

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

1.1. Product identifier

Product form : Mixture
Product name : TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only
Use of the substance/mixture : To be used with Tristel Duo for Labs Base Solution

1.2.2. Uses advised against

Restrictions on use : Uses other than the intended use of the product.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Tristel Solutions Limited
Unit 1B Lynx Business Park,
Fordham Road, Newmarket
Cambridgeshire
CB8 7NY United Kingdom
T +44 (0) 1638 721500
SDS@tristel.com

1.4. Emergency telephone number

Emergency number

Country/Area	Organisation/Company	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

No labelling applicable

2.3. Other hazards

Component	
Substance(s) not meeting the PBT criteria of UK REACH regulation, in accordance with Annex XIII	SODIUM CARBONATE (497-19-8), SODIUM CHLORITE 100% (7758-19-2), 1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Component	
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	SODIUM CARBONATE (497-19-8), SODIUM CHLORITE 100% (7758-19-2), 1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)
Component	
Substance(s) not included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP	1-DECANAMINE,N,N-DIMETHYL-N-OXIDE(2605-79-0), SODIUM CHLORITE 100%(7758-19-2), SODIUM CARBONATE(497-19-8)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to GB CLP (SI 2019:720 as amended)
1-DECANAMINE,N,N-DIMETHYL-N-OXIDE	CAS-No.: 2605-79-0 EC-No.: 220-020-5	< 1	Acute Tox. 4 (Oral), H302 (ATE=300 mg/kg bodyweight) Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
SODIUM CHLORITE 100%	CAS-No.: 7758-19-2 EC-No.: 231-836-6	< 1	Ox. Sol. 1, H271 Acute Tox. 3 (Oral), H301 (ATE=100 mg/kg bodyweight) Acute Tox. 2 (Dermal), H310 (ATE=50 mg/kg bodyweight) Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 3, H412 EUH032
SODIUM CARBONATE	CAS-No.: 497-19-8 EC-No.: 207-838-8	< 1	Eye Irrit. 2, H319

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 after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause moderate irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May cause irritation to the digestive tract.

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

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

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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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.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area.
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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.
Hygiene measures	: 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

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store in a well-ventilated place. Keep cool.
Incompatible materials	: Heat sources.
Storage temperature	: 10 – 35 °C

7.3. Specific end use(s)

To be used with Tristel Duo for Labs Base Solution. For professional use only.

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Avoid contact with eyes.

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Avoid contact with skin.

8.2.2.3. Respiratory protection

Respiratory protection:

Ensure there is sufficient ventilation of the area during use.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: odourless.

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Odour threshold	: Not available
pH	: 10.3 – 11.3
Melting point	: No data available.
Freezing point	: Not available
Boiling point	: 100 °C
Flash point	: > 93 °C
Explosive limits	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Relative vapour density at 20°C	: No data available.
Relative density	: 1 – 1.01
Density	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Auto-ignition temperature	: No data available.
Decomposition temperature	: Not available
Viscosity, kinematic	: Not available
Explosive properties	: Not available

9.2. Other information

Particle characteristics	: Not applicable
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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

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

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 toxicological effects

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

1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)

LD50 oral rat	300 – 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method)
LD50 oral	300 – 2000 mg/kg

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)

LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 10.3 – 11.3
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 10.3 – 11.3
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)

SODIUM CHLORITE 100% (7758-19-2)

IARC group	3 - Not classifiable
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)

SODIUM CHLORITE 100% (7758-19-2)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
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1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)

NOAEL (oral, rat, 90 days)	40 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

Other information

No additional information available

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)

SODIUM CHLORITE 100% (7758-19-2)

LC50 - Fish [1]	265 – 310 mg/l
EC50 - Other aquatic organisms [1]	0.29 mg/l

1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)

LC50 - Fish [1]	134 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
LC50 - Fish [2]	31.8 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	10.4 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	3.1 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	0.7 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	0.42 mg/l

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

12.2. Persistence and degradability

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Persistence and degradability	Biodegradability in water: no data available.
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SODIUM CARBONATE (497-19-8)

Persistence and degradability	Not rapidly degradable
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SODIUM CHLORITE 100% (7758-19-2)

Persistence and degradability	Biodegradability in water: no data available.
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1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)

Persistence and degradability	Rapidly degradable
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Biodegradation	97 %
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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

Component

SODIUM CARBONATE (497-19-8)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII
SODIUM CHLORITE 100% (7758-19-2)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII
1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

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

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Transport document description				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

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

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

This product contains no substance(s) listed on the UK REACH Candidate List (SVHC) above the 0.1% level of disclosure

GB PIC regulation (Prior Informed Consent)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

POP Regulation (Persistent Organic Pollutants)

This product contains no substance(s) listed on the GB POP List equal to or above the level of SDS disclosure

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed as a reportable poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a reportable explosive precursor on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This substance is not listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations

Drug Precursors Regulation (273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other Information

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
BS EN	British Standard
CAS-No.	Chemical Abstract Service number
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level

TRISTEL DUO FOR LABS ACTIVATOR SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Abbreviations and acronyms:	
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-statements:	
Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Ox. Sol. 1	Oxidising Solids, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H271	May cause fire or explosion; strong oxidiser.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.

Safety Data Sheet (SDS), UK

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.

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

1.1. Product identifier

Product form : Mixture
Product name : TRISTEL DUO FOR LABS BASE SOLUTION

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only
Use of the substance/mixture : To be used with Tristel Duo for Labs Activator Solution

1.2.2. Uses advised against

Restrictions on use : Uses other than the intended use of the product.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Tristel Solutions Limited
Unit 1B Lynx Business Park,
Fordham Road, Newmarket
Cambridgeshire
CB8 7NY United Kingdom
T +44 (0) 1638 721500
SDS@tristel.com

1.4. Emergency telephone number

Emergency number

Country/Area	Organisation/Company	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Serious eye damage/eye irritation, Category 2 H319
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes serious eye irritation.

2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

Hazard pictograms (GB CLP)



GHS07

Signal word (GB CLP) : Warning
Hazard statements (GB CLP) : H319 - Causes serious eye irritation.

TRISTEL DUO FOR LABS BASE SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Precautionary statements (GB CLP) : P280 - Wear protective gloves, protective clothing, eye protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice or attention.

2.3. Other hazards

Component	
Substance(s) not meeting the PBT criteria of UK REACH regulation, in accordance with Annex XIII	CITRIC ACID MONOHYDRATE (5949-29-1), 1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	CITRIC ACID MONOHYDRATE (5949-29-1), 1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)
Component	
Substance(s) not included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP	CITRIC ACID MONOHYDRATE(5949-29-1), 1-DECANAMINE,N,N-DIMETHYL-N-OXIDE(2605-79-0)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to GB CLP (SI 2019:720 as amended)
CITRIC ACID MONOHYDRATE	CAS-No.: 5949-29-1	5 – 10	Eye Irrit. 2, H319 STOT SE 3, H335
1-DECANAMINE,N,N-DIMETHYL-N-OXIDE	CAS-No.: 2605-79-0 EC-No.: 220-020-5	< 1	Acute Tox. 4 (Oral), H302 (ATE=300 mg/kg bodyweight) Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

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 after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : May cause moderate irritation.
Symptoms/effects after eye contact : Eye irritation.
Symptoms/effects after ingestion : May cause irritation to the digestive tract.

TRISTEL DUO FOR LABS BASE SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

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.

5.2. Special hazards arising from the substance or mixture

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

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

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".

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. Wear personal protective equipment.
Hygiene measures : 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 : Keep container tightly closed. Store in a well-ventilated place. Keep cool.
Storage temperature : 10 – 35 °C

7.3. Specific end use(s)

To be used with Tristel Duo for Labs Activator Solution. For professional use only.

TRISTEL DUO FOR LABS BASE SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses EN 366

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves EN 374

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	2 (> 30 minutes)	0.10	> 480 minutes	EN ISO 374-1

8.2.2.3. Respiratory protection

Respiratory protection:

Ensure there is sufficient ventilation of the area during use.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

TRISTEL DUO FOR LABS BASE SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Blue.
Odour	: Not available
Odour threshold	: Not available
pH	: 2 – 3
Melting point	: No data available.
Freezing point	: Not available
Boiling point	: Not available
Flash point	: Not available
Explosive limits	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Relative vapour density at 20°C	: No data available.
Relative density	: 1.02 – 1.03
Density	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Auto-ignition temperature	: No data available.
Decomposition temperature	: Not available
Viscosity, kinematic	: Not available
Explosive properties	: Not available

9.2. Other information

Particle characteristics	: Not applicable
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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

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

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 toxicological effects

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

TRISTEL DUO FOR LABS BASE SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

CITRIC ACID MONOHYDRATE (5949-29-1)	
LD50 oral rat	11700 mg/kg
LD50 dermal rat	> 2000 mg/kg

1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)	
LD50 oral rat	300 – 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method)
LD50 oral	300 – 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 2 – 3
Serious eye damage/irritation	: Causes serious eye irritation. pH: 2 – 3
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)

CITRIC ACID MONOHYDRATE (5949-29-1)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
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1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)	
NOAEL (oral, rat, 90 days)	40 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:

Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
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CITRIC ACID MONOHYDRATE (5949-29-1)	
Viscosity, kinematic	Not applicable

Other information

No additional information available

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)

CITRIC ACID MONOHYDRATE (5949-29-1)	
LC50 - Fish [1]	440 – 706 mg/l

1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)	
LC50 - Fish [1]	134 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
LC50 - Fish [2]	31.8 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)

TRISTEL DUO FOR LABS BASE SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)

EC50 - Crustacea [1]	10.4 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	3.1 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	0.7 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	0.42 mg/l

12.2. Persistence and degradability

TRISTEL DUO FOR LABS BASE SOLUTION

Persistence and degradability	Biodegradability in water: no data available.
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CITRIC ACID MONOHYDRATE (5949-29-1)

Persistence and degradability	Rapidly degradable
Biodegradation	97 %

1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)

Persistence and degradability	Rapidly degradable
Biodegradation	97 %

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

Component

CITRIC ACID MONOHYDRATE (5949-29-1)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII
1-DECANAMINE,N,N-DIMETHYL-N-OXIDE (2605-79-0)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

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

TRISTEL DUO FOR LABS BASE SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Transport document description				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

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

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

This product contains no substance(s) listed on the UK REACH Candidate List (SVHC) above the 0.1% level of disclosure

GB PIC regulation (Prior Informed Consent)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

TRISTEL DUO FOR LABS BASE SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

POP Regulation (Persistent Organic Pollutants)

This product contains no substance(s) listed on the GB POP List equal to or above the level of SDS disclosure

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed as a reportable poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a reportable explosive precursor on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This substance is not listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations

Drug Precursors Regulation (273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other Information

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
BS EN	British Standard
CAS-No.	Chemical Abstract Service number
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level

TRISTEL DUO FOR LABS BASE SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Abbreviations and acronyms:	
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Safety Data Sheet (SDS), UK

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.

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

1.1. Product identifier

Product form : Mixture
Product name : TRISTEL DUO FOR LABS WORKING SOLUTION

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

1.2.1. Relevant identified uses

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

1.2.2. Uses advised against

Restrictions on use : Uses other than the intended use of the product.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Tristel Solutions Limited
Unit 1B Lynx Business Park,
Fordham Road, Newmarket
Cambridgeshire
CB8 7NY United Kingdom
T +44 (0) 1638 721500
SDS@tristel.com

1.4. Emergency telephone number

Emergency number

Country/Area	Organisation/Company	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

No labelling applicable

2.3. Other hazards

Component	
Substance(s) not meeting the PBT criteria of UK REACH regulation, in accordance with Annex XIII	chlorine dioxide ... % (10049-04-4)

TRISTEL DUO FOR LABS WORKING SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Component	
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	chlorine dioxide ... % (10049-04-4)
Component	
Substance(s) not included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP	chlorine dioxide ... %(10049-04-4)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to GB CLP (SI 2019:720 as amended)
chlorine dioxide ... %	CAS-No.: 10049-04-4 EC-No.: 233-162-8 UK Index-No.: 017-026-01-0	< 1	Acute Tox. 3 (Oral), H301 Skin Corr. 1B, H314 Aquatic Acute 1, H400

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
chlorine dioxide ... %	CAS-No.: 10049-04-4 EC-No.: 233-162-8 UK Index-No.: 017-026-01-0	(0.3 ≤ C < 3) Eye Irrit. 2; H319 (1 ≤ C < 5) Skin Irrit. 2; H315 (3 ≤ C < 5) Eye Dam. 1; H318 (3 ≤ C ≤ 100) STOT SE 3; H335 (5 ≤ C ≤ 100) Skin Corr. 1B; H314

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 after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause moderate irritation.
Symptoms/effects after eye contact	: May cause slight irritation.
Symptoms/effects after ingestion	: May cause irritation to the digestive tract.

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

Treat symptomatically.

TRISTEL DUO FOR LABS WORKING SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

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

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

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".

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. Wear personal protective equipment.
Hygiene measures : 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 : Keep container tightly closed. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

Disinfectant. For professional use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

TRISTEL DUO FOR LABS WORKING SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

chlorine dioxide ... % (10049-04-4)	
United Kingdom - Occupational Exposure Limits	
Local name	Chlorine dioxide
WEL TWA (OEL TWA)	0.28 mg/m ³
	0.1 ppm
WEL STEL (OEL STEL)	0.84 mg/m ³
	0.3 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

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Avoid contact with eyes.

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Avoid contact with skin.

8.2.2.3. Respiratory protection

Respiratory protection:

Ensure there is sufficient ventilation of the area during use.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

TRISTEL DUO FOR LABS WORKING SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Yellow.
Odour	: characteristic.
Odour threshold	: Not available
pH	: No data available.
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: 100 °C
Flash point	: > 93 °C
Explosive limits	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Relative vapour density at 20°C	: Not available
Relative density	: Not available
Density	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
Viscosity, kinematic	: Not available
Explosive properties	: Not available

9.2. Other information

Particle characteristics	: Not applicable
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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

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

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 toxicological effects

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

TRISTEL DUO FOR LABS WORKING SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

chlorine dioxide ... % (10049-04-4)	
LD50 oral rat	93.86 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral)), Remarks on results: other:, 95% CL: 45,52 - 193,53
LC50 Inhalation - Rat (Vapours)	0.041 mg/l Source: ECHA

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: No data available.

chlorine dioxide ... % (10049-04-4)	
pH	< 1

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: No data available.

chlorine dioxide ... % (10049-04-4)	
pH	< 1

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)

Other information

No additional information available

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)

chlorine dioxide ... % (10049-04-4)	
LC50 - Fish [1]	75 mg/l Test organisms (species): Cyprinodon variegatus
LC50 - Fish [2]	0.021 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	0.063 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	1096 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.324 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	≥ 500 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	≥ 500 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '36 d'

12.2. Persistence and degradability

TRISTEL DUO FOR LABS WORKING SOLUTION

Persistence and degradability	Biodegradability in water: no data available.
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TRISTEL DUO FOR LABS WORKING SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

chlorine dioxide ... % (10049-04-4)

Persistence and degradability

Biodegradability in water: no data available.

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

Component

chlorine dioxide ... % (10049-04-4)

This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII
This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Transport document description				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

TRISTEL DUO FOR LABS WORKING SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

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

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

This product contains no substance(s) listed on the UK REACH Candidate List (SVHC) above the 0.1% level of disclosure

GB PIC regulation (Prior Informed Consent)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

POP Regulation (Persistent Organic Pollutants)

This product contains no substance(s) listed on the GB POP List equal to or above the level of SDS disclosure

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed as a reportable poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a reportable explosive precursor on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This substance is not listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations

Drug Precursors Regulation (273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other Information

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

TRISTEL DUO FOR LABS WORKING SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
BS EN	British Standard
CAS-No.	Chemical Abstract Service number
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
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
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
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TRISTEL DUO FOR LABS WORKING SOLUTION

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

Safety Data Sheet (SDS), UK

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.