Suitable eye protection

Wear dust resistant safety goggles where there is danger of eye contact. EN 166.

Hand protection

Skin- / hand protection, long term contact

Under normal conditions of use gloves are not normally required.

Skin protection

Additional skin protection measures

No special precautions.

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	Powder, dust.
Colour	White.
Odour	No characteristic odour.
pH	Status: In delivery state Comments: Not relevant. Status: In aqueous solution Value: ~ 2,0 Comments: 5%
Melting point / melting range	Value: ~ 135 °C

Boiling point / boiling range	Comments: Not relevant.
Flash point	Comments: Not relevant.
Evaporation rate	Comments: Not relevant.
Explosion limit	Comments: Not relevant.
Vapour pressure	Comments: Not relevant.
Vapour density	Comments: Not relevant.
Bulk density	Value: 1,54 g/cm ³
Solubility	Comments: Completely soluble in water.
Partition coefficient: n-octanol/ water	Value: -1,72
Auto-ignition temperature	Value: 345 °C
Decomposition temperature	Value: > 170 °C
Viscosity	Comments: Not relevant.
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.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Liberates toxic gases when mixed with chlorine containing products.

10.4. Conditions to avoid

Conditions to avoid Avoid contact with strong oxidisers. Strong alkalis. Chlorine containing products.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong alkalis. Stærke oxidationsmidler.

10.6. Hazardous decomposition products

Hazardous decomposition products In case of fire, toxic gases (CO, CO₂, NO_x) may be formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Substance Citric acid, monohydrate

Acute toxicity
Type of toxicity: Acute
Effect tested: LD50
Route of exposure: Oral
Value: 3000 mg/kg
Animal test species: Rat

Type of toxicity: Acute
Effect tested: LD50
Route of exposure: Oral
Value: 5400 mg/kg
Animal test species: Mice

Other toxicological data Toxicological tests on the product has not been performed.

Other information regarding health hazards

Assessment of acute toxicity, classification No evidence for acute toxicity.

Inhalation Dust may irritate throat and respiratory system and cause coughing.

Skin contact Skin irritation is not anticipated when used normally.

Eye contact Irritating and may cause redness and pain.

Ingestion Ingestion may cause irritation of the gastrointestinal tract, vomiting and diarrhoea.

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.

Symptoms of exposure

Symptoms of overexposure No specific symptoms noted.

11.2 Other information

Endocrine disruption No evidence for endocrine disrupting properties.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Citric acid, monohydrate
Aquatic toxicity, fish	Value: 440-760 mg/L Test duration: 96h Species: Leuciscus idus Method: LC50
Substance	Citric acid, monohydrate
Aquatic toxicity, algae	Value: 640 mg/L Test duration: 168h Species: Scenedesmus quadricauda Method: EC0
Substance	Citric acid, monohydrate
Aquatic toxicity, crustacean	Value: 120 mg/L Test duration: 72h Species: Daphnia Magna Method: EC100
Ecotoxicity	Large amounts of the product may affect the acidity (pH-factor) in water with possible risk of harmful effects to aquatic organisms.

12.2. Persistence and degradability

Persistence and degradability description/evaluation	The product is easily biodegradable.
Substance	Citric acid, monohydrate
Biodegradability	Value: 97% Method: OECD 301B Test period: 28d

12.3. Bioaccumulative potential

Bioaccumulation, comments	The product is not bioaccumulating.
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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.
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12.6. Endocrine disrupting properties

Endocrine disrupting properties	No evidence for endocrine disrupting properties.
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12.7. Other adverse effects

Additional ecological information	No information.
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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.
Appropriate methods of disposal for the contaminated packaging	Dispose unused product and the packaging in accordance with local requirements. Empty containers are rinsed with plenty of water and disposed to normal or commercial waste.
EWC waste code	EWC waste code: 070601 aqueous washing liquids and mother liquors Classified as hazardous waste: Yes
EWL packing	EWC waste code: 070601 aqueous washing liquids and mother liquors 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 No

14.1. UN number

Comments The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2. UN proper shipping name

Comments Not relevant.

14.3. Transport hazard class(es)

Comments Not relevant.

14.4. Packing group

Comments Not relevant.

14.5. Environmental hazards

14.6. Special precautions for user

Special safety precautions for user Not relevant.

14.7. Maritime transport in bulk according to IMO instruments

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.
Legislation and regulations	<p>The Management of Health and Safety at Work Regulations 1999 (SI 1999 No. 3242), with amendments.</p> <p>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.</p> <p>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.</p> <p>REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents.</p>

15.2. Chemical safety assessment

Chemical safety assessment performed	No
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SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H319 Causes serious eye 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.
Information added, deleted or revised	Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
Version	3
Prepared by	ALM