

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Reference number: Periodic review of SDS 24/04/2026 Issue date: 4/24/2023 Version: 1.0

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

1.1. Product identifier

Product form : Mixture Trade name : Ice Clear

UFI : T2D6-Q0EG-P00X-VUPF

: WP 2307 Product code

Type of product : Acidic aqueous solution

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial

For professional use only

Use of the substance/mixture : Descaler

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

HA Climate Control Ltd 12 Yiannaki Taloite

Mesa Chorio

8290 Paphos

Cyprus

T 00357 99063256

www.haccltd.com

E-mail address of competent person responsible for the SDS: haclimatecontrol@gmail.com

1.4. Emergency telephone number

Emergency number : 00357 99063256

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4 H302 Skin corrosion/irritation, Category 2 H315 Serious eye damage/eye irritation, Category 1 H318 Specific target organ toxicity - Single exposure, Category 3, Respiratory H335

tract irritation

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

Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Causes skin irritation. Causes serious eye damage.

2.2. Label elements

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

Hazard pictograms (CLP)





GHS05

GHS07

Signal word (CLP) : Danger

Contains : citric acid; glycolic acid; urea hydrochloride

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Hazard statements (CLP) : H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H318 - Causes serious eye damage. H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 - Wash hands thoroughly after handling.

P280 - Wear eye protection, protective gloves, protective clothing.

P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a

doctor, a POISON CENTER.

P312 - Call a POISON CENTRE or doctor if you feel unwell.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
citric acid (77-92-9)	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
glycolic acid (79-14-1)	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
urea hydrochloride (506-89-8)	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

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	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-XXXX	15–20	Eye Irrit. 2, H319 STOT SE 3, H335
urea hydrochloride	CAS-No.: 506-89-8 EC-No.: 208-059-6	3 – 5	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
glycolic acid	CAS-No.: 79-14-1 EC-No.: 201-180-5	3 – 5	Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318

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

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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. Never give anything by mouth to an

unconscious person. If you feel unwell, seek medical advice (show the label

where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON

CENTER/doctor if you feel unwell.

First-aid measures after skin contact : Take off contaminated clothing. Wash skin with plenty of water. If skin irritation occurs: Get

medical advice/attention. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a

POISON CENTER/doctor if you feel unwell.

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

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Irritation. Causes skin irritation.
Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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 : Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon

dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing. Do not enter fire area without

proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Evacuate unnecessary personnel.

6.1.2. 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". Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

For containment : Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or

diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear

personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation

in process area to prevent formation of vapour. Avoid breathing

dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.

Hygiene measures : Always wash hands after handling the product. Do not eat, drink or smoke when using this

product. Wash Both hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep only in the original container in a cool, well ventilated place

away from : Direct sunlight. Keep container tightly closed.

Incompatible products : Oxidizing agent. Strong bases. Strong acids.

Incompatible materials : Acidic aqueous solution. Contact with alkaline products gives exothermic reaction. Strong

oxidizers. Sources of ignition. Direct sunlight.

Storage temperature : 5–48°C

Storage area : Protect from freezing.

Packaging materials : Do not store in corrodable metal.

7.3. Specific end use(s)

Cleaning.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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8.2.2. Personal protection equipment

Personal protective equipment:

Use appropriate personal protection equipment (PPE). Gloves. Protective goggles. Protective clothing. Avoid all unnecessary exposure.

Personal protective equipment symbol(s):







8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear protective gloves.

Other skin protection

Materials for protective clothing:

Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls

8.2.2.3. Respiratory protection

Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid Colour : Colourless. Appearance : Clear. Liquid. Odour : characteristic. Odour threshold : Not available Melting point : Not applicable Freezing point : Not available : 100 °C Boiling point Flammability : Non flammable. Explosive limits Not available Lower explosion limit : Not available

: Not available Upper explosion limit Flash point : Not available : Not available Auto-ignition temperature Decomposition temperature : Not available рΗ : Not available Viscosity, kinematic : Not available : soluble in water. Solubility Partition coefficient n-octanol/water (Log Kow) : Not available

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Vapour pressure : Not available
Vapour pressure at 50°C : Not available
Density : 1.09 g/cm³
Relative density : Not available
Relative vapour density at 20°C : Not available
Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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

Not established.

LD50 oral rat

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

oxidizing materials. aluminium. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2). fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Ice Machine Descaler		
ATE CLP (oral)	500 mg/kg bodyweight	
citric acid (77-92-9)		
LD50 oral rat	11700 mg/kg	
LD50 oral	5400 mg/kg bodyweight Animal: (mouse)	
LD50 dermal rat	> 2000 mg/kg bodyweight	
glycolic acid (79-14-1)		

Remarks on results: other:, 95% CL: 1443 - 2469

2040 mg/kg bodyweight Animal: rat, Guideline: EPA OPP 81-1 (Acute Oral Toxicity),

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urea hydrochloride (506-89-8)	
LD50 oral rat	1100 mg/kg
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: May cause respiratory irritation.
citric acid (77-92-9)	
STOT-single exposure	May cause respiratory irritation.
urea hydrochloride (506-89-8)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
glycolic acid (79-14-1)	
LOAEL (oral, rat, 90 days)	300 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPP 82-1 (90-
	Day Oral Toxicity), Guideline: other:, Guideline: other:
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-
, , ,	Day Oral Toxicity Study in Rodents), Guideline: EPA OPP 82-1 (90-Day Oral Toxicity),
	Guideline: other:, Guideline: other:
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
citric acid (77-92-9)	
Viscosity, kinematic	Not applicable
glycolic acid (79-14-1)	
Viscosity, kinematic	6149 mm²/s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm²/s)' Remarks on result:

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms

: Risk of serious damage to eyes, Skin irritation, Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation the acidity of the product may represent a danger to aquatic

organisms.

Ecology - water : Urea hydrochloride is mostly dissociated in water to provide an acidic solution said to be

less acidic than hydrochloric but more acidic than phosphoric

acid. Hazardous to the aquatic environment, short-term : Not classified (acute)

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Hazardous to the aquatic environment, long-term : Not classified (chronic)

(and in o)		
citric acid (77-92-9)		
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Fathead minnow, (P. promelas)	
EC50 - Other aquatic organisms [1]	> 50 mg/l Test organisms (species): (Zebra mussel D. polymorpha)	
NOEC chronic algae	425 mg/l Test organisms (species): (Algae S. quadricauda)	
glycolic acid (79-14-1)		
LC50 - Fish [1]	164 mg/l Test organisms (species): Pimephales promelas	
EC50 - Crustacea [1]	141 mg/l Test organisms (species): Daphnia magna	
urea hydrochloride (506-89-8)		
LC50, daphnia, acute, Ceriodaphnia dubia	71 mg/l (48 Hours)	

12.2. Persistence and degradability

Ice Machine Descaler			
Persistence and degradability	Not established.		
citric acid (77-92-9)			
Persistence and degradability	Readily biodegradable.		
glycolic acid (79-14-1)	glycolic acid (79-14-1)		
Persistence and degradability	Readily biodegradable.		
urea hydrochloride (506-89-8)	3500 g O₂/g substance		
Chemical oxygen demand (COD)			
12.3. Bioaccumulative potential			
Ice Machine Descaler			
Bioaccumulative potential	Not established.		
citric acid (77-92-9)			

Bioaccumulative potential glycolic acid (79-14-1)

Bioaccumulative potential Low bioaccumulation potential.

-1.8 – -1.6

12.4. Mobility in soil

Ice Machine Descaler	
Mobility in soil	The acid will permeate soil, dissolving some soil material and will then neutralize.
Ecology - soil	Mobile. Adsorbs into the soil.

Not expected to bioaccumulate due to the low log Kow (log Kow < 4).

12.5. Results of PBT and vPvB assessment

Partition coefficient n-octanol/water (Log Kow)

Component	
citric acid (77-92-9)	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

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Component	
glycolic acid (79-14-1)	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
urea hydrochloride (506-89-8)	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

Additional information : Avoid release to the environment.

citric acid (77-92-9)

Dissociation constant pKa = 3.13, 4.76 and 6.4 at 25°C

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

Product/Packaging disposal recommendations

- : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials

: Avoid release to the environment.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID n	umber			
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping	g name			
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

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Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

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)

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)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
CAS-No.	Chemical Abstract Service number
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
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

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Abbreviations and acronyms:	
COD	Chemical oxygen demand (COD)
EC-No.	European Community number
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
N.O.S.	Not Otherwise Specified
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Data sources

: 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.

Other information

: None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

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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.