

MSDS		0.1 Product	Citric acid
MATERIAL SAFETY DATA SHEET		0.2 Status	Active
		0.3 Version	4
		0.4 Version date	02-06-2026
1. Identification of the substance/mixture and of the company			
1.1 Product identification			
Product name	Citric acid		
Trade name	Citroenzuur		
Product code	CITR00001 (1 kg); CITR00005 (5 kg); CITR00010 (10 kg)		
Chemical description	Citric acid, monohydrate (2-hydroxypropane-1,2,3-tricarboxylic acid, monohydrate)		
REACH registration number	01-2119457026-42-XXXX		
1.2 Relevant identified uses of the substance or mixture and uses advised against			
Identified use(s)	Industrial use, cleaning agent, additive.		
Use(s) advised against	Not identified.		
1.3 Details of the supplier of the safety data sheet			
Company identification	Name	Hofman Animal Care B.V.	
Contact details	Address	De Leemkoele 2	
	Zip code	7468 DM	
	Town	Enter	
	Country	The Netherlands	
	Telephone	+31 (0)548-545277	
	E-mail	info@hofmananimalcare.nl	
	Website	www.hofmananimalcare.com	
1.4 Emergency telephone number			
Emergency telephone number	The Netherlands: National Poisoning Information Centre – Utrecht TEL: +31 (0) 88 755 8000 Belgium: Antipoison Centre – Brussels TEL: +32 (0)70 245 245 (Only for the purpose of informing medical personnel in case of acute intoxications)		
2. Hazards identification			
2.1 Classification of the substance or mixture			
<u>Classification according to Regulation (EC) no. 1272/2008:</u> Eye Irrit. 2; Eye irritation, category 2; H319 STOT SE 3; Specific target organ toxicity, single exposure, category 3; H335 The full text of the (EU)H-statements can be found in section 16.			
2.2 Label elements			
<u>Labelling according to Regulation (EC) no. 1272/2008:</u>			
Hazardous component(s)	Citric acid, monohydrate		
Hazard pictogram(s)			
Signal word	Warning		
Hazard statements	H319 Causes serious eye irritation. H335 May cause respiratory irritation.		
Precautionary measures - Prevention	P261 Avoid breathing vapours/spray. P280 Wear eye protection/face protection.		

- Response		P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a POISON CENTER/doctor if you feel unwell. P337+P313 If eye irritation persists: Get medical advice/attention.				
2.3	Other hazards					
Results of PBT and vPvB assessment		The product does not contain PBT substances. The product does not contain vPvB substances.				
Endocrine disrupting properties		The product does not contain any substances that have endocrine-disrupting properties in relation to humans. The product does not contain any substances that have endocrine-disrupting properties in relation to non-target organisms.				
3. Composition / information on ingredients						
3.1	Substances					
Name component(s)	Weight %	CAS no.	EINECS no.	Index no.	REACH no.	Classification
Citric acid monohydrate	>99.5%	5949-29-1	201-069-1	607-750-00-3	01-2119457026-42-XXXX	Eye Irrit. 2; H319 STOT SE 3; H335
The full text of the (EU)H-statements can be found in section 16.						
4. First aid measures						
4.1	Description of first aid measures					
General		If there is a risk of loss of consciousness, place the person in the recovery position and transport them in this position. Remove contaminated, soaked clothing immediately; do not allow it to dry.				
First aid measures in case of inhalation		Ensure there is plenty of fresh air. If symptoms persist, seek medical advice.				
First aid measures in case of skin contact		If the product comes into contact with the skin, wash immediately with plenty of water. If skin irritation persists, consult a doctor.				
First aid measures in case of eye contact		If the substance comes into contact with the eyes, rinse immediately with plenty of water for 15 minutes. Remove contact lenses. Seek treatment from an ophthalmologist.				
First aid measures in case of ingestion		Rinse your mouth and then drink plenty of water. Do not induce vomiting. Seek medical advice.				
4.2	Most important symptoms and effects, both acute and delayed					
Causes serious eye irritation. Inhalation may cause respiratory irritation.						
4.3	Indication of any immediate medical attention and special treatment needed					
Notes for the doctor / treatment: Treat symptomatically.						
5. Firefighting measures						
5.1	Extinguishing media					
Suitable extinguishing media		Carbon dioxide, dry powder, water spray, foam.				
Unsuitable extinguishing media		Water jet.				
5.2	Special hazards arising from the substance or mixture					
Special exposure hazards		In the event of a fire, dangerous gases may be produced.				
5.3	Advice for firefighters					
Special protective equipment		Wear a self-contained breathing apparatus.				
Special procedures		Combustion residues and contaminated fire-fighting water must be disposed of in accordance with local regulations issued by the authorities.				
6. Accidental release measures						
6.1	Personal precautions, protective equipment and emergency procedures					
Personal precautions		Wear personal protective equipment. Avoid generating dust. Do not breathe in dust. Ensure adequate ventilation.				

6.2	Environmental precautions													
Environmental precautions		Do not allow to enter the sewer system or the aquatic environment. Do not allow to enter the ground or soil.												
6.3	Methods and material for containment and cleaning up													
Methods for cleaning up		Collect mechanically. Rinse away any residue with water. Avoid creating dust.												
6.4	Reference to other sections													
Personal protection		See section 8.												
Removal of the waste product		See section 13.												
7. Handling and storage														
7.1	Precautions for safe handling													
Handling		Avoid generating dust. Do not breathe in dust.												
Protection against fire and explosion		Dust may form an explosive mixture with air. Keep away from sources of ignition – No smoking. <i>Dust explosion class:</i> dust explosion hazard.												
7.2	Conditions for safe storage, including any incompatibilities													
Provide an acid-resistant floor. Do not store together with oxidising agents or alkalis. Storage class in accordance with TRGS 510: 10–13 Other flammable and non-flammable substances. Keep the packaging dry and tightly sealed, and store in a cool, well-ventilated place.														
7.3	Specific end use(s)													
See section 1.2.														
8. Exposure controls / personal protection														
8.1	Control parameters													
Occupational exposure limits		For technical safety measures to limit exposure, see also section 7.												
Biological limit values		The product does not contain any substances for which exposure limits have been established.												
DNELs		No DNEL value has been derived.												
PNECs		<i>Citric acid monohydrate (CAS-no. 5949-29-1)</i> <table><tr><th>Environmental parameter</th><th>Value</th></tr><tr><td>Fresh water</td><td>0.44 mg/l</td></tr><tr><td>Salt water</td><td>0.044 mg/l</td></tr><tr><td>Fresh water sediment</td><td>34.6 mg/kg</td></tr><tr><td>Marine sediment</td><td>3.46 mg/kg</td></tr><tr><td>Soil</td><td>33.1 mg/kg</td></tr></table>	Environmental parameter	Value	Fresh water	0.44 mg/l	Salt water	0.044 mg/l	Fresh water sediment	34.6 mg/kg	Marine sediment	3.46 mg/kg	Soil	33.1 mg/kg
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Fresh water sediment	34.6 mg/kg													
Marine sediment	3.46 mg/kg													
Soil	33.1 mg/kg													
8.2	Exposure controls													
Appropriate engineering controls		Remove contaminated clothing immediately. Avoid contact with the eyes and skin. Keep separate from food and animal feed. Do not eat, drink, smoke or sniff during work. Wash hands before breaks and after finishing work. Keep an eye wash station ready. Personal protective equipment must comply with Council Regulation (EC) No 2016/425 and the CEN standards derived from it. The following information on personal protective equipment (PPE) is intended as a suggestion. The choice of the necessary PPE must be considered by the employer, depending on the work to be carried out and the local conditions. If the on-site risk assessment determines that there is no risk to the employee, the wearing of PPE is not necessary, or the scope of the PPE to be used may be adjusted accordingly.												
Personal protection equipment														
Eye / face protection		Tight-fitting safety goggles.												
Skin protection		Workwear commonly worn in chemical plants.												
Hand protection		<i>Suitable material:</i> chloroprene												

	<i>Gloves thickness: >= 0.6 mm</i> <i>Penetration time: >= 480 min</i>
Respiratory protection	Use respiratory protective equipment when dust is generated. Particle-filtering half-mask, P2 filter.
Environmental exposure controls	Do not allow to enter the sewer system or the aquatic environment. Do not allow to enter the ground or soil.
9. Physical and chemical properties	
9.1	<u>Information on basic physical and chemical properties</u>
Physical state	Crystalline powder
Colour	White
Odour	Odourless
Melting point/freezing point	145 °C
Boiling point/range (1013 hPa)	Not applicable.
Flammability	Not applicable.
Lower and upper explosion limit	Not applicable.
Flash point	Not applicable.
Auto-ignition temperature	345 °C
Decomposition temperature	> 170 °C
pH	2.2
Kinematic viscosity	Not applicable.
Solubility	Water: 880 g/l (20 °C) soluble
Partition coefficient n-octanol/water	<i>log Pow</i> : -1.72
Vapour pressure	< 0.01 hPa (20 °C)
Density and/or relative density	1.542 g/cm ³ (20 °C)
Relative vapour density	Not applicable
Particle characteristics	Not applicable
9.2	<u>Other information</u>
Other information	<i>Unpleasant odour threshold</i> : not applicable <i>Evaporation rate</i> : not applicable <i>Explosive properties</i> : the product is not explosive <i>Oxidising properties</i> : non-oxidising <i>Bulk density</i> : 550 to 950 kg/m ³ (20 °C)
10. Stability and reactivity	
10.1	<u>Reactivity</u>
Reactivity	No decomposition if used as directed.
10.2	<u>Chemical stability</u>
Stability	Under normal storage conditions and with normal use, the product is stable.
10.3	<u>Possibility of hazardous reactions</u>
Hazardous reactions	This product is dust explosive.
10.4	<u>Conditions to avoid</u>
Conditions to avoid	Avoid dust formation.
10.5	<u>Incompatible materials</u>
Materials to avoid	Reactions with strong bases and oxidising agents.
10.6	<u>Hazardous decomposition products</u>
Hazardous decomposition products	In the event of a fire, dangerous gases may be produced.
11. Toxicological information	
11.1	<u>Information on hazard classes as defined in Regulation (EC) no. 1272/2008</u>
Acute toxicity: inhalation	Aerosol/mist, guinea pig: approx. 75 mg/l (3-minute exposure time)
Acute toxicity: skin contact	LD ₅₀ (dermal, rat): > 2000 mg/kg body weight
Acute toxicity: ingestion	LD ₅₀ (oral, rat): 3000 mg/kg body weight LD ₅₀ (oral, mouse): 5400 mg/kg body weight

Skin corrosion/irritation	Based on the available data, the classification criteria are not met.		
Serious eye damage/irritation	Classification: irritant. The classification criteria are met.		
Respiratory or skin sensitisation	Classification: non-sensitising.		
Germ cell mutagenicity	There are no reports of genotoxicity available.		
Carcinogenicity	There is no evidence of carcinogenic effects in long-term studies.		
Reproductive toxicity	There are no reports of reproductive toxicity available.		
Specific target organ toxicity – single exposure	The classification criteria have been met. May cause respiratory irritation.		
Specific target organ toxicity – repeated exposure	Based on the available data, the classification criteria are not met.		
Aspiration hazard	Based on the available data, the classification criteria are not met.		
11.2	Information on other hazards		
Other hazards	Endocrine-disrupting properties in humans: The product does not contain any substances that have endocrine-disrupting properties in humans.		
12. Ecological information			
12.1	Toxicity		
Ecotoxicity	The product is not classified as hazardous to the environment.		
	Citric acid monohydrate (CAS no. 5949-29-1)		
	LC50 (fish, 48 hours)	440 to 760 mg/l (Leuciscus idus) (OECD 203)	
	LC50 (crustaceans, 24 hours)	1535 mg/l (Daphnia magna) (OECD 202)	
	Toxicity to algae (168 hours)	425 mg/l (Scenedesmus quadricauda) (static system)	
	Toxicity to bacteria (16 hours)	> 10000 mg/l (Pseudomas putida)	
12.2	Persistence and degradability		
Persistence	No data available.		
Degradability	Citric acid monohydrate (CAS no. 5949-29-1)		
	Method	OECD 301 B	OECD 301 E
	Value	97 %	100 %
	Test duration	28 days	19 days
	Assessment	Readily biodegradable	Readily biodegradable
12.3	Bioaccumulative potential		
Bioaccumulation	Partition coefficient n-octanol/water: log Pow: -1.72 Bioaccumulation is not expected.		
Bioconcentration factor (BCF)	Not applicable.		
12.4	Mobility in soil		
Mobility	No data available.		
12.5	Results of PBT and vPvB assessment		
Assessment	The substance does not meet the criteria for PBT properties. The substance does not meet the criteria for vPvB properties.		
12.6	Endocrine disrupting properties		
Endocrine disrupting potential	The product does not contain any substances that have endocrine-disrupting properties in relation to non-target organisms.		
12.7	Other adverse effects		
Behaviour in wastewater treatment plants	No data available.		
Further information on environmental aspects	Do not allow to enter drains, surface water or groundwater. Harmful effects due to fluctuations in pH.		
13. Disposal considerations			
13.1	Waste treatment methods		

Waste from residues / unused products	Prevent the product from entering the sewer system or surface waters.	
European list of waste products	A waste code number in accordance with the European Waste Catalogue (EWC) must be assigned in consultation with the local waste management company.	
Removal of contaminated packaging	Packaging that cannot be cleaned must be disposed of in consultation with the local waste management company.	
14. Transport information		
Transport by road, by rail and inland waterway transport (ADR/RID/ADN)	14.1 UN-number: 14.2 UN proper shipping name: 14.3 Transport hazard class(es): 14.4 Packing group:	Not applicable. The product is not subject to ADR/RID/ADN regulations (not classified as dangerous goods).
Marine transport (IMDG)	14.1 UN-number: 14.2 UN proper shipping name: 14.3 Transport hazard class(es): 14.4 Packing group:	Not applicable. The product is not subject to IMDG regulations (not classified as dangerous goods).
Air transport (ICAO-IATA)	14.1 UN-number: 14.2 UN proper shipping name: 14.3 Transport hazard class(es): 14.4 Packing group:	Not applicable. The product is not subject to ICAO-IATA regulations (not classified as dangerous goods).
14.5	Environmental hazards	
Environmental hazard	Not classified as dangerous goods under these transport regulations.	
Marine pollutant	No information available.	
14.6	Special precautions for user	
No data available.		
14.7	Maritime transport in bulk according to IMO instruments	
Not applicable.		
15. Regulatory information		
15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
Relevant EU rule(s)	VOC content in accordance with Directive 2010/75/EU: 0%. The product does not contain any substances listed on the Candidate List for inclusion in Annex XIV of Regulation (EC) No 1907/2006 (REACH). EINECS registration status: listed or meets the requirements. EU Regulation No. 1451/2007 [biocides], Annex I, active substances identified as existing: EC number: 201-069-1; listed. Directive 2012/18/EU (SEVESO III) Annex I: Substance/mixture is not covered by this legislation.	
National regulations	Directive 94/33/EC on the protection of young people at work. Observe the work restrictions set out in the Pregnancy Directive (92/85/EEC) for expectant or breastfeeding mothers.	
15.2	Chemical safety assessment	
No data available.		
16. Other information		
Indication of changes (revised safety data sheet)	In accordance with the Regulation. Regulation (EC) No 1907/2006 (REACH), as amended by 2020/878/EU. Restructuring and revision of sections 1 to 15.	
Sources of used key data	This information is based on the currently available information (Producer(s)). See also the website: https://echa.europa.eu/information-on-chemicals/registered-substances	
(EU)H-statement(s)	H319 Causes serious eye irritation. H335 May cause respiratory irritation.	
Classification procedure	Eye Irrit. 2 H319	



	STOT SE 3 H335
List of abbreviations and acronyms	ADN (Accord européen relatif au transport international des marchandises Dangereuses par voies de Navigation intérieure): European agreement concerning the international carriage of dangerous goods by inland waterways. ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route): European agreement concerning the international carriage of dangerous goods by road. DNEL (Derived No Effect Level): an estimated safe exposure level. EC50: median Effective Concentration. Eye Irrit. 2: Eye Irritation - Category 2. IATA (International Air Transport Association): regulations concerning the international transport of dangerous goods by air. IMDG (International Maritime Dangerous Goods code): International code for the transport of dangerous goods by sea. LC50: median Lethal Concentration. LD50: median Lethal Dose. NFPA (National Fire Protection Association) or hazard diamond. NOEC (No Observed Effect Concentration): concentration at which no adverse effect was observed. NPIC: National Poisoning Information Centre. OECD: Organisation for Economic Co-operation and Development. PBT: persistent, bioaccumulative and toxic. PNEC (Predicted No Effect Concentration): concentration below which exposure to a substance has no effect. REACH: Registration, Evaluation and Authorisation of Chemicals. RID (Regulations concerning the International carriage of Dangerous goods by rail): international regulations governing the transport of dangerous goods by rail. STOT SE 3: Specific target organ toxicity following single exposure – Category 3. vPvB: very persistent and very bioaccumulative.

This information is to our knowledge correct and complete on the date of issue of this safety data sheet. The information only concerns the product and does not give any guarantee for the quality and the completeness of the properties of the product, or in case of mixing or using in any other process. It remains the responsibility of the user to assure himself that the information is suitable and complete concerning the special use he makes of the product.

Hofman Animal Care B.V. denies all responsibility for loss or damage resulting from the use of these data.

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