

# Safety Data Sheet

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

Issue date: 01/28/2022 Revision date: 01/28/2022 Supersedes version of: 6/6/2019 Version: 8.00

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

#### 1.1. Product identifier

Trade name : lotus® PRO & iClean® mini & iClean® PRO

Model # LQFC225K, LQFC275, LQFC200, LQFC300

Type of product : Biocidal products

Other means of identification : Stabilized aqueous ozone

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : Cleaning agent Disinfectant

#### 1.2.2. Uses advised against

No additional information available

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

Supplier Importer

Tersano Inc.

Killis Limited

Unit 1A Orgreave Road

Oldcastle Ontario, NOR 1L0

Killis Limited

Unit 1A Orgreave Road

Dorehouse Industrial Estate

Canada Handsworth, Sheffield, S13 9LQ

T +1 800-808-1723 United Kingdom
www.tersano.com
T 07 73 664 80 24
www.killis.co.uk

**Email competent person** 

sds@kft.de

### 1.4. Emergency telephone number

Emergency number : National Health Service (NHS)

24 hour national number consumer

England and Scotland: 111

Wales: 0845 46 47

Northern Ireland: call your local General Practitioner

Call 999 if there is a life-threatening incident.

#### **SECTION 2: Hazards identification**

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

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

Not classified

Adverse physicochemical, human health and environmental effects

This product is not hazardous in the form in which it is shipped by the manufacturer.

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#### 2.2. Label elements

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

Extra phrases : The additional label requirements of directive EU 528/2012 about the available on the

market and use of biocidal products have to be observed.

#### 2.3. Other hazards

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

Component		
water (7732-18-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
Ozone generated from oxygen (10028-15-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

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

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
water	CAS-No.: 7732-18-5 EC-No.: 231-791-2	≥ 99,999	Not classified
Ozone generated from oxygen (Active substance (Biocide))	CAS-No.: 10028-15-6 EC-No.: 233-069-2	< 0,001	Ox. Gas 1, H270 Acute Tox. 1 (Inhalation:gas), H330 (ATE=0.7 ppmv/4h) Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT RE 1, H372 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410

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

### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

First-aid measures general : In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after inhalation : No specific measures are necessary.

First-aid measures after skin contact : No specific measures are necessary.

First-aid measures after eye contact : No specific measures are necessary.

First-aid measures after ingestion : No specific measures are necessary.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

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#### 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 : Not applicable. The product is not flammable. Use extinguishing media appropriate for

surrounding fire.

Unsuitable extinguishing media : None.

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

Fire hazard : Non flammable.
Explosion hazard : Product is not explosive.

Reactivity in case of fire : The product is not flammable.

Hazardous decomposition products in case of fire : The product is not flammable.

#### 5.3. Advice for firefighters

No additional information available

#### **SECTION 6: Accidental release measures**

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

General measures : Not expected to present a significant hazard under anticipated conditions of normal use.

6.1.1. For non-emergency personnel

Protective equipment : No specific measures are necessary.

6.1.2. For emergency responders

Protective equipment : No specific measures are necessary.

#### 6.2. Environmental precautions

No specific measures are necessary.

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

For containment : For a large spillage, contain the spillage by bunding.

Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

# 6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Avoid breathing mist, vapours, spray.

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

Storage conditions : Containment as appropriate. Glass. Plastic materials. Keep container tightly closed.

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#### 7.3. Specific end use(s)

Follow the directions! Germicide. PT2 - Biocidal products used for the disinfection of surfaces, materials, equipment and furniture which are not used for direct contact with food or feeding stuffs. Usage areas include, inter alia, swimming pools, aquariums, bathing and other waters; air conditioning systems; and walls and floors in private, public and industrial areas and in other areas for professional activities. PT4 - Biocidal products used for the disinfection of equipment, containers, consumption utensils, surfaces or pipework associated with the production, transport, storage or consumption of food or feed (including drinking water) for humans and animals. Cleaner. Deodorizer.

# SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

Ozone generated from oxygen (10028-15-6)		
United Kingdom - Occupational Exposure Limits		
Local name Ozone		
WEL STEL (OEL STEL) 0.4 mg/m³		
WEL STEL (OEL STEL) [ppm] 0.2 ppm		
Regulatory reference EH40/2005 (Fourth edition, 2020). HSE		

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

Ozone generated from oxygen (10028-15-6)		
DNEL/DMEL (Workers)		
Long-term - local effects, inhalation 0.024 mg/m³		
PNEC (Water)		
PNEC aqua (freshwater)	0.008 μg/L	
PNEC aqua (marine water) 0.0008 µg/L		
PNEC aqua (intermittent, freshwater) 0.08 µg/L		
PNEC aqua (intermittent, marine water)	0.008 μg/L	

#### 8.1.5. Control banding

No additional information available

# 8.2. Exposure controls

# 8.2.1. Appropriate engineering controls

# Appropriate engineering controls:

Ensure good ventilation of the work station. Keep good industrial hygiene.

#### 8.2.2. Personal protection equipment

# 8.2.2.1. Eye and face protection

#### Eye protection:

Does not require any particular or specific measures. Respect the general rules for occupational hygiene

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#### 8.2.2.2. Skin protection

#### Skin and body protection:

Does not require any particular or specific measures. Respect the general rules for occupational hygiene

#### Hand protection:

Does not require any particular or specific measures. Respect the general rules for occupational hygiene

#### 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Breathing apparatus with filter. Type NO P3 (blue). EN 143. Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust

#### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

#### Other information:

The above mentioned instructions regarding the protective equipment refer to the industrial use of larger quantities.

#### SECTION 9: Physical and chemical properties

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid
Colour : colourless.
Appearance : clear.

Odour : slight. Sweet. not perfumed.

Odour threshold: Not availableMelting point: Not applicableFreezing point: 0 °CBoiling point: 100 °CFlammability (solid, gas): Not applicable

Explosive properties : Product is not explosive.

Oxidising properties : Non oxidizing.

Explosive limits : Not applicable

Lower explosive limit (LEL) : Not available

Upper explosive limit (UEL) : Not available

Flash point : Not applicable

Auto-ignition temperature : Not self-igniting

Decomposition temperature : Not available

pH : SAO-24: 3.0 - 6.0; SAO-4: 5.0 - 6.0; iClean mini/PRO: 4.0 - 6.0; No cartridge: 7.0

Viscosity, kinematic : Not relevant (Water)
Viscosity, dynamic : Not relevant (Water)
Solubility : Water: Soluble/Miscible

: Not available Partition coefficient n-octanol/water (Log Kow) Partition coefficient n-octanol/water (Log Pow) : Not applicable Vapour pressure : 2.3 kPa (20 °C) Vapour pressure at 50 °C Not available Density 1 g/cm<sup>3</sup> Relative density Not available Relative vapour density at 20 °C Not available Particle size Not applicable Particle size distribution Not applicable Particle shape Not applicable Particle aspect ratio Not applicable Particle aggregation state Not applicable Not applicable Particle agglomeration state Not applicable Particle specific surface area Particle dustiness : Not applicable

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#### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1) : Not relevant (Water)

# **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

The product is stable at normal handling and storage conditions.

#### 10.3. Possibility of hazardous reactions

Tersano SAO systems include SAO cartridge. Without SAO cartridge device produces only an Aqueous Ozone solution which may form bromates in the presence of bromides in the water above pH 6.

#### 10.4. Conditions to avoid

None under normal use.

Acute toxicity (oral)

#### 10.5. Incompatible materials

Low carbon steels and other materials incompatible with water.

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# **SECTION 11: Toxicological information**

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

Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
	pH: SAO-24: 3.0 - 6.0; SAO-4: 5.0 - 6.0; iClean mini/PRO: 4.0 - 6.0; No cartridge: 7.0
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
	pH: SAO-24: 3.0 - 6.0; SAO-4: 5.0 - 6.0; iClean mini/PRO: 4.0 - 6.0; No cartridge: 7.0
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
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: Not classified (Based on available data, the classification criteria are not met)

Iotus® PRO & iClean® mini & iClean® PRO	
Viscosity, kinematic	Not relevant (Water)

# 11.2. Information on other hazards

No additional information available

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# **SECTION 12: Ecological information**

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

(acute)

: Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term

(chronic)

: Not classified (Based on available data, the classification criteria are not met)

Additional information

: Not toxic to aquatic environments when containing <25 ppm ozone, based on M-factor calculation.

# 12.2. Persistence and degradability

lotus® PRO & iClean® mini & iClean® PRO	
Persistence and degradability	Decomposes: water, oxygen.

#### 12.3. Bioaccumulative potential

lotus® PRO & iClean® mini & iClean® PRO	
Partition coefficient n-octanol/water (Log Pow) Not applicable	
Bioaccumulative potential	Not applicable.

### 12.4. Mobility in soil

Iotus® PRO & iClean® mini & iClean® PRO	
Mobility in soil	Not applicable

#### 12.5. Results of PBT and vPvB assessment

lotus® PRO & iClean® mini & iClean® PRO			
This substance/mixture does not meet the PBT crite	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII		
This substance/mixture does not meet the vPvB crit	eria of REACH regulation, annex XIII		
Component			
water (7732-18-5)  This substance/mixture does not meet the PBT criteria of REACH regulation, annex XI This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XI			
Ozone generated from oxygen (10028-15-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII		

# 12.6. Endocrine disrupting properties

No additional information available

#### 12.7. Other adverse effects

Other adverse effects : None

# **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Waste treatment methods : Disposal must be done according to official regulations. European waste catalogue.

Product/Packaging disposal recommendations : Recycle or dispose of in compliance with current legislation.

European List of Waste (LoW) code : 06 13 99 - wastes not otherwise specified

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#### **SECTION 14: Transport information**

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID n	umber		1	
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping	g name			
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard c	lass(es)		1	
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			1	
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental haz	ards	1	1	ı
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

#### 14.6. Special precautions for user

# Overland transport

Not regulated

# Transport by sea

Not regulated

#### Air transport

Not regulated

#### Inland waterway transport

Not regulated

#### Rail transport

Not regulated

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

Not applicable

# **SECTION 15: Regulatory information**

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

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Other information, restriction and prohibition regulations

: A safety data sheet is not required for this product under Article 31 of REACH. This Product Safety Information Sheet has been created on a voluntary basis. Regulation (EC) No. 648/2004 of 31 March 2004 on detergents. Labelling of contents (648/2004/EC). Not applicable. Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products. The additional label requirements of directive EU 528/2012 about the available on the market and use of biocidal products have to be observed. Every advertisement for biocides has to be accompanied by following sentence: Use biocides safely. Always read the label and product information before use.

#### Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products

This product contains biocidal products

Type of product (Biocide) : 2 - Disinfectants and algaecides not intended for direct application to humans or animals, 4 -

Food and feed area

Authorisation number :

#### 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			
Section	Changed item	Change	Comments
	General revision		SDS EU format according to COMMISSION REGULATION (EU) 2020/878
1.1	Trade name	Modified	
1.3	Manufacturer/Supplier	Modified	address
1.3	Importer	Modified	
3.2	Components	Added	
3.2	Active substance (Biocide)	Added	
15.1	Type of product (Biocide)	Added	

Abbreviations and acronyms:		
IATA	International Air Transport Association	
IARC	International Agency for Research on Cancer	
EC50	Median effective concentration	
DNEL	Derived-No Effect Level	
DMEL	Derived Minimal Effect level	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
BCF	Bioconcentration factor	
ATE	Acute Toxicity Estimate	
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	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	

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Abbreviations and acronyms:		
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
PBT	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
TLM	Median Tolerance Limit	
vPvB	Very Persistent and Very Bioaccumulative	

Data sources : Information provided by the manufacturer. European Chemicals Agency,

http://echa.europa.eu/.

Department issuing data specification sheet: : KFT Chemieservice GmbH

Im Leuschnerpark 3 D-64347 Griesheim

Phone: +49 6155-8981-400 Fax: +49 6155 8981-500 SDS Service: +49 6155 8981-522

Contact person : Julia Wack

Other information : Version/s 4.00 - 7.00 is/are not available in this language.

Full text of H- and EUH-statements:	
Acute Tox. 1 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 1
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H270	May cause or intensify fire; oxidiser.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
Ox. Gas 1	Oxidising Gases, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1

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KFT SDS EU 00

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.