

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

1.1. Product identifier

Product form	: Substance
Substance name	: ACIDE CITRIQUE MONOHYDRATE CODEX
IUPAC name	: Citric acid
EC-No.	: 201-069-1
CAS-No.	: 5949-29-1
REACH registration No.	: 01-2119457026-42
Product code	: ACIDE CITRIQUE

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

Relevant identified uses

Use of the substance/mixture : food additive; cosmetic

1.3. Details of the supplier of the safety data sheet

INTERCHIMIE
ZAC du Parc
13 rue Louis Blériot
FR- 77290 COMPANS
T T: +33 (0)1 64 77 76 27
qualite@interchimie.fr, www.interchimie.fr

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 2 H319

Specific target organ toxicity – Single exposure, Category 3, H335

Respiratory tract irritation

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause respiratory irritation. Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

Precautionary statements (CLP)

: P101 - If medical advice is needed, have product container or label at hand.

P264 - Wash hands, forearms and face thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
CAS-No. : 5949-29-1
EC-No. : 201-069-1

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
citric acid	CAS-No.: 77-92-9 EC-No.: 201-069-1 EC Index-No.: 607-750-00-3 REACH-no: 01-2119457026-42	≥ 99.5	Eye Irrit. 2, H319 STOT SE 3, H335

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact : Take off immediately all contaminated clothing. Wash skin with plenty of water.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Drink plenty of water. Call a physician immediately.

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

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : May cause moderate irritation.
Symptoms/effects after eye contact : Serious damage to eyes.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon oxides (CO, CO₂).

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Prevent fire fighting water from entering the environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures	: Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.
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For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Mechanically recover the product. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Keep only in original container. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Incompatible products	: Oxidizing agent. Strong bases.
Incompatible materials	: copper. Steel.
Storage temperature	: 5 – 30 °C

7.3. Specific end use(s)

No additional information available

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL and PNEC

ACIDE CITRIQUE MONOHYDRATE CODEX (5949-29-1)

PNEC (Water)

PNEC aqua (freshwater)	0.44 mg/l
PNEC aqua (marine water)	0.044 mg/l

PNEC (Sediment)

PNEC sediment (freshwater)	34.6 mg/kg dwt
PNEC sediment (marine water)	3.46 mg/kg dwt

PNEC (Soil)

PNEC soil	33.1 mg/kg dwt
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PNEC (STP)

PNEC sewage treatment plant	> 1000 mg/l
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8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

ISO 16321-1.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Colour	: white.
Appearance	: Powder. Crystals.
Molecular mass	: 210.14 g/mol
Odour	: odourless.
Odour threshold	: Not available
Melting point	: $\approx 153\text{ }^{\circ}\text{C}$ Decomposition: 'no' Sublimation: 'no'
Freezing point	: Not applicable
Boiling point	: $175\text{ }^{\circ}\text{C}$
Flammability	: Non flammable.
Explosive properties	: No dangerous reactions known.
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: 345
Auto-ignition temperature	: $1010\text{ }^{\circ}\text{C}$
Decomposition temperature	: $170\text{ }^{\circ}\text{C}$
pH	: Not available
pH solution	: ≈ 1.8 à 50 g/l (25°C)
Viscosity, kinematic	: $1.653\text{ mm}^2/\text{s}$
Viscosity, dynamic	: 2.549 cP
Solubility	: soluble in water. Soluble in alcohols. Water: $\approx 1000\text{ g/l}$ (20°C) Ethanol: $\approx 38.3\text{ g/100ml}$
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: -1.67
Vapour pressure	: $< 0.001\text{ hPa}$
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: $\approx 1.542\text{ g/cm}^3$ 20°C
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Gives off hydrogen by reaction with metals.

10.4. Conditions to avoid

Moisture. High temperature. gel. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Oxidizing agent. Strong bases. Strong acids. Reducing agent. Metals.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen oxides.

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

ACIDE CITRIQUE MONOHYDRATE CODEX (5949-29-1)

LD50 oral rat	3000 mg/kg
LD50 oral	5400 mg/kg bodyweight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:, 95% CL: 4500 - 6400
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 2000 mg/kg

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.

citric acid (77-92-9)

STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified

ACIDE CITRIQUE MONOHYDRATE CODEX (5949-29-1)

LOAEL (oral, rat, 90 days)	8000 mg/kg bodyweight Animal: rat
NOAEL (oral, rat, 90 days)	4000 mg/kg bodyweight Animal: rat

Aspiration hazard : Not classified

ACIDE CITRIQUE MONOHYDRATE CODEX (5949-29-1)

Viscosity, kinematic	1.653 mm ² /s
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11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Damaging effect on aquatic ecosystems possible due to change in the pH value.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

ACIDE CITRIQUE MONOHYDRATE CODEX (5949-29-1)

LC50 - Fish [1]	440 mg/l Fish - 48h - OECD 203
LC50 - Other aquatic organisms [1]	1535 mg/l Daphnia Magna - 24h (bringmann and kuhn1977)
NOEC chronic algae	425 mg/l Algae (bringmann and kuhn1974)

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

12.2. Persistence and degradability

ACIDE CITRIQUE MONOHYDRATE CODEX (5949-29-1)

Persistence and degradability	Rapidly degradable
Biochemical oxygen demand (BOD)	0.575 – 0.675 g O ₂ /g substance (DBO ₅)
Chemical oxygen demand (COD)	0.7 – 0.8 g O ₂ /g substance

citric acid (77-92-9)

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

ACIDE CITRIQUE MONOHYDRATE CODEX (5949-29-1)

Partition coefficient n-octanol/water (Log Pow)	-1.67
Bioaccumulative potential	Bioaccumulation unlikely.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

ACIDE CITRIQUE MONOHYDRATE CODEX (5949-29-1)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Must follow special treatment according to local regulation.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No data available

SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
	Supersedes version of	Modified
	Revision date	Modified
1.1	Name	Modified
2.2	Precautionary statements (CLP)	Modified
4.1	First-aid measures after skin contact	Modified
4.1	First-aid measures after eye contact	Modified
4.2	Symptoms/effects after skin contact	Added
5.1	Suitable extinguishing media	Modified
5.3	Firefighting instructions	Added
6.3	Methods for cleaning up	Modified
7.1	Precautions for safe handling	Modified
7.2	Incompatible materials	Added
7.2	Storage temperature	Added
9	Viscosity, dynamic	Added
9	Solubility in ethanol	Added
9	Vapour pressure	Modified
9	Partition coefficient n-octanol/water (Log Pow)	Modified
9	Viscosity, kinematic	Modified
9	Solubility in water	Modified
9	Relative density	Modified
9	Molecular mass	Added
9	Auto-ignition temperature	Modified
9	pH solution	Modified
9	Appearance	Modified
9.1	Decomposition temperature	Added
10.3	Possibility of hazardous reactions	Modified
10.4	Conditions to avoid	Modified
10.5	Incompatible materials	Modified
10.6	Hazardous decomposition products	Modified
11.1	LD50 oral rat	Added
11.1	LD50 dermal rabbit	Added

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Indication of changes		
Section	Changed item	Comments
12.1	Ecology - general	Modified
12.2	Chemical oxygen demand (COD)	Added
12.2	Biochemical oxygen demand (BOD)	Added
12.3	Bioaccumulative potential	Added
13.1	Waste treatment methods	Modified
15.2	Chemical safety assessment	Modified

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit

ACIDE CITRIQUE MONOHYDRATE CODEX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:

VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Data sources : This MSDS has been established with data of MSDS coming from upstream suppliers.

Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.