

# SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by  
UK REACH Regulations SI 2019/758



## CORN MIX

Version	Revision Date:	SDS Number:	Date of last issue: 09.01.2024
1.3	09.01.2024	50001931	Date of first issue: 14.02.2019

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

#### 1.1 Product identifier

**Product name** CORN MIX

#### Other means of identification

**Product code** 50001931

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

Use of the Sub-  
stance/Mixture : A fertilizer with micronutrients for use in agriculture

Recommended restrictions  
on use : Use as recommended by the label.  
For professional users only.

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

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

**Supplier Address** FMC Agro Limited  
Rectors Lane, Pentre  
Flintshire  
CH5 2DH  
United Kingdom

Telephone: + 44 1244 537370  
E-mail address: SDS-Info@fmc.com .

#### 1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:  
England and Wales: 44-870-8200418 (CHEMTREC)

Medical emergency:  
England and Wales: 111  
Scotland: 84 54 24 2424

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK  
SI 2019/720, and UK SI 2020/1567)

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Skin corrosion, Category 2

H315: Causes skin irritation.

Serious eye damage, Category 2

H319: Causes serious eye irritation.

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

Hazard pictograms

:



Signal word

:

Warning

Hazard statements

:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

:

#### **Prevention:**

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/goggles/face shield.

#### **Response:**

P302 + P352 IF ON SKIN: Wash with plenty of water and soap.

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

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

Hazardous components which must be listed on the label:

phosphoric acid

potassium hydroxide

#### **Additional Labelling**

EUH401

To avoid risks to human health and the environment, comply with the instructions for use.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

##### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
phosphoric acid	7664-38-2 231-633-2 015-011-00-6	Skin Corr. 1B; H314  specific concentra- tion limit Skin Corr. 1B; H314 ≥ 25 % Skin Irrit. 2; H315 10 - < 25 % Eye Irrit. 2; H319 10 - < 25 %	≥ 20 - < 25
potassium hydroxide	1310-58-3 215-181-3 019-002-00-8	Met. Corr. 1; H290 Acute Tox. 4; H302 Skin Corr. 1A; H314 Eye Dam. 1; H318  specific concentra- tion limit Skin Corr. 1A; H314 ≥ 5 % Skin Corr. 1B; H314 2 - < 5 % Skin Irrit. 2; H315 0.5 - < 2 % Eye Irrit. 2; H319 0.5 - < 2 %	≥ 5 - < 10
magnesium nitrate	10377-60-3 233-826-7	Ox. Sol. 3; H272 Eye Irrit. 2; H319	≥ 1 - < 10
Citric acid, monohydrate	5949-29-1	Eye Irrit. 2; H319	≥ 1 - < 10

For explanation of abbreviations see section 16.

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### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- |                            |   |
|----------------------------|---|
| General advice             | : Move out of dangerous area.<br>Consult a physician.<br>Show this safety data sheet to the doctor in attendance.<br>Do not leave the victim unattended.  |
| Protection of first-aiders | : First Aid responders should pay attention to self-protection and use the recommended protective clothing<br>Avoid inhalation, ingestion and contact with skin and eyes.<br>If potential for exposure exists refer to Section 8 for specific personal protective equipment.  |
| If inhaled                 | : Move to fresh air.<br>If unconscious, place in recovery position and seek medical advice.<br>If symptoms persist, call a physician.   |
| In case of skin contact    | : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.<br>If on skin, rinse well with water.<br>If on clothes, remove clothes.  |
| In case of eye contact     | : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.<br>In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>Continue rinsing eyes during transport to hospital.<br>Remove contact lenses.<br>Protect unharmed eye.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist. |
| If swallowed               | : Clean mouth with water and drink afterwards plenty of water.<br>Keep respiratory tract clear.<br>Do NOT induce vomiting.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.<br>Take victim immediately to hospital.  |

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

- |       |   |
|-------|---|
| Risks | : Causes skin irritation.<br>Causes serious eye irritation. |
|-------|---|

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

- |           |                          |
|-----------|--------------------------|
| Treatment | : Treat symptomatically. |
|-----------|--------------------------|

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or regular foam.

Unsuitable extinguishing media : High volume water jet

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

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Fire may produce irritating, corrosive and/or toxic gases. Ammonia

#### 5.3 Advice for firefighters

Special protective equipment for firefighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment.  
Never return spills in original containers for re-use.  
Mark the contaminated area with signs and prevent access to unauthorized personnel.  
Only qualified personnel equipped with suitable protective equipment may intervene.  
For disposal considerations see section 13.

#### 6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

Methods for cleaning up : Neutralize with chalk, alkali solution or ammonia.  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

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### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/dust.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
To avoid spills during handling keep bottle on a metal tray.  
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : When using do not eat or drink. When using do not smoke.  
Wash hands before breaks and at the end of workday.

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

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully re-sealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage : Do not store near acids.

Further information on storage stability : No decomposition if stored and applied as directed.

### 7.3 Specific end use(s)

Specific use(s) : Fertilizers

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
phosphoric acid	7664-38-2	TWA	1 mg/m <sup>3</sup>	GB EH40
		STEL	2 mg/m <sup>3</sup>	GB EH40
		TWA	1 mg/m <sup>3</sup>	2000/39/EC
Further information: Indicative				
		STEL	2 mg/m <sup>3</sup>	2000/39/EC

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	Further information: Indicative			
potassium hydroxide	1310-58-3	STEL	2 mg/m3	GB EH40

### 8.2 Exposure controls

#### Personal protective equipment

- Eye/face protection : Eye wash bottle with pure water  
Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.
- Hand protection  
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : No personal respiratory protective equipment normally required.
- Protective measures : Plan first aid action before beginning work with this product.  
Always have on hand a first-aid kit, together with proper instructions.  
Ensure that eye flushing systems and safety showers are located close to the working place.  
Wear suitable protective equipment.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Physical state : liquid
- Colour : blue  
blue green
- Odour : Barely perceptible
- Odour Threshold : No data available
- pH : 1.0 - 2.5  
Concentration: 100 %
- Melting point/freezing point : No data available
- Initial boiling point and boiling : No data available

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range

Flash point : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 1.24 - 1.25

Density : No data available

Bulk density : No data available

Solubility(ies)

Water solubility : soluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : Non-oxidizing

### 9.2 Other information

Particle size : No data available

Particle Size Distribution : No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No decomposition if stored and applied as directed.



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### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : None reasonably foreseeable.No decomposition if stored and applied as directed.

### 10.4 Conditions to avoid

Conditions to avoid : Avoid extreme temperatures  
Heat, flames and sparks.

### 10.5 Incompatible materials

Materials to avoid : Avoid strong acids, bases, and oxidizers

### 10.6 Hazardous decomposition products

Toxic fumes

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

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

#### Product:

Acute oral toxicity : Acute toxicity estimate (Rat): > 8,000 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 13.14 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

#### Components:

##### phosphoric acid:

Acute oral toxicity : LD50 (Rat, female): > 300 - < 2,000 mg/kg  
Method: OECD Test Guideline 423

##### potassium hydroxide:

Acute oral toxicity : LD50 (Rat, male): 333 mg/kg

##### magnesium nitrate:

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg  
Method: OECD Test Guideline 423

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Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Method: OECD Test Guideline 402

### **Citric acid, monohydrate:**

Acute oral toxicity : LD50 Oral (Mouse, male and female): 5,400 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 Dermal (Rat, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### **Skin corrosion/irritation**

Causes skin irritation.

#### **Product:**

Assessment : Irritating to skin.  
Result : Severe skin irritation

#### **Components:**

##### **phosphoric acid:**

Species : Rabbit  
Assessment : Corrosive  
Result : Corrosive after 3 minutes to 1 hour of exposure

##### **potassium hydroxide:**

Species : reconstructed human epidermis (RhE)  
Method : OECD Test Guideline 431  
Result : Corrosive

##### **magnesium nitrate:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation  
Remarks : Based on data from similar materials

### **Citric acid, monohydrate:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

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

Causes serious eye irritation.

#### **Product:**

Assessment : Irritating to eyes.  
Result : Eye irritation

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### Components:

#### **phosphoric acid:**

Result	:	Irreversible effects on the eye
Remarks	:	Based on skin corrosivity

#### **potassium hydroxide:**

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Corrosive

#### **magnesium nitrate:**

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Eye irritation

#### **Citric acid, monohydrate:**

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irritation to eyes, reversing within 21 days

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

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

#### **Respiratory sensitisation**

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

### Product:

Remarks	:	Not expected to cause skin sensitisation
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### Components:

#### **potassium hydroxide:**

Test Type	:	Intracutaneous test
Species	:	Guinea pig
Result	:	Not a skin sensitizer.

#### **magnesium nitrate:**

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitisation.

### **Germ cell mutagenicity**

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

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### Components:

#### **phosphoric acid:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Method: OECD Test Guideline 471  
Result: negative

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative

#### **potassium hydroxide:**

Genotoxicity in vitro : Test Type: Ames test  
Result: negative

#### **magnesium nitrate:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Method: OECD Test Guideline 471  
Result: negative

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative  
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: Based on data from similar materials

Germ cell mutagenicity- Assessment : In vitro tests did not show mutagenic effects

#### **Citric acid, monohydrate:**

Genotoxicity in vitro : Test Type: Micronucleus test  
Method: OECD Test Guideline 487  
Result: positive

Test Type: reverse mutation assay  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: chromosome aberration assay  
Species: Rat (male)  
Application Route: Oral  
Method: OECD Test Guideline 475  
Result: negative

Test Type: Rodent Dominant Lethal Assay  
Species: Rat (male and female)  
Application Route: Oral

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Method: Regulation (EC) No. 440/2008, Annex, B.22  
Result: negative

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

### Carcinogenicity

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

#### Components:

##### **Citric acid, monohydrate:**

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

### Reproductive toxicity

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

#### Components:

##### **phosphoric acid:**

Effects on fertility : Test Type: reproductive and developmental toxicity study  
Species: Rat, male and female  
Application Route: Ingestion  
General Toxicity - Parent: NOAEL: 500 mg/kg body weight  
General Toxicity F1: NOAEL: 500 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Mouse  
Application Route: Ingestion  
General Toxicity Maternal: NOAEL: 370 mg/kg body weight  
Developmental Toxicity: NOAEL: 370 mg/kg body weight  
Result: negative  
Remarks: Based on data from similar materials

##### **magnesium nitrate:**

Effects on fertility : Species: Rat, male and female  
Application Route: Oral  
Dose: 0, 250, 750, and 1,500 milligram per kilogram  
Duration of Single Treatment: 28 d  
General Toxicity - Parent: NOAEL: > 1,500 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: negative  
Remarks: Based on data from similar materials

Effects on foetal development : Species: Rat  
Application Route: Oral  
Dose: 0, 250, 750, and 1,500 milligram per kilogram  
Duration of Single Treatment: 28 d  
General Toxicity Maternal: NOAEL: > 1,500 mg/kg body

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weight  
Developmental Toxicity: NOAEL: > 1,500 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: negative  
Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

### Citric acid, monohydrate:

Effects on foetal development : Test Type: reproductive and developmental toxicity study  
Species: Mouse  
Application Route: Oral  
Dose: 0, 2.41, 11.2, 52.0, 241 mg/k  
Duration of Single Treatment: 6 - 15 d  
Teratogenicity: NOAEL: > 241 mg/kg body weight

Test Type: reproductive and developmental toxicity study  
Species: Rat  
Application Route: Oral  
Dose: 0, 2.95, 13.7, 63.6, 295 mg/k  
Duration of Single Treatment: 6 - 15 d  
Teratogenicity: NOAEL: > 295 mg/kg body weight

Test Type: reproductive and developmental toxicity study  
Species: Rabbit  
Application Route: Oral  
Dose: 0, 4.25, 19.75, 91.70, 425 mg  
Duration of Single Treatment: 6 - 15 d  
Teratogenicity: NOAEL: > 425 mg/kg body weight

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

### STOT - single exposure

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

### STOT - repeated exposure

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

### Components:

#### magnesium nitrate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

#### Citric acid, monohydrate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

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### Repeated dose toxicity

#### Components:

##### phosphoric acid:

Species	: Rat, male and female
NOAEL	: 250 mg/kg
Application Route	: Oral - gavage
Exposure time	: 42 - 54 d
Method	: OECD Test Guideline 422

##### magnesium nitrate:

Species	: Rat, male and female
NOAEL	: > 1,500 mg/kg
Application Route	: Oral
Exposure time	: 28d
Dose	: 0, 250, 750, 1,500 mg/kg/day
Method	: OECD Test Guideline 422
Remarks	: Based on data from similar materials

##### Citric acid, monohydrate:

Species	: Rat
NOAEL	: 4,000 mg/kg
LOAEL	: 8,000 mg/kg
Application Route	: Oral
Exposure time	: 10d
Dose	: 2, 4, 8, 16 g/kg bw/day

Species	: Mouse
NOAEL	: 1,000 mg/kg
LOAEL	: 2,000 mg/kg
Application Route	: Oral
Exposure time	: 10d
Dose	: 1, 2, 4, 8 g/kg bw/day

### Aspiration toxicity

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

### Further information

#### Product:

Remarks	: No data available
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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

##### phosphoric acid:

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Toxicity to fish	: LC50 (Lepomis macrochirus (Bluegill sunfish)): 3 - 3.25 mg/l
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201  NOEC (Desmodesmus subspicatus (green algae)): 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	: EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

### magnesium nitrate:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials  LC50 (Poecilia reticulata (guppy)): 1,378 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials  LC50 (Cyprinus carpio (Carp)): 95 - 102 mg/l Exposure time: 48 h Test Type: semi-static test Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 39 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: EC50 (diatoms): > 1,700 mg/l Exposure time: 10 d Test Type: static test Remarks: Based on data from similar materials
Toxicity to microorganisms	: EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials
Toxicity to fish (Chronic toxicity)	: NOEC: 58 mg/l Exposure time: 30 d Species: Pimephales promelas (fathead minnow) Test Type: flow-through test



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Remarks: Based on data from similar materials

NOEC: 157 mg/l  
Exposure time: 32 d  
Species: Pimephales promelas (fathead minnow)  
Test Type: flow-through test  
Remarks: Based on data from similar materials

### Citric acid, monohydrate:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 440 mg/l Test Type: static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1,535 mg/l Exposure time: 24 h Test Type: static test
Toxicity to algae/aquatic plants	:	NOEC (Scenedesmus quadricauda (Green algae)): 425 mg/l Exposure time: 8 d Test Type: static test
Toxicity to microorganisms	:	NOEC (Pseudomonas putida): > 10,000 mg/l Exposure time: 16 h Test Type: Cell multiplication inhibition test  NOEC (Protozoa): 325 mg/l Exposure time: 72 h
Toxicity to terrestrial organisms	:	NOEC: > 4 mg/kg Exposure time: 14 d Species: Birds  LD50: > 4 mg/kg Exposure time: 14 d Species: Birds

## 12.2 Persistence and degradability

### Components:

#### phosphoric acid:

Biodegradability	:	Remarks: The methods for determining biodegradability are not applicable to inorganic substances.
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#### Citric acid, monohydrate:

Biodegradability	:	Result: Readily biodegradable. Method: OECD Test Guideline 301B  Result: Readily biodegradable. Method: OECD Test Guideline 301E
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Result: Inherently biodegradable.  
Method: OECD Test Guideline 302B

### 12.3 Bioaccumulative potential

#### Components:

##### **Citric acid, monohydrate:**

Bioaccumulation : Bioconcentration factor (BCF): 3.2  
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: -1.55

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

#### Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Additional ecological information : No data available

#### Components:

##### **phosphoric acid:**

Additional ecological information : Harmful effects on aquatic organisms also due to pH shift.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemical or used container.

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Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

## SECTION 14: Transport information

### 14.1 UN number

ADN	: UN 3264
ADR	: UN 3264
RID	: UN 3264
IMDG	: UN 3264
IATA	: UN 3264

### 14.2 UN proper shipping name

ADN	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Orthophosphoric acid, Potassium hydroxide)
ADR	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Orthophosphoric acid, Potassium hydroxide)
RID	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Orthophosphoric acid, Potassium hydroxide)
IMDG	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Orthophosphoric acid, Potassium hydroxide)
IATA	: Corrosive liquid, acidic, inorganic, n.o.s. (Orthophosphoric acid, Potassium hydroxide)

### 14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	: 8	
ADR	: 8	
RID	: 8	
IMDG	: 8	
IATA	: 8	

### 14.4 Packing group

ADN	
Packing group	: III
Classification Code	: C1
Hazard Identification Number	: 80
Labels	: 8
ADR	
Packing group	: III

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Classification Code : C1  
Hazard Identification Number : 80  
Labels : 8  
Tunnel restriction code : (E)

### RID

Packing group : III  
Classification Code : C1  
Hazard Identification Number : 80  
Labels : 8

### IMDG

Packing group : III  
Labels : 8  
EmS Code : F-A, S-B

### IATA (Cargo)

Packing instruction (cargo aircraft) : 856  
Packing instruction (LQ) : Y841  
Packing group : III  
Labels : Corrosive

### IATA (Passenger)

Packing instruction (passenger aircraft) : 852  
Packing instruction (LQ) : Y841  
Packing group : III  
Labels : Corrosive

## 14.5 Environmental hazards

### ADN

Environmentally hazardous : no

### ADR

Environmentally hazardous : no

### RID

Environmentally hazardous : no

### IMDG

Marine pollutant : no

## 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

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### SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	: Conditions of restriction for the following entries should be considered: Number on list 3  boric acid (Number on list 30)
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	: Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	: Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	: Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	: Not applicable
Control of Major Accident Hazards Regulations 2015 (COMAH)	Not applicable

#### The components of this product are reported in the following inventories:

TCSI	: Not in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIIC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL.
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
NZIoC	: Not in compliance with the inventory

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TECI : Not in compliance with the inventory

### 15.2 Chemical safety assessment

A chemical safety assessment is not required for this product (mixture).

## SECTION 16: Other information

### Full text of H-Statements

H272	: May intensify fire; oxidizer.
H290	: May be corrosive to metals.
H302	: Harmful if swallowed.
H314	: Causes severe skin burns and eye damage.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.

### Full text of other abbreviations

Acute Tox.	: Acute toxicity
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Met. Corr.	: Corrosive to metals
Ox. Sol.	: Oxidizing solids
Skin Corr.	: Skin corrosion
STOT SE	: Specific target organ toxicity - single exposure
2000/39/EC	: Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
GB EH40	: UK. EH40 WEL - Workplace Exposure Limits
2000/39/EC / TWA	: Limit Value - eight hours
2000/39/EC / STEL	: Short term exposure limit
GB EH40 / TWA	: Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	: Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Ef-

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fect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

### Further information

#### Classification of the mixture:

Skin Corr. 2	H315
Eye Dam. 2	H319

#### Classification procedure:

Based on product data or assessment
Based on product data or assessment

### Disclaimer

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