

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Date of revision: 04. 11. 2022

Version: 5.0

Replaced version from: 22. 12. 2021

Date of issue: 26. 11. 2012

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

#### 1.1. Product identifier

##### Product Name

KRYSTAL Mechanical dish rinsing

##### UFI code

UFI: 1WK0-50CQ-P002-C4CP

##### Product code

None

##### Mixture description

An aqueous solution.

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

##### Identified uses

Liquid rinsing and polishing product to be used in all types of dish washers. Reliable for all types of materials. Professional and consumer use.

##### Uses advised against

Not known. It is recommended to use it only for the intended use. Other uses may expose users to unpredictable risks.

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

##### CORMEN s.r.o.

Věchnov 73

593 01

Czech Republic

Tel.: +420 566 550 961

Fax: +420 566 551 822

e-mail address for a competent person responsible for the SDS: [info@cormen.cz](mailto:info@cormen.cz)

#### 1.4. Emergency telephone number

112 (General emergency phone).

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

The mixture is classified as **hazardous** according to regulation 1272/2008/EC.

**Classification according to 1272/2008/EC**

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Flam. Liq. 3; H226

Full text of classifications and H-phrases: see section 16.

### ***The most important adverse physical, human health and environmental effects***

Flammable liquid and vapour.

## **2.2. Label elements**

### ***Hazard pictograms***



### ***Signal word***

Warning.

### ***Substances of the mixture to be placed on the label***

Not are.

### ***Hazard statements***

H226 Flammable liquid and vapour.

### ***Precautionary statements***

P102 Keep out of reach of children.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P501 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### ***Supplemental hazard information***

Mandatory additional information is not required according to CLP regulation.  
Composition according to regulation 648/2004/EC on detergents: < 5 % non-ionic surfactants, preservation agents (METHYLCHLOROISOTHIAZOLINONE AND METHYLISOTHIAZOLINONE, BENZYL ALCOHOL).

## **2.3. Other hazards**

Mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH regulation. Mixture does not contain the substance(s) 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.

## **SECTION 3: Composition/information on ingredients**

### **3.2. Mixtures**

#### **3.2.1. Substances of a mixture classified as hazardous**

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Identification of substance		Content wt. %	Classification according to 1272/2008/EC
<b>Propan-2-ol; Isopropyl alcohol; Isopropanol</b>			
CAS Number	67-63-0	≤ 5.0	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
EC Number	200-661-7		
Index Number	603-117-00-0		
Registration Number	01-2119457558-25-XXXX		
<b>Citric acid monohydrate</b>			
CAS Number	5949-29-1	≤ 2.0	Eye Irrit. 2; H319 STOT SE 3; H335
EC Number	201-069-1		
Index Number	607-750-00-3		
Registration Number	01-2119457026-42-XXXX		
<b>Ethanediol; Ethylene glycol</b>			
CAS Number	107-21-1	< 0.001	Acute Tox. 4; H302 STOT RE 2; H373
EC Number	203-473-3		
Index Number	603-027-00-1		
Registration Number	not yet available		

Full text of classifications and H-phrases: see section 16.

## SECTION 4: First aid measures

In all cases keep the victim at physical and mental rest and warm. In case of doubt or if symptoms persist, seek medical attention. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing. Protect yourself during rescue work.

### 4.1. Description of first aid measures

#### Inhalation

Interrupt the exposure, move the person to the fresh air. In case of persistent nausea, seek medical advice.

#### Skin contact

Remove contaminated clothing, shoes, and wash affected skin thoroughly with water (preferably lukewarm) and soap. Do not use solvents or thinners. If the problem persists, seek medical advice.

#### Eye contact

Rinse with a gentle stream of water for at least 15 minutes. Keep your eyelids wide open with your thumb and forefinger. If the affected person is wearing contact lenses, remove them before rinsing eyes if it is easy. If pain or redness persists, seek medical advice.

#### Ingestion

Rinse your mouth and then drink plenty of water. Do not induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Seek medical advice.

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

Are not known.

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

Treat symptomatically and supportively.

## SECTION 5: Firefighting measures

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

### 5.1. Extinguishing media

#### ***Suitable extinguishing media***

##### Small fire:

Carbon dioxide CO<sub>2</sub>, dry extinguishing agent, sand or earth, alcohol-resistant foam.

##### Extensive fire:

Fragmented water streams (water mist), alcohol-resistant foam.

#### ***Unsuitable extinguishing media***

Solid streams of water may be ineffective.

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

In case of fire extinguishing prevent leakage of water and rest of product into drains. Collect them separately and dispose of safely in accordance with current legislation and applicable local regulations.

In case of fires, hazardous combustion gases are formed: carbon oxides and products of incomplete combustion.

### 5.3. Advice for firefighters

Stop further leakage of product if possible. Spilled product, which does not burn, cover with sand or foam. Move containers and barrels away from the fire to a safe place, if possible. Cool all affected containers down with flooding quantities of water. If the fire can't be extinguished - evacuate the premises.

In case of fire, wear suitable respiratory protective equipment and fire-fighting suit.

## SECTION 6: Accidental release measures

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

Avoid contact with skin and eyes, use suitable protective equipment and clothing, see Section 8. Ensure adequate ventilation. Avoid formation of vapour and aerosol. At the point of leakage, prevent the movement of unauthorized persons.

### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. If this cannot be avoided, inform the competent authorities (police and firefighters) immediately.

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

According to the amount of spilled liquid, drain away the substance (large spillage) or in case of small spillage, absorb it with suitable absorbent (vermiculite, dry sand), put into labelled closed containers and dispose of them accordingly to Section 13. Flush residues with water and collect it for waste disposal. Do not use solvents or dispersants unless instructed by an expert or government authority.

If container is damaged, remove the content to the new undamaged container and label it properly again.

### 6.4. Reference to other sections

Refer also to the provisions of sections 7, 8 and 13 of this safety data sheet.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Avoid contact with skin and eyes. Personal protection see. Section 8. Ensure good ventilation to prevent formation of vapour and aerosol.

Smoking, eating and drinking should be prohibited at the place of use. Keep safety regulations for handling chemicals. Take off contaminated clothing and protective equipment before entering the dining area. Do not use dirty clothing. After work wash yourself carefully with warm water and soap, take a shower. Use protective cream.

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

Store in original, tightly closed containers, in a dry, cool and well-ventilated place at room temperature. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not store together with incompatible materials (see subsection 10.5), food, drink and feed.

### 7.3. Specific end use(s)

See subsection 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. Exposure limit value

Ethandiol				CAS: 107-21-1
Limit values - Eight hours		Limit values - Short-term		Note
52 mg/m <sup>3</sup>	20 ppm	104 mg/m <sup>3</sup>	40 ppm	Skin

#### 8.1.2. Biological limit values

Not determined in EU.

#### 8.1.3. DNEL and PNEC values

Propan-2-ol				CAS: 67-63-0
-------------	--	--	--	--------------

#### DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Systemic effect	Long term	500 mg/m <sup>3</sup>
Workers	Dermal	Systemic effect	Long term	888 mg/kg/day
General population	Inhalation	Systemic effect	Long term	89 mg/m <sup>3</sup>
General population	Dermal	Systemic effect	Long term	319 mg/kg/day
General population	Oral	Systemic effect	Long term	26 mg/kg/day

#### PNEC

Fresh water	Marine water	Intermittent releases		Sewage Treatment Plant (STP)
		Fresh water	Marine water	
140.9 mg/l	140.9 mg/l	140.9 mg/l	not given	2 251 mg/l

#### PNEC

Sediment (freshwater)	Sediment (marine water)	Air	Soil	Hazard for predators
552 mg/kg	552 mg/kg	not given	28 mg/kg	160 mg/kg food

Citric acid monohydrate				ES: 201-069-1
-------------------------	--	--	--	---------------

DNEL - not yet available

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

<b>PNEC</b>				
Fresh water	Marine water	Intermittent releases		Sewage Treatment Plant (STP)
		Fresh water	Marine water	
0.44 mg/l	0.044 mg/l	not given	not given	1 000 mg/l
<b>PNEC</b>				
Sediment (freshwater)	Sediment (marine water)	Air	Soil	Hazard for predators
34.6 mg/l	3.46 mg/kg	not given	33.1 mg/kg	not given
<b>8.2. Exposure controls</b>				
<b>8.2.1. Appropriate engineering controls</b>				
Use only in well-ventilated areas.				
Observe usual safety precautions for working with chemicals. The degree of effectiveness of personal protective equipment depends on temperature and ventilation levels.				
<b>8.2.2. Individual protection measures, such as personal protective equipment</b>				
Do not eat, drink or smoke. After work, wash thoroughly with warm water and soap and take a shower. Use protective cream. Do not soiled protective equipment to wash, do not use solvents.				
<b>Eye/face protection</b>				
Wear safety goggles or face shield when manufacturing and handling the product.				
<b>Skin protection - hand protection</b>				
Wear protective gloves when manufacturing and handling the product.				
The selection of the glove material on consideration of the breakthrough time, permeability, degradation and next relevant factors; other chemicals that may come into contact, physical requirements (cut and puncture protection, dexterity, thermal protection), possible body reactions to the glove material and the glove supplier's instructions and specifications. In case of repeated use of gloves, clean and keep them in a well-ventilated place before taking off.				
<b>Skin protection - other</b>				
In normal use is not necessary, in case of prolonged contact with the product, wear protective work clothes and shoes.				
<b>Respiratory protection</b>				
Not necessary in case of compliance concentration limits (if they were exceeded, use a respirator against vapour). In the event of an accident or a fire use self-contained breathing apparatus.				
<b>Thermal hazards</b>				
In normal use is not necessary protective equipment to be worn for materials that represent a thermal hazard.				
<b>8.2.3. Environmental exposure controls</b>				
Uncontrolled release of the mixture into environment is to be avoided. Keep the emission limits according to national legislation.				
<b>SECTION 9: Physical and chemical properties</b>				
<b>9.1. Information on basic physical and chemical properties</b>				
<b>Mixture</b>				
<b>Physical state</b>		Liquid.		



# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

<b>Colour</b>	Colourless.
<b>Odour</b>	Odourless.
<b>Melting point/freezing point</b>	Not determined.
<b>Boiling point or initial boiling point and boiling range</b>	82 °C
<b>Flammability</b>	Not determined.
<b>Lower explosion limit</b>	Not determined for the mixture, values are given for substances classified as flammable liquids.
<b>Upper explosion limit</b>	Not determined for the mixture, values are given for substances classified as flammable liquids.
<b>Flash point</b>	46 °C
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition temperature</b>	Not determined, the mixture does not contain self-reactive substances or organic peroxides or other substances which may decompose.
<b>pH</b>	2.0 – 3.0.
<b>Kinematic viscosity</b>	Not determined, the mixture does not contain a substance classified as aspiration toxic, or the sum of the concentrations of substances classified as aspiration toxic is less than 10 wt. %.
<b>Solubility</b>	Miscible.
<b>Partition coefficient n-octanol/water (log value)</b>	Does not apply to mixture.
<b>Vapour pressure</b>	23 hPa.
<b>Density and/or relative density</b>	$D_4^{20} = 1$ .
<b>Relative vapour density</b>	Not determined.
<b>Particle characteristics</b>	Does not apply to liquid.
<b>Propan-2-ol</b> CAS: 67-63-0	
<b>Physical state</b>	Liquid.
<b>Colour</b>	Colorless.
<b>Odour</b>	Not determined.
<b>Melting point/freezing point</b>	-88.5 °C (literature).
<b>Boiling point or initial boiling point and boiling range</b>	82.3 °C (literature).
<b>Flammability</b>	Highly flammable liquid.
<b>Lower explosion limit</b>	2 vol. % (literature).
<b>Upper explosion limit</b>	13 vol. % (literature).
<b>Flash point</b>	11.7 °C (literature).
<b>Auto-ignition temperature</b>	399 - 455.6 °C (literature).
<b>Decomposition temperature</b>	Not determined, it is not a self-reactive substance or an organic peroxide or a substance that may decompose.

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

<i><b>pH</b></i>	Not determined.
<i><b>Kinematic viscosity</b></i>	Not determined, it is not a hydrocarbon or a chlorinated hydrocarbon.
<i><b>Solubility</b></i>	Miscible with water.
<i><b>Partition coefficient n-octanol/water (log value)</b></i>	log Pow = 0.05 (25 °C, literature).
<i><b>Vapour pressure</b></i>	Not determined.
<i><b>Density and/or relative density</b></i>	785.5 kg/m <sup>3</sup> (20 °C, literature).
<i><b>Relative vapour density</b></i>	Not determined.
<i><b>Particle characteristics</b></i>	Does not apply to liquid.
Citric acid monohydrate ES: 201-069-1	
<i><b>Physical state</b></i>	Solid.
<i><b>Colour</b></i>	White.
<i><b>Odour</b></i>	Odourless.
<i><b>Melting point/freezing point</b></i>	ca. 153 °C (literature).
<i><b>Boiling point or initial boiling point and boiling range</b></i>	Not determined, substance decomposes.
<i><b>Flammability</b></i>	The substance is not classified as flammable (ECSIS Burning Test)
<i><b>Lower explosion limit</b></i>	Does not apply to solid.
<i><b>Upper explosion limit</b></i>	Does not apply to solid.
<i><b>Flash point</b></i>	Does not apply to solid.
<i><b>Auto-ignition temperature</b></i>	Does not apply to solid.
<i><b>Decomposition temperature</b></i>	Not determined.
<i><b>pH</b></i>	Not determined.
<i><b>Kinematic viscosity</b></i>	Does not apply to solid.
<i><b>Solubility</b></i>	592 g/l (20 °C, literature).
<i><b>Partition coefficient n-octanol/water (log value)</b></i>	Not determined.
<i><b>Vapour pressure</b></i>	0 Pa (25 °C, literature).
<i><b>Density and/or relative density</b></i>	D <sub>4</sub> <sup>20</sup> = 1.67 (literature).
<i><b>Relative vapour density</b></i>	Does not apply to solid.
<i><b>Particle characteristics</b></i>	Not determined.
<b>9.2. Other information</b>	
<b>9.2.1. Information with regard to physical hazard classes</b>	
<b>Mixture</b>	
<b>Explosives</b>	
Data for the mixture are not available. The mixture does not contain substances classified as explosives or oxidising, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.	



# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

<b>Flammable gases</b>
It is not gas.
<b>Aerosols</b>
It is not aerosol.
<b>Oxidising gases</b>
It is not gas.
<b>Gases under pressure</b>
It is not gas.
<b>Flammable liquids</b>
The mixture is classified as flammable liquid category 3 according to the value of the flash point and boiling point.
<b>Flammable solids</b>
It is not solid.
<b>Self-reactive substances and mixtures</b>
Data for the mixture are not available. The mixture does not contain substances classified as self-reactive substances or explosives or organic peroxides or oxidising, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
<b>Pyrophoric liquids</b>
Data for the mixture are not available. The mixture does not contain substances classified as pyrophoric liquids or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
<b>Pyrophoric solids</b>
It is not solid.
<b>Self-heating substances and mixtures</b>
Data for the mixture are not available. The mixture does not contain substances classified as self-heating or pyrophoric substances or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
<b>Substances and mixtures, which emit flammable gases in contact with water</b>
Data for the mixture are not available. The mixture does not contain substances classified as substances, which emit flammable gases in contact with water or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
<b>Oxidising liquids</b>
Data for the mixture are not available. The mixture does not contain substances classified as oxidising liquids or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
<b>Oxidizing solids</b>
It is not solid.
<b>Organic peroxides</b>

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Data for the mixture are not available.

The mixture does not contain substances classified as organic peroxides or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

### **Corrosive to metals**

Data for the mixture are not available.

The mixture does not contain substances classified as corrosive to metals or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

### **Desensitised explosives**

Data for the mixture are not available.

The mixture does not contain substances classified as explosives or desensitised explosives, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

### **Propan-2-ol**

CAS: 67-63-0

### **Explosives**

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive properties.

Pure propan-2-ol is autoxidated by air and light to form an explosive cyclic triacetone triperoxide, which settles to the bottom of the vessel as a white sediment. In the event of such a finding, the container must be handled immediately and pyrotechnics called.

### **Flammable gases**

It is not gas.

### **Aerosols**

It is not aerosol.

### **Oxidising gases**

It is not gas.

### **Gases under pressure**

It is not gas.

### **Flammable liquids**

The substance is classified as flammable liquid category 2 according to the value of the flash point and boiling point.

### **Flammable solids**

It is not solid.

### **Self-reactive substances and mixtures**

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive or self-reactive properties.

### **Pyrophoric liquids**

Data for the substance are not available.

The substance is stable in air, there is no spontaneous ignition.

### **Pyrophoric solids**

It is not solid.

### **Self-heating substances and mixtures**

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Data for the substance are not available.

The substance is not classified as self-heating.

### **Substances and mixtures, which emit flammable gases in contact with water**

Data for the substance are not available.

The chemical structure of the substance does not contain metals or metalloids.

The substance is miscible with water and forms a stable mixture with it.

### **Oxidising liquids**

Data for the substance are not available.

It is an organic substance that does not contain oxygen, fluorine or chlorine, or these elements are chemically bounded only to carbon or hydrogen.

### **Oxidizing solids**

It is not solid.

### **Organic peroxides**

Data for the substance are not available.

The substance does not contain a bivalent group -O-O- with at least one organic radical.

### **Corrosive to metals**

Data for the substance are not available.

The substance is not classified as corrosive to metal.

### **Desensitised explosives**

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive properties.

### **Citric acid monohydrate**

ES: 201-069-1

### **Explosives**

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive properties.

### **Flammable gases**

It is not gas.

### **Aerosols**

It is not aerosol.

### **Oxidising gases**

It is not gas.

### **Gases under pressure**

It is not gas.

### **Flammable liquids**

It is not liquid.

### **Flammable solids**

The substance is not classified as flammable solid (ECSIS Burning Test).

### **Self-reactive substances and mixtures**

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive or self-reactive properties.

### ***Pyrophoric liquids***

It is not liquid.

### ***Pyrophoric solids***

Data for the substance are not available.

The substance is stable in air, there is no spontaneous ignition.

### ***Self-heating substances and mixtures***

Data for the substance are not available.

The substance is not classified as self-heating.

### ***Substances and mixtures, which emit flammable gases in contact with water***

Data for the substance are not available.

The chemical structure of the substance does not contain metals or metalloids.

The substance is soluble in water and forms a stable mixture with it.

### ***Oxidising liquids***

It is not liquid.

### ***Oxidizing solids***

Data for the substance are not available.

It is an organic substance that does not contain oxygen, fluorine or chlorine, or these elements are chemically bounded only to carbon or hydrogen.

### ***Organic peroxides***

Data for the substance are not available.

The substance does not contain a bivalent group -O-O- with at least one organic radical.

### ***Corrosive to metals***

Data for the substance are not available.

The substance is not classified as corrosive to metal.

### ***Desensitised explosives***

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive properties.

### **9.2.2. Other safety characteristics**

<b><i>Mechanical sensitivity</i></b>	Not determined, it is not an explosive substance.
<b><i>Self-accelerating polymerisation temperature</i></b>	Not determined, it is not a polymerising substance.
<b><i>Formation of explosible dust/air mixtures</i></b>	Not determined, it is not a dust.
<b><i>Acid/alkaline reserve</i></b>	Not determined.
<b><i>Evaporation rate</i></b>	Not determined.
<b><i>Miscibility</i></b>	Not determined.
<b><i>Conductivity</i></b>	Not determined.
<b><i>Corrosiveness</i></b>	Not determined.
<b><i>Gas group</i></b>	Not determined, it is not gas.

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

<b>Redox potential</b>	Not determined.
<b>Radical formation potential</b>	Not determined.
<b>Photocatalytic properties</b>	Not determined.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The mixture is stable under normal conditions of use. There aren't any hazardous reaction.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

Hazardous reactions aren't known under normal conditions of use.

#### 10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

#### 10.5. Incompatible materials

Strong oxidizing agents.

#### 10.6. Hazardous decomposition products

They do not form under normal use. Burning releases carbon oxides and products of incomplete combustion.

### SECTION 11: Toxicological information

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

##### Mixture

##### Acute toxicity

The mixture is not classified as toxic for all routes of exposure.

**Oral** Data for the mixture are not available.  
ATE<sub>mixture</sub> > 2 000 mg/kg (estimate, low concentration of substance classified as toxic oral route of exposure).

**Dermal** Data for the mixture are not available.  
The mixture does not contain substances classified as an acute toxicity by dermal route of exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

**Inhalation** Data for the mixture are not available.  
The mixture does not contain substances classified as an acute toxicity by inhalation route of exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

##### Skin corrosion/irritation

Data for the mixture are not available.

The mixture does not contain substances classified as hazardous to skin or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

##### Serious eye damage/irritation

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Data for the mixture are not available.

The mixture is not classified as eye irritant based on the general/specific concentration limits of substance(s).

### **Respiratory or skin sensitisation**

Data for the mixture are not available.

The mixture does not contain substances classified as sensitizing or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

### **Germ cell mutagenicity**

Data for the mixture are not available.

The mixture does not contain substances classified as mutagenicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

### **Carcinogenicity**

Data for the mixture are not available.

The mixture does not contain substances classified as carcinogenicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

### **Reproductive toxicity**

Data for the mixture are not available.

The mixture does not contain substances classified as toxic for reproduction or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

### **STOT – single exposure**

Data for the mixture are not available.

The mixture is not classified as toxic for specific target organs in a single exposure in category 3 according to the recommended concentration limits of substance(s).

### **STOT – repeated exposure**

Data for the mixture are not available.

The mixture is not classified as toxic for specific target organs in a repeated exposure according to the general/specific concentration limits of substance(s).

### **Aspiration hazard**

Data for the mixture are not available.

The mixture is not classified as aspiration hazard according to the general/specific concentration limits of substance(s).

### **Other information**

See section 2 and 4.

### **Propan-2-ol**

CAS: 67-63-0

### **Acute toxicity**

**Oral** Based on available data, the classification criteria are not met.  
LD<sub>50</sub> = 5 840 mg/kg (rat, OECD 401).

**Dermal** Based on available data, the classification criteria are not met.  
LD<sub>50</sub> = 16.4 ml/kg (12 792 mg/kg at a density of 0.78 g/cm<sup>3</sup>, rabbit, OECD 402).

**Inhalation** Based on available data, the classification criteria are not met.  
LC<sub>50</sub> > 10 000 ppm (vapour, 6 h, OECD 403).

### **Skin corrosion/irritation**



# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Based on available data, the classification criteria are not met.  
Mean erythema score = 0 and oedema = 0 (rabbit, OECD 404).

### **Serious eye damage/irritation**

The substance is classified as eye irritant.  
Total mean irritation score = 1.89 (rabbit, 72 h, OECD 405).

### **Respiratory or skin sensitisation**

Based on available data, the classification criteria are not met.  
Not skin sensitising (guinea pig, OECD 406).

### **Germ cell mutagenicity**

Based on available data, the classification criteria are not met.  
Negative (OECD 471, OECD 476).

### **Carcinogenicity**

Based on available data, the classification criteria are not met.  
NOAEL = 5 000 ppm (testicular tumors, rat, male, vapour, OECD 451).

### **Reproductive toxicity**

Based on available data, the classification criteria are not met.  
NOAEL = 853 mg/kg/day (rat, oral, generation P0, OECD 415).

### **STOT – single exposure**

The substance may cause drowsiness or dizziness.

### **STOT – repeated exposure**

Based on available data, the classification criteria are not met.  
NOEC = 500 ppm (specific toxic effect, rat, vapour, 104 weeks, OECD 451).  
NOAEC = 5 000 ppm (specific exposure-related adverse reaction, rat, vapour, 104 weeks, OECD 451).  
NOEC = 5 000 ppm (effects of oncogenicity, rat, vapour, 104 weeks, OECD 451).

### **Aspiration hazard**

The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm<sup>2</sup>/s or less at 40 °C.

**Citric acid monohydrate**

ES: 201-069-1

### **Acute toxicity**

**Oral** Based on available data, the classification criteria are not met.  
LD<sub>50</sub> = 5 400 mg/kg (rat, OECD 401).

**Dermal** Based on available data, the classification criteria are not met.  
LD<sub>50</sub> > 2 000 mg/kg (rabbit, OECD 402).

**Inhalation** Data for the substance are not available.

### **Skin corrosion/irritation**

Based on available data, the classification criteria are not met.  
Primary dermal irritation index PDII = 0.3 (max. 8) (rabbit, 72 h, OECD 404).

### **Serious eye damage/irritation**

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

The substance is classified as eye irritant.

Overall irritation score (not fully reversible after 14 days) (rabbit, 72 h, OECD 405).

### **Respiratory or skin sensitisation**

Data for the substance are not available.

### **Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

In vitro:

Positive (OECD 487).

Negative (OECD 471).

In vivo:

Negative (EU Method B.22, OECD 475).

### **Carcinogenicity**

Data for the substance are not available.

### **Reproductive toxicity**

Data for the substance are not available.

### **STOT – single exposure**

Data for the substance are not available.

May cause respiratory irritation.

### **STOT – repeated exposure**

Data for the substance are not available.

### **Aspiration hazard**

The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm<sup>2</sup>/s or less at 40 °C.

## **11.2. Information on other hazards**

Mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet and given in the list (established in accordance with Article 59(1) for having endocrine disrupting properties of REACH regulation.

Mixture does not contain the substance(s) 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. There is no other relevant information on adverse health effects that is not required according to the classification criteria set out in CLP Regulation.

## **SECTION 12: Ecological information**

### **12.1. Toxicity**

#### **Mixture**

Data for the mixture are not available.

#### **Acute aquatic toxicity**

The mixture does not contain substances classified as acute aquatic toxicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

#### **Chronic aquatic toxicity**

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

The mixture does not contain substances classified as a chronic aquatic toxicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.	
<b>Propan-2-ol</b>	CAS: 67-63-0
The substance is not classified as hazardous for the aquatic environment.	
<b>Fish</b>	
LC <sub>50</sub> , 96 hrs., Pimephales promelas: 9 640 - 10 000 mg/l (mortality, OECD 203)	
<b>Crustaceans</b>	
EC <sub>50</sub> , 24 hrs., Daphnia Magna: > 10 000 mg/l (mobility, OECD 202)	
logNOEC, 16 d., Daphnia Magna: 3.37 (growth, NOEC = 2 344 µmol/l = 140.9 mg/l)	
<b>Algae</b>	
Threshold toxicity, 7 d., Scenedesmus quadricauda: 1.800 mg/l	
<b>Citric acid monohydrate</b>	ES: 201-069-1
The substance is not classified as hazardous for the aquatic environment.	
<b>Fish</b>	
LC <sub>50</sub> , 48 hrs., Leuciscus idus: 440 - 760 mg/l (mortality, OECD 203)	
LC <sub>0</sub> , 48 hrs., Leuciscus idus: 200 - 620 mg/l (mortality, OECD 203)	
<b>Crustaceans</b>	
LC <sub>50</sub> , 24 hrs., Daphnia Magna: 1 535 mg/l (mortality)	
LC <sub>0</sub> , 24 hrs., Daphnia Magna: 1 206 mg/l (mortality)	
<b>Algae</b>	
NOEC, 8 d., Scenedesmus quadricauda: 425 mg/l (cell density)	
<b>12.2. Persistence and degradability</b>	
<b>Mixture</b>	
Data for the mixture are not available.	
<b>Propan-2-ol</b>	CAS: 67-63-0
Readily biodegradable: 53 % after 5 days (CO <sub>2</sub> evolution, OECD 301 B).	
<b>Citric acid monohydrate</b>	ES: 201-069-1
Readily biodegradable: 100 % after 19 days (removal of dissolved organic carbon, OECD 301 E).	
<b>12.3. Bioaccumulative potential</b>	
<b>Mixture</b>	
Data for the mixture are not available.	
<b>Propan-2-ol</b>	CAS: 67-63-0
log Pow = 0.05 (25 °C).	
<b>Citric acid monohydrate</b>	ES: 201-069-1
Not determined.	
<b>12.4. Mobility in soil</b>	
<b>Mixture</b>	

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Data for the mixture are not available.

### Propan-2-ol

CAS: 67-63-0

Data for the substance are not available.

### Citric acid monohydrate

ES: 201-069-1

Not determined.

### 12.5. Results of PBT and vPvB assessment

Mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH Regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH Regulation.

### 12.6. Endocrine disrupting properties

The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH Regulation. Mixture does not contain the substance(s) 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.

### 12.7. Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal methods of the substance or mixture and the contaminated packaging

Dispose according to the applicable European and local regulations (eg. in a hazardous waste incinerator). **Do not empty unused product into drainage systems.** Do not contaminate ponds or ditches with the product or used container. Hand over the residual amounts and solutions to a licensed disposal company. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### Possible waste code

16 03 05\* - organic wastes containing hazardous substances or 20 01 29\* detergents containing hazardous substances (mixture), 15 01 10\* - packaging containing residues of or contaminated by hazardous substances (contaminated packaging), 15 01 02 - plastic packaging (clear packaging).

#### Physical/chemical properties that may affect waste treatment options

Flammability.

#### Special precautions recommended for waste management

Not known.

#### Waste legislation

Directive 2008/98/EC on waste and repealing certain Directives, as amended.

## SECTION 14: Transport information

### 14.1. UN number or ID number

UN 1987.

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

### 14.2. UN proper shipping name

ALCOHOLS, N.O.S. (Propan-2-ol).

### 14.3. Transport hazard class(es)

3

### 14.4. Packing group

III

### 14.5. Environmental hazards

It is not dangerous for the environment during transport.

### 14.6. Special precautions for user

Not given.

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

Not available.

### 14.8. Other information

#### Labeling according to ADR



#### Additional data for ADR/RID

Classification code	F1
Labels	3
Hazard identification code	30
Tunnel restriction code	D/E (ADR), - (RID).
Limited quantities	5 l
Excepted quantities	Maximum net quantity per inner packaging: 30 ml. Maximum net quantity per outer packaging: 1 000 ml.
Transport category	3

#### Additional data for IMDG

Emergency Schedules (EmS)	F-E, S-D.
---------------------------	-----------

## SECTION 15: Regulatory information

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

# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

Regulation No. 1907/2006/EC, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, as amended (REACH)

Regulation No. 1272/2008/EC, on Classification, Labelling and Packaging of substances and mixtures, as amended (CLP)

Regulation No. 648/2004/EC on detergents, as amended

### 15.2. Chemical safety assessment

Has not been carried out for mixture.

## SECTION 16: Other information

### Reason for the revision of the safety data sheet

Change of the classification and labeling of the mixture. Change in the composition of the mixture in section 3 and related changes in the other sections.

### Key or legend to abbreviations and acronyms

Acute Tox. 4	Acute toxicity, cat. 4
Eye Irrit. 2	Eye irritation, cat. 2
Flam. Liq. 2	Flammable liquid, cat. 2
Flam. Liq. 3	Flammable liquid, cat. 3
STOT RE 2	Specific target organ toxicity - repeated exposure, cat. 2
STOT SE 3	Specific target organ toxicity - single exposure, cat. 3
ADR	Accord Dangereuses Route
CLP	Regulation No. 1272/2008/EC, on Classification, Labelling and Packaging of substances and mixtures
DNEL	Derived No Effect Level
ICAO/IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
PBT	Persistent, bioaccumulative, toxic substance
PNEC	Predicted No Effect Concentration
REACH	Regulation No. 1907/2006/EC, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulation concerning the International Carriage of Dangerous Goods by Rail
STOT	Specific target organ toxicity
vPvB	Very persistent and very bioaccumulative substance

### Sources of key data used to compile the Safety Data Sheet

European legislation, manufacturer's safety data sheet, registration dossier of substances.

### List of H- and P- phrases

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.



# SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

## KRYSTAL Mechanical dish rinsing

H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P501	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### **Training advice**

According to SDS.

### **Other information**

Classification according to data from the manufacturer. The mixture is classified using calculation methods according to Regulation CLP and tests. Use only for the purposes designated by the manufacturer, will prevent health and environmental risks.

The information in this SDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

The safety data sheet is created in accordance with Regulation No. 2020/878/EC. There is no additional information in accordance with the local and national legislation of the Member State in the European Union, in the safety data sheet.

The safety data sheet was created by company LACHEPRA s.r.o.