

Safety Data Sheet

Prepared according to the (US) Hazard Communication Standard (29 CFR §1910.1200)

1 PRODUCT CHEMISTRY AND COMPANY IDENTIFICATION

Product Name :Tristel Duo - Working Solution
Intended Use :Disinfectant solution.
Restrictions of Use :Uses other than those recommended.
Manufacture/Supplier :Tristel Solutions Ltd
Lynx Business Park
Fordham Rd, Snailwell, Newmarket Cambridgeshire, UK
CB8 7NY
In Case of Emergency :1-800-631-8888

2 HAZARDS IDENTIFICATION

2.1 Product hazard category

This material is NOT considered hazardous by the OSHA Hazard Communication Standard (29 CFR § 1910.1200)

2.2 Label Content

Not a hazardous substance or mixture.

2.3 Other hazards

Hazards Not Otherwise Classified (HNOC) :None known.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture :Mixture

Component	CAS#	Concentration
CHLORINE DIOXIDE	10049-04-4	< 1% (320 ppm)

The exact composition/components have been withheld due to trade secret.

4 FIRST AID MEASURES

4.1 Description of first aid measures

Due to the composition and type of the substances present in the product, no particular warnings are necessary.

General Advise :Seek medical attention/advice if you feel unwell.
Eye Contact :Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
Inhalation :Remove person to fresh air and keep comfortable for breathing.
Skin Contact :Rinse skin immediately with plenty of water for 15-20 minutes.
Ingestion :If accidentally ingested, seek immediate medical attention. Rinse mouth. Do NOT induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

4.2 Most important health effects, both acute and delayed

Irritation to eyes and skin may be possible

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4.3 Indication of immediate medical attention and special treatment.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

5 FIREFIGHTING MEASURES

Suitable extinguishing media	:Use suitable media for surrounding fire.
Specific hazard arising from the chemical	:Toxic fumes can be emitted during combustion.
Special protective equipment for fire-fighters	:According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and gloves.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	: Use protective gloves/clothing/eye wear.
Environmental precautions	:Product not classified as hazardous for the environment, avoid spillage as much as possible. Flush with copious amounts of water into drain.
Methods and materials for containment and cleaning up	:Contaminated area should be cleaned up with an absorbent such as dry earth or sand, and transferred to a sealable labeled container. Dispose of contaminates in accordance with existing federal state, provincial and or local environmental controls laws.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

The product does not require special handling measures, the following general measures are recommended:

Protective measures	:Use appropriate personal protective equipment as needed including, but not limited to long sleeved shirt, long pants, waterproof gloves, closed toed shoes, and protective eye-wear. Never use pressure to empty the containers. No smoking, eating or drinking allowed when using this product. Wash hands before breaks and at end of work shift. Avoid Skin and Eye Contact. Containers, even those that have been emptied, will retain product residue and vapors. Always obey hazard warnings and handle empty containers as if they were full. Follow legislation on occupational health and safety. Keep the product in containers made of a material identical to the original.
Conditions for safe storage	:Store in a cool, well ventilated area. Keep container tightly closed. Store away from children. In case of spill, flood areas with large quantities of water.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Occupational exposure limits

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL).

Chlorine dioxide (100%):

ACGIH (TLV-TWA)	0.1 ppm (0.3 mg/m ³)
ACGIH (STEL)	0.3 ppm (0.9 mg/m ³)

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8.2 Exposure Controls

Protective measures	:Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system. If the recommended technical measures are observed, no individual protection equipment is necessary.
Appropriate engineering controls	:General industrial hygiene practice.

8.3 Personal Protection

Use appropriate personal protective equipment for surrounding hazards. No specific protective equipment is required for this mixture.

Eye/face protection	:Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.
Skin protection	:Wear protective gloves. Use proper glove removal techniques to avoid skin contact.
Body protection	:Choose body protection appropriate to the concentration and exposure and to the work place environment.
Respiratory protection	:Not required. In case of insufficient ventilation, wear suitable respiratory equipment. NIOSH approved, air-purifying organic vapor respirator.
Hygiene measures	:Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Physical State	:Yellow liquid.
Odor	:Chlorine like odor.
Odor threshold	:No information available.

Other Properties:

pH	:No information available.
Melting point/freezing point	:No information available.
Initial boiling point and boiling range	:No information available.
Flash point	:No information available
Evaporation rate	:No information available.
Flammability (solid, gas)	:No information available
Upper/lower flammability or explosive limits	:No information available.
Vapor pressure	:No information available.
Vapor density	:No information available.
Relative density	:No information available
Solubilities	:No information available.
Partition coefficient: (n-octanol/water)	:No information available.
Auto-ignition temperature	:No information available.
Decomposition temperature	:No information available.
Viscosity (Kinematic)	:No information available.

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10 STABILITY AND REACTIVITY

Reactivity	:The product does not present hazards by their reactivity.
Chemical stability	:Stable under the recommended storage conditions.
Possibility of hazardous reactions	:Hazardous reactions will not occur under normal transport or storage conditions.
Conditions to avoid	:Heat.
Incompatible materials	:Strong acids and oxidizing agents.
Hazardous decomposition products	:In combustion, emits toxic fumes.

11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure :Dermal contact. Eye contact. Inhalation. Ingestion.

11.1 Potential acute health effects

Eye contact	:Possible Eye irritation/corrosion.
Inhalation	:Possible irritation of the respiratory tracts.
Skin Contact	:Possible Skin irritation/corrosion.
Ingestion	:Possible irritation of the digestive tract.

11.2 Potential chronic health effects

Short term exposure:

Potential immediate effects None known.

Long term exposure:

Potential delayed effect	:Not available.
General	:No known significant effects or critical hazards.
Carcinogenicity	:No known significant effects or critical hazards.
Mutagenicity	:No known significant effects or critical hazards.
Teratogenicity	:No known significant effects or critical hazards.
Developmental effects	:No known significant effects or critical hazards.
Fertility effects	:No known significant effects or critical hazards.

11.3 Information on toxicological effects

Acute toxicity:

	Results	Classification
Chlorine Dioxide - 100%	Oral	292 mg / kg
Working solution	Oral	> 2000 mg/kg

Irritation/Corrosion:

Skin irritation OCED 404-Slight erythema. Slight irritant.

Sensitization: Not a skin sensitizer - ISO 10993-10

Chronic Toxicity: No data available.

Germ Cell Mutagenicity: Non Mutagenic - OCED 471

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Reproductive Toxicity: No data available.

Specific target organ toxicity (single exposure): Not classified.

Specific target organ toxicity (repeated exposure): Not classified.

Aspiration hazard: Not classified.

Carcinogenicity:

IARC	:No component of this product present at levels greater than or equal to 0.1% is identified probable, possible or confirmed carcinogen.
ACGIH	:No component of this product present at levels greater than or equal to 0.1% is identified probable, possible or confirmed carcinogen.
NTP	:No component of this product present at levels greater than or equal to 0.1% is identified probable, possible or confirmed carcinogen.
OSHA	:No component of this product present at levels greater than or equal to 0.1% is identified probable, possible or confirmed carcinogen.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12 ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Not environmentally hazardous

12.2 Persistence and degradability

Mixture is biodegradable.

12.3 Bioaccumulation potential

No bioaccumulation potential.

12.4 Mobility in soil

Readily absorbed into soil. Not classified as environmentally hazardous.

12.5 Other adverse effect

No data available.

13 DISPOSAL CONSIDERATIONS

Disposal methods	:To avoid waste, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).
Container handling	:Non-refillable container. Do not reuse or refill container. Clean container promptly after emptying. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

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14 TRANSPORT INFORMATION

Regulatory information	UN number	Proper shipping name	Classes	Packing Group	Label	Additional information
DOT (US)	-	-	-	-	-	Not a hazardous material
IMDG Class	-	-	-	-	-	Not a hazardous material
IARA-DGR Class	-	-	-	-	-	Not a hazardous material

15 REGULATORY INFORMATION

15.1 US Federal Regulations

SARA 311/312 :None

SARA Title III Section 302 Extremely Hazardous Substances :None

SARA Title III Section 313 Toxic Chemicals :This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.2 Pesticide Registration (PR) Notice 2012-1 Material Safety Data Sheets as Pesticide Labeling

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

KEEP OUT OF REACH OF CHILDREN CAUTION

First Aid

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything to an unconscious person.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION: Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Storage and Disposal

Do not contaminate food or feed by storage or disposal or cleaning of equipment. STORAGE: Store in a cool, well ventilated area. Keep container tightly closed. Store away from children. In case of spill, flood areas with large quantities of water.

PESTICIDE DISPOSAL: To avoid waste, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING: Non-refillable container. Do not reuse or refill container. Clean container promptly after emptying. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

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The logo for Tristel, featuring the word "Tristel" in a bold, sans-serif font. The "i" and "s" are green, while the other letters are black.

16 OTHER INFORMATION

Date prepared: 28 March 2022

Version: 2.0

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.