

SECTION 1: Identification of the hazardous chemical and of the supplier

1.1. Product identifier

Name : Tristel Fuse for Surfaces Activator Solution

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

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

1.4. Supplier details

Manufacturer

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

Distributor

Tristel Malaysia Sdn. Bhd.
A-25-3A
Pinnacle PJ
Lorong Utara C
46200 Petaling Jaya
Selangor
Malaysia
T +603 7931 7791
mail-my@tristel.com

1.5. Emergency phone number

Emergency number : 604-6536 999

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to Industry Code of Practice on chemicals classification and hazard communication (2019)

Skin corrosion or irritation, Category 2	H315
Serious eye damage or eye irritation, Category 2	H319

2.2. Label elements

Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2019)

Hazard pictograms (GHS MY) :



Signal word (GHS MY) : Warning

Hazard statements (GHS MY) : H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements (GHS MY) : P280 - Wear protective gloves/protective clothing/eye protection
P302+P352 - IF ON SKIN: Wash with plenty of water
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention

2.3. Other hazards that do not result in classification

No additional information available

Tristel Fuse for Surfaces Activator Solution

Safety Data Sheet

according to ICOP 2014,2019

SECTION 3: Composition and information of the ingredients of the hazardous chemical

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
SODIUM CHLORITE 100%	CAS-No.: 7758-19-2	1 – 5

SECTION 4: First-aid measures

4.1. Description of necessary first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
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. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
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.
Self protection of the first-aider	: First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

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

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
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5.2. Physicochemical hazards arising from the chemical

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Special protective equipment and precautions for fire fighters

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

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".
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Tristel Fuse for Surfaces Activator Solution

Safety Data Sheet

according to ICOP 2014,2019

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

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

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 : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.
Storage temperature : 10 – 35 °C

SECTION 8: Exposure controls and personal protection

8.1. Control parameters

No additional information available

Exposure limit values for the other components

No additional information available

8.1.1 Biological monitoring

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.3. Individual protection measures, such as PPE

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:					
Protective gloves					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	2 (> 30 minutes)	0.1		KPT

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
Ensure there is sufficient ventilation of the area during use.

Tristel Fuse for Surfaces Activator Solution

Safety Data Sheet

according to ICOP 2014,2019

Personal protective equipment symbol(s):



Environmental exposure controls

: Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid
Colour	: Colourless
Odour	: No data available
Odour threshold	: No data available
pH	: 9.2 – 12.2
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Explosive limits	: No data available
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 1.01 – 1.02
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

SECTION 10: Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport
Chemical stability	: Stable under normal conditions
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use
Conditions to avoid	: None under recommended storage and handling conditions (see section 7)
Incompatible materials	: No additional information available
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
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion or irritation	: Causes skin irritation. pH: 9.2 – 12.2
Serious eye damage or eye irritation	: Causes serious eye irritation.
Respiratory sensitization	: Not classified
Skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Tristel Fuse for Surfaces Activator Solution

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according to ICOP 2014,2019

SODIUM CHLORITE 100% (7758-19-2)

IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
Specific target organ toxicity (STOT) – single exposure	: Not classified
Specific target organ toxicity (STOT) – repeated exposure	: Not classified

SODIUM CHLORITE 100% (7758-19-2)

Specific target organ toxicity (STOT) – repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Ecotoxicity

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
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

SODIUM CHLORITE 100% (7758-19-2)

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

12.2. Persistence and degradability

Tristel Fuse for Surfaces Activator Solution

Persistence and degradability	Biodegradability in water: no data available.
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SODIUM CHLORITE 100% (7758-19-2)

Persistence and degradability	Biodegradability in water: no data available.
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12.3. Bioaccumulative potential

Tristel Fuse for Surfaces Activator Solution

Bioaccumulative potential	No additional information available
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12.4. Mobility in soil

Tristel Fuse for Surfaces Activator Solution

Mobility in soil	No additional information available
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12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

SECTION 13: Disposal information

13.1. Disposal methods

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.

Tristel Fuse for Surfaces Activator Solution

Safety Data Sheet

according to ICOP 2014,2019

Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14: Transportation information

In accordance with IMDG / IATA / UN RTDG

IMDG	IATA	UNRTDG
14.1. UN number		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
14.4. Packing Group, if applicable		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Not applicable	Not applicable	Not applicable
No supplementary information available		

14.6. Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

Not applicable

14.7. Special precautions for user

UN RTDG

Not applicable

IMDG

Not applicable

IATA

Not applicable

14.8. Hazchem or Emergency Action Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental regulations specific for the hazardous chemical in question

No additional information available

15.2. International agreements

No additional information available

SECTION 16: Other information

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Revision date : 19/8/2025
Supersedes : 21/4/2020

Tristel Fuse for Surfaces Activator Solution

Safety Data Sheet

according to ICOP 2014,2019

Full text of H-statements	
Eye Irrit. 2	Serious eye damage or eye irritation, Category 2
Skin Irrit. 2	Skin corrosion or irritation, Category 2
H315	Causes skin irritation
H319	Causes serious eye irritation

Safety Data Sheet (SDS), Malaysia

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 hazardous chemical and of the supplier

1.1. Product identifier

Name : Tristel Fuse for Surfaces Base Solution

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

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

1.4. Supplier details

Manufacturer

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

Distributor

Tristel Malaysia Sdn. Bhd.
A-25-3A
Pinnacle PJ
Lorong Utara C
46200 Petaling Jaya
Selangor
Malaysia
T +603 7931 7791
mail-my@tristel.com

1.5. Emergency phone number

Emergency number : 604-6536 999

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to Industry Code of Practice on chemicals classification and hazard communication (2019)

Skin corrosion or irritation, Category 2	H315
Serious eye damage or eye irritation, Category 2	H319
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

2.2. Label elements

Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2019)

Hazard pictograms (GHS MY) :



Signal word (GHS MY)
Hazard statements (GHS MY)

: Warning
: H315 - Causes skin irritation
: H319 - Causes serious eye irritation
: H412 - Harmful to aquatic life with long lasting effects
: P280 - Wear protective gloves/protective clothing/eye protection
: P302+P352 - IF ON SKIN: Wash with plenty of water
: P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
: P332+P313 - If skin irritation occurs: Get medical advice/attention
: P337+P313 - If eye irritation persists: Get medical advice/attention

Precautionary statements (GHS MY)

Tristel Fuse for Surfaces Base Solution

Safety Data Sheet

according to ICOP 2014,2019

2.3. Other hazards that do not result in classification

No additional information available

SECTION 3: Composition and information of the ingredients of the hazardous chemical

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
CITRIC ACID MONOHYDRATE	CAS-No.: 5949-29-1	1 – 10
1-DECANAMINE,N,N-DIMETHYL-N-OXIDE	CAS-No.: 2605-79-0	1 – 10

SECTION 4: First-aid measures

4.1. Description of necessary first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
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. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
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.
Self protection of the first-aider	: First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

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

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
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5.2. Physicochemical hazards arising from the chemical

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Special protective equipment and precautions for fire fighters

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

Protective equipment	: Wear recommended personal protective equipment.
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Tristel Fuse for Surfaces Base Solution

Safety Data Sheet

according to ICOP 2014,2019

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 materials for containment and cleaning up

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

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 : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

Storage temperature : 10 – 35 °C

SECTION 8: Exposure controls and personal protection

8.1. Control parameters

No additional information available

Exposure limit values for the other components

No additional information available

8.1.1 Biological monitoring

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.3. Individual protection measures, such as PPE

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:					
Protective gloves					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	2 (> 30 minutes)	0.1		KPT

Eye protection:	
Safety glasses	

Skin and body protection:	
Wear suitable protective clothing	

Tristel Fuse for Surfaces Base Solution

Safety Data Sheet

according to ICOP 2014,2019

Respiratory protection:

Ensure there is sufficient ventilation of the area during use.

Personal protective equipment symbol(s):



Environmental exposure controls

: Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid
Colour	: Green
Odour	: characteristic
Odour threshold	: No data available
pH	: 1.5 – 3.5
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Explosive limits	: No data available
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 1.01 – 1.03
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

SECTION 10: Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport
Chemical stability	: Stable under normal conditions
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use
Conditions to avoid	: None under recommended storage and handling conditions (see section 7)
Incompatible materials	: No additional information available
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
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

CITRIC ACID MONOHYDRATE (5949-29-1)

LD50 oral rat	11700 mg/kg
LD50 dermal rat	> 2000 mg/kg

Tristel Fuse for Surfaces Base Solution

Safety Data Sheet

according to ICOP 2014,2019

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 or irritation	: Causes skin irritation. pH: 1.5 – 3.5
Serious eye damage or eye irritation	: Causes serious eye irritation.
Respiratory sensitization	: Not classified
Skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (STOT) – single exposure	: Not classified

CITRIC ACID MONOHYDRATE (5949-29-1)	
Specific target organ toxicity (STOT) – single exposure	May cause respiratory irritation.

Specific target organ toxicity (STOT) – repeated exposure	: Not classified
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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
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SECTION 12: Ecological information

12.1. Ecotoxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

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

12.2. Persistence and degradability

Tristel Fuse for Surfaces Base Solution	
Persistence and degradability	Biodegradability in water: no data available.

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 %

Tristel Fuse for Surfaces Base Solution

Safety Data Sheet

according to ICOP 2014,2019

12.3. Bioaccumulative potential

Tristel Fuse for Surfaces Base Solution

Bioaccumulative potential	No additional information available
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12.4. Mobility in soil

Tristel Fuse for Surfaces Base Solution

Mobility in soil	No additional information available
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12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

SECTION 13: Disposal information

13.1. Disposal methods

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: Transportation information

In accordance with IMDG / IATA / UN RTDG

IMDG	IATA	UNRTDG
14.1. UN number		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
14.4. Packing Group, if applicable		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Not applicable	Not applicable	Not applicable
No supplementary information available		

14.6. Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

Not applicable

14.7. Special precautions for user

UN RTDG

Not applicable

IMDG

Not applicable

IATA

Not applicable

Tristel Fuse for Surfaces Base Solution

Safety Data Sheet

according to ICOP 2014,2019

14.8. Hazchem or Emergency Action Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental regulations specific for the hazardous chemical in question

No additional information available

15.2. International agreements

No additional information available

SECTION 16: Other information

Version : 6.0
Issue date : 6/8/2013
Revision date : 19/8/2025
Supersedes : 16/4/2020

Full text of H-statements

Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage or eye irritation, Category 2
Skin Irrit. 2	Skin corrosion or irritation, Category 2
H315	Causes skin irritation
H319	Causes serious eye irritation
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), Malaysia

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 hazardous chemical and of the supplier

1.1. Product identifier

Name : Tristel Fuse for Surfaces Working Solution

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

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

1.4. Supplier details

Manufacturer

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

Distributor

Tristel Malaysia Sdn. Bhd.
A-25-3A
Pinnacle PJ
Lorong Utara C
46200 Petaling Jaya
Selangor
Malaysia
T +603 7931 7791
mail-my@tristel.com

1.5. Emergency phone number

Emergency number : 604-6536 999

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to Industry Code of Practice on chemicals classification and hazard communication (2019)

Not classified

2.2. Label elements

Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2019)

No labelling applicable

2.3. Other hazards that do not result in classification

No additional information available

SECTION 3: Composition and information of the ingredients of the hazardous chemical

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
chlorine dioxide ... %	CAS-No.: 10049-04-4	< 1

Tristel Fuse for Surfaces Working Solution

Safety Data Sheet

according to ICOP 2014,2019

SECTION 4: First-aid measures

4.1. Description of necessary first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
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.
Self protection of the first-aiders	: First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, 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 immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
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5.2. Physicochemical hazards arising from the chemical

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Special protective equipment and precautions for fire fighters

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

Protective equipment	: Wear recommended personal protective equipment.
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".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

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

Tristel Fuse for Surfaces Working Solution

Safety Data Sheet

according to ICOP 2014,2019

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls and personal protection

8.1. Control parameters

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

Malaysia - Occupational Exposure Limits

Local name	Klorin dioksida # Chlorine dioxide
PEL (OEL TWA)	0.28 mg/m ³
	0.1 ppm
MEL (mg/m ³)	0.84 mg/m ³
MEL (ppm)	0.3 ppm

Exposure limit values for the other components

No additional information available

8.1.1 Biological monitoring

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.3. Individual protection measures, such as PPE

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Ensure there is sufficient ventilation of the area during use.

Personal protective equipment symbol(s):



Environmental exposure controls : Avoid release to the environment.

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SECTION 9: Physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid
Colour	: Yellow
Odour	: characteristic
Odour threshold	: No data available
pH	: 2.5 – 5.5
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Explosive limits	: No data available
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 1 – 1.01
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

SECTION 10: Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport
Chemical stability	: Stable under normal conditions
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use
Conditions to avoid	: None under recommended storage and handling conditions (see section 7)
Incompatible materials	: No additional information available
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
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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 or irritation	: Not classified pH: 2.5 – 5.5
Serious eye damage or eye irritation	: Not classified
Respiratory sensitization	: Not classified
Skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (STOT) – single exposure	: Not classified

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Specific target organ toxicity (STOT) – repeated exposure : Not classified
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Ecotoxicity

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
Hazardous to the aquatic environment, long-term (chronic) : Not classified

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

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Persistence and degradability	Biodegradability in water: no data available.
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chlorine dioxide ... % (10049-04-4)

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	No additional information available
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12.4. Mobility in soil

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Mobility in soil	No additional information available
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12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No additional information available

SECTION 13: Disposal information

13.1. Disposal methods

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.

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Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14: Transportation information

In accordance with IMDG / IATA / UN RTDG

IMDG	IATA	UNRTDG
14.1. UN number		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
14.4. Packing Group, if applicable		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Not applicable	Not applicable	Not applicable
No supplementary information available		

14.6. Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

Not applicable

14.7. Special precautions for user

UN RTDG

Not applicable

IMDG

Not applicable

IATA

Not applicable

14.8. Hazchem or Emergency Action Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental regulations specific for the hazardous chemical in question

No additional information available

15.2. International agreements

No additional information available

SECTION 16: Other information

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Safety Data Sheet (SDS), Malaysia

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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.