

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

1.1. Product identifier

Product form : Mixture
Product name : CircoClean IO

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only
Use of the substance/mixture : Disinfectant

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

GEA Farm Technologies GmbH

Siemensstraße 25-27

59199 Bönen - Germany

T + 49 (0) 23839370

E-mail address of competent person responsible for the SDS: sds@gbk-ingelheim.de

Distributor

GEA Farm Technologies (UK) Ltd.

Wylle Works, Watery Lane, Bishopstrow,

Warminster, Wiltshire BA12 9Ht - United Kingdom

T + 44 (0)1985 216444

1.4. Emergency telephone number

Emergency number : 24 Hour Emergency Telephone No. for advice on chemical emergencies, spillages, fires or
First Aid: +44 (0) 870 1906777 (GEA Farm Technologies)
NATIONAL: In England and Wales: 111, In Scotland: 111
INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Corrosive to metals, Category 1 H290
Skin corrosion/irritation, Category 1B H314
Serious eye damage/eye irritation, Category 1 H318
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May be corrosive to metals. Causes severe skin burns and eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

Signal word (CLP)

: Danger

Hazardous ingredients

: Phosphoric acid

Hazard statements (CLP)

: H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP)

: P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P406 - Store in a corrosion-resistant container with a resistant inner liner.
P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

PBT : Not applicable.
vPvB : Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Aqueous solution

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Phosphoric acid	(CAS-No.) 7664-38-2 (EC-No.) 231-633-2 (EC Index-No.) 015-011-00-6 (REACH-no) 01-2119485924-24	< 35	Met. Corr. 1, H290 Skin Corr. 1B, H314
Glycols, polyethylene-polypropylene	(CAS-No.) 9003-11-6	10 - < 15	Aquatic Chronic 3, H412
sodium xylenesulphonate	(CAS-No.) 1300-72-7 (EC-No.) 215-090-9	< 5	Eye Irrit. 2, H319
1,2-propanediol substance with national workplace exposure limit(s) (GB)	(CAS-No.) 57-55-6 (EC-No.) 200-338-0 (REACH-no) 01-2119456809-23	1 - 5	Not classified
iodine	(CAS-No.) 7553-56-2 (EC-No.) 231-442-4 (EC Index-No.) 053-001-00-3 (REACH-no) 01-2119485285-30	< 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 1, H372 Aquatic Acute 1, H400

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Phosphoric acid	(CAS-No.) 7664-38-2 (EC-No.) 231-633-2 (EC Index-No.) 015-011-00-6 (REACH-no) 01-2119485924-24	(10 =<C < 25) Eye Irrit. 2, H319 (10 =<C < 25) Skin Irrit. 2, H315 (C >= 25) Skin Corr. 1B, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately. Remove and wash contaminated clothing before re-use.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth out with water. Do not induce vomiting. Call a physician immediately. Give water to drink if victim completely conscious/alert.

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

Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide. Product does not burn, fire-extinguishing activities according to surrounding.
Unsuitable extinguishing media	: high volume water jet.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Cool containers at risk with water spray jet. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Ensure adequate air ventilation. Wear personal protective equipment. Avoid contact with skin, eyes and clothing.
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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".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material.
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.

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. Do not breathe. Do not breathe vapour/aerosol. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool.
Incompatible materials	: Bases.
Information on mixed storage	: Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Disinfectant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Phosphoric acid (7664-38-2)		
EU	Local name	Orthophosphoric acid
EU	IOELV TWA (mg/m ³)	1 mg/m ³
EU	IOELV STEL (mg/m ³)	2 mg/m ³
EU	Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom	Local name	Orthophosphoric acid
United Kingdom	WEL TWA (mg/m ³)	1 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	2 mg/m ³
United Kingdom	Regulatory reference	EH40. HSE

1,2-propanediol (57-55-6)

United Kingdom	Local name	Propane-1,2-diol
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1,2-propanediol (57-55-6)

United Kingdom	WEL TWA (mg/m ³)	474 mg/m ³ Propane-1,2-diol total vapour and particulates; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005); Propane-1,2-diol particulates; 10 mg/m ³ ; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	150 ppm Propane-1,2-diol total vapour and particulates; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	1422 mg/m ³ (calculated-total particulate and vapour) 30 mg/m ³ (calculated-particulate)
United Kingdom	WEL STEL (ppm)	450 ppm (calculated-total particulate and vapour)
United Kingdom	Regulatory reference	EH40. HSE

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Chemically resistant protective gloves	Nitrile rubber	6 (> 480 minutes)	0,7	2 (< 1.5)	EN 374

Eye protection:

Safety glasses. Eye wash bottle with pure water (EN 15154).

Type	Use	Characteristics	Standard
Safety goggles	Liquid splashes may occur	With side shields	EN 166

Skin and body protection:

Acid-resistant clothing

Type	Standard
Long sleeved protective clothing	EN 368

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. No personal breathing protective equipment is normally required

Personal protective equipment symbol(s):



Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: dark brown
Odour	: Slightly like iodine
Odour threshold	: No data available
pH	: < 2
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available

Freezing point	: No data available
Boiling point	: $\approx 100\text{ }^{\circ}\text{C}$
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not applicable
Flammability (solid, gas)	: Not applicable Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.14 - 1.17 g/cm ³
Solubility	: Water: completely miscible
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not applicable.
Oxidising properties	: Product is not explosive.
Explosive limits	: No data available

9.2. Other information

VOC content	: 0 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Gives off hydrogen by reaction with metals. Exothermic reaction on contact with : Bases.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat. Reacts violently with water.

10.5. Incompatible materials

Bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Fire may produce: Phosphorus oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Phosphoric acid (7664-38-2)

LD50 oral rat	1530 mg/kg
LD50 oral	2000 mg/kg
LD50 dermal rabbit	2740 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	0.9615 mg/l/4h

1,2-propanediol (57-55-6)

LD50 oral rat	20000 mg/kg
LD50 dermal rat	22500 mg/kg
LD50 dermal rabbit	20800 mg/kg

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: < 2
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Serious eye damage/irritation	: Causes serious eye damage. pH: < 2
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

Phosphoric acid (7664-38-2)

LC50 fish 1	75.1 mg/l
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1,2-propanediol (57-55-6)

LC50 fish 1	51600 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	34400 mg/l

12.2. Persistence and degradability

CircoClean IO

Persistence and degradability	No data available.
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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information	: Avoid release to the environment
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Disposal in accordance with local regulations. Should not be disposed of with household waste.
Sewage disposal recommendations	: Do not discharge into drains.
Product/Packaging disposal recommendations	: Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Additional information	: Recommended cleaning agent: Water with detergents.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	: 02 01 08* - agrochemical waste containing dangerous substances

SECTION 14: Transport information






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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1805	1805	1805	1805	1805
14.2. UN proper shipping name				
PHOSPHORIC ACID, SOLUTION	PHOSPHORIC ACID SOLUTION	Phosphoric acid, solution	PHOSPHORIC ACID, SOLUTION	PHOSPHORIC ACID, SOLUTION

Transport document description

UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III, (E)	UN 1805 PHOSPHORIC ACID SOLUTION, 8, III	UN 1805 Phosphoric acid, solution, 8, III	UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III	UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III
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14.3. Transport hazard class(es)

8	8	8	8	8
				

14.4. Packing group

III	III	III	III	III
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14.5. Environmental hazards

Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
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No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C1
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Transport category (ADR)	: 3
Hazard identification number (Kemler No.)	: 80
Orange plates	: 

Tunnel restriction code (ADR)	: E
EAC code	: 2R

Transport by sea

Packing instructions (IMDG)	: P001, LP01
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Properties and observations (IMDG)	: Miscible in water. Mildly corrosive to most metals.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3
ERG code (IATA)	: 8L

Inland waterway transport

Classification code (ADN)	: C1
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: C1
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Transport category (RID)	: 3
Hazard identification number (RID)	: 80

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

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content	: 0 %
Seveso Additional information	: Not subject to the Seveso III Directive

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

Indication of changes:

All chapters have been modified since the previous version.

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
DOT	Department of Transport
TDG	Transportation of Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
GHS	Globally Harmonized System of Classification, Labelling and Packaging of Chemicals
IARC	International Agency for Research on Cancer
vPvB	Very Persistent and Very Bioaccumulative
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
CAS	CAS (Chemical Abstracts Service) number
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ATE	Acute Toxicity Estimate
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
BCF	Bioconcentration factor
MARPOL 73/78	MARPOL 73/78: International Convention for the Prevention of Pollution From Ships
LC50	Median lethal concentration
LD50	Median lethal dose

Data sources	: Raw material supplier's SDS. 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	: Data of sections 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. The delivery specifications are contained in the corresponding product sheet. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
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.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Met. Corr. 1	H290	Expert judgment
Skin Corr. 1B	H314	Expert judgment
Eye Dam. 1	H318	Expert judgment

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