

## SAFETY DATA SHEET ( SDS )

This safety data sheet complies with the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008, (EU) No. 2015/830

Revision Date 11-Jul-2019

Revision Number 8

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product Identifier

**Product Name** perfectION™ Ion Electrolyte B  
**Product No** 51344751  
**Pure substance/mixture** Mixture

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

**Recommended Use** Use as laboratory reagent  
**Uses advised against** No Information available

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

**Manufacturer, Importer, Supplier** Mettler-Toledo GmbH  
ANALYTICAL  
Im Langacher 44  
CH-8606 Greifensee  
Switzerland  
Tel: +41-22-567-53-22  
Fax: +41-22-567-53-23  
Email: ph.lab.support@mt.com

**E-mail address** See Above

**Made in** USA

**1.4. Emergency telephone number** +41-44-251 51 51 (Tox Center)  
OR country specific emergency number  
§45 - (EC)1272/2008

**SECTION 2. HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture**

Classification - Mixture

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

Chronic aquatic toxicity	Category 2 - (H411)
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**2.2. Label elements****Hazard Statements**

H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements**

P273 - Avoid release to the environment

P202 - Do not handle until all safety precautions have been read and understood

**2.3. Other hazards**

Toxic to aquatic life

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1. Substances**

Component	EC-No.	CAS-No	Weight %	CLP Classification - Regulation (EC) No 1272/2008	REACH Reg. No
Water	EEC No. 231-791-2	7732-18-5	80 - 90%	-	No information available
Potassium Nitrate	EEC No. 231-818-8	7757-79-1	10 - 20%	Ox. Sol. 2 (H272) Aquatic Acute 3 (H402) Aquatic Chronic 3 (H412)	No information available
Potassium Chloride	EEC No. 231-211-8	7447-40-7	0 - 10%	-	No information available
Triton® X-100	-	9002-93-1	0 - 10%	Acute Tox. 4 (H302) Eye Irrit. 2 (H319) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	No information available
Silver Nitrate	EEC No. 231-853-9	7761-88-8	0 - 10%	Skin Corr. 1B (H314) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Ox. Sol. 2 (H272)	No information available

**Note** \*The exact percentage (concentration) of composition has been withheld as a trade secret

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

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

<b>General Advice</b>	Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately.
<b>Self-Protection of the First Aider</b>	Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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

<b>Most important symptoms and effects</b>	See section 11, See section 2 for more information
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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically
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## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **Unsuitable Extinguishing Media**

No information available

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

Thermal decomposition can lead to release of irritating gases and vapors.

### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

<b>Personal Precautions</b>	Use personal protective equipment. Evacuate personnel to safe areas.
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### 6.2. Environmental precautions

<b>Environmental Precautions</b>	Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in
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low areas. Refer to protective measures listed in Sections 7 and 8. Do not apply directly to water. Beware of vapors accumulating to form explosive concentrations.

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

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning Up** Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

#### Reference to Other Sections

Refer to protective measures listed in Sections 7 and 8

See Section 8 for information on appropriate personal protective equipment

See Section 12 for additional Ecological Information

See Section 13 for additional waste treatment information

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

#### Advice on safe handling

To avoid risks to human health and the environment, comply with the instructions for use. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation, especially in confined areas.

#### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

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

#### Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from direct sunlight.

### 7.3. Specific end use(s)

#### Specific Use(s)

Use as laboratory reagent

#### Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Component	European Union	The United Kingdom	France	Spain	Germany
Silver Nitrate 7761-88-8	TWA: 0.01 mg/m <sup>3</sup> (8hr)	STEL: 0.03 mg/m <sup>3</sup> 15 min TWA: 0.01 mg/m <sup>3</sup> 8 hr	TWA / VME: 0.01 mg/m <sup>3</sup> (8 heures). indicative limit	TWA / VLA-ED: 0.01 mg/m <sup>3</sup> (8 horas)	TWA: 0.01 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 2 TWA: 0.01 mg/m <sup>3</sup> (8 Stunden). MAK Höhepunkt: 0.02 mg/m <sup>3</sup>
Component	Italy	Portugal	The Netherlands	Finland	Denmark
Silver Nitrate 7761-88-8	-	TWA: 0.01 mg/m <sup>3</sup> 8 horas	-	TWA: 0.01 mg/m <sup>3</sup> 8 tunteina STEL: 0.03 mg/m <sup>3</sup> 15 minuutteina	-
Component	Austria	Switzerland	Poland	Norway	Ireland
Silver Nitrate 7761-88-8	MAK-TMW: 0.01 mg/m <sup>3</sup> 8 Stunden	STEL: 0.02 mg/m <sup>3</sup> 15 Minuten TWA: 0.01 mg/m <sup>3</sup> 8 Stunden	-	TWA: 0.01 mg/m <sup>3</sup> 8 timer	-

#### Legend:

X - Listed 'X' - Not Listed XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B))

<b>Derived No Effect Level (DNEL)</b>	No information available
<b>Predicted No Effect Concentration (PNEC)</b>	No information available

**8.2. Exposure controls**

<b>Engineering Measures</b>	Showers Eyewash stations Ventilation systems
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**Personal protective equipment**

<b>Eye/face Protection</b>	Wear chemical splash goggles and face shield. If splashes are likely to occur, wear: Goggles.
<b>Skin and body protection</b>	Wear protective gloves/clothing.
<b>Respiratory Protection</b>	No protective equipment is needed under normal use conditions. In case of inadequate ventilation wear respiratory protection.

<b>Environmental exposure controls</b>	No information available
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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid
<b>Appearance</b>	Clear
<b>Odor</b>	None
<b>Odor Threshold</b>	No information available
<b>pH</b>	6.5
<b>PH Range</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point/freezing point</b>	No information available	
<b>Boiling Point/Range</b>	100 °C / 212 °F	
<b>Flash Point (High in °C)</b>	No information available	
<b>Evaporation Rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>	No information available	
<b>Lower flammability limit:</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor Density</b>	No information available	
<b>Specific Gravity</b>	No information available	
<b>Water Solubility</b>	soluble	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient</b>	No information available	
<b>Autoignition Temperature</b>	-	
<b>Decomposition Temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Explosive Properties</b>	No information available	
<b>Oxidizing Properties</b>	No information available	

**9.2. Other information**

<b>Softening Point</b>	No information available
<b>Molecular Weight</b>	No information available
<b>VOC Content(%)</b>	No information available
<b>Density</b>	No Information available
<b>Bulk Density</b>	No information available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

No information available

### 10.2. Chemical stability

Stable under normal conditions

### Explosion Data

Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	None

### 10.3. Possibility of hazardous reactions

None under normal processing

### 10.4. Conditions to avoid

Extremes of temperature and direct sunlight

### 10.5. Incompatible materials

No information available

### 10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Acute Toxicity

#### Product Information

Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation	No information available
Eye Contact	No information available
Skin Contact	No information available
Ingestion	No information available

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	27,017.00 mg/kg
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**Skin Corrosion/Irritation** No information available

**Serious eye damage/eye irritation** No information available

**Sensitization** No information available

**Mutagenic Effects** No information available

**Carcinogenic effects** No information available

**Reproductive Effects** No information available

**STOT - single exposure** No information available

**STOT - repeated exposure** No information available

**Aspiration hazard** No information available

**SECTION 12. ECOLOGICAL INFORMATION****12.1. Toxicity**

Toxic to aquatic life with long lasting effects

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Potassium Chloride	EC50: = 2500 mg/L, 72h (Desmodesmus subspicatus)	LC50: = 1060 mg/L, 96h static (Lepomis macrochirus) LC50: 750 - 1020 mg/L, 96h static (Pimephales promelas)	EC50: = 83 mg/L, 48h Static (Daphnia magna) EC50: = 825 mg/L, 48h (Daphnia magna)
Silver Nitrate	-	LC50: = 0.0027 mg/L, 96h semi-static (Cyprinus carpio) LC50: = 0.009 mg/L, 96h (Pimephales promelas) LC50: 0.0064 - 0.0106 mg/L, 96h semi-static (Pimephales promelas) LC50: 0.00181 - 0.00214 mg/L, 96h static (Pimephales promelas) LC50: 0.00452 - 0.00638 mg/L, 96h flow-through (Pimephales promelas) LC50: 0.00512 - 0.00787 mg/L, 96h semi-static (Poecilia reticulata) LC50: = 0.0075 mg/L, 96h semi-static (Oncorhynchus mykiss) LC50: 0.001339 - 0.001637 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 0.05 - 0.07 mg/L, 96h static (Lepomis macrochirus) LC50: 0.0242 - 0.0484 mg/L, 96h semi-static (Lepomis macrochirus) LC50: 0.009 - 0.02 mg/L, 96h flow-through (Lepomis macrochirus) LC50: 0.00839 - 0.1802 mg/L, 96h static (Oncorhynchus mykiss)	EC50: 0.0008 - 0.001 mg/L, 48h Flow through (Daphnia magna) EC50: 0.0008 - 0.0011 mg/L, 48h Static (Daphnia magna) EC50: = 0.0006 mg/L, 48h (Daphnia magna)

**12.2. Persistence and degradability**

No information available

**12.3. Bioaccumulative potential**

No information available

**12.4. Mobility in soil**

No information available

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

No information available

**12.6. Other adverse effects**

No information available

**Endocrine Disruptor Information**

No information available

Component	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Triton® X-100	Group III Chemical	-	-

**SECTION 13. DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

**Waste from Residues / Unused Products** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Improper disposal or reuse of this container may be dangerous and illegal.

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

14.1 UN-No	UN3082
14.2 Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.3 Hazard Class	9
14.4 Packing Group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Silver nitrate), 9, III, Marine Pollutant
14.5 Marine Pollutant	Not Applicable
Environmental hazard	YES
14.6 Special Provisions	274, 335, 969
EmS No.	F-A, S-F
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

### ICAO

14.1 UN-No	UN3082
14.2 Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.3 Hazard Class	9
14.4 Packing Group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (SILVER NITRATE), 9, III
14.5 Environmental hazard	YES
14.6 Special Provisions	A97, A158, A197

### IATA

14.1 UN-No	UN3082
14.2 Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.3 Hazard Class	9
14.4 Packing Group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Silver nitrate), 9, III
14.5 Environmental hazard	YES
14.6 Special Provisions	A97, A158, A197
ERG Code	9L

## SECTION 15: REGULATORY INFORMATION

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

#### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

#### International Inventories

United States of America Inventory	Complies
CANINV	Complies
EINECS/ELINCS	Does not Comply
ENCS	Does not Comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies



**Legend:****USINV/ TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**CANINV/ DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances**ENCS** - Japanese Existing and New Chemical Substances**IECSC** - Chinese Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**15.2. Chemical safety assessment**

A Chemical safety assessment according to regulation (EC) No. 1907/2006 is not required

**SECTION 16: OTHER INFORMATION****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H272 - May intensify fire; oxidizer

H402 - Harmful to aquatic life

H412 - Harmful to aquatic life with long lasting effects

**Legend - SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

<b>Prepared By</b>	Thermo Fisher Scientific© Water and Lab Products 22 Alpha Road Chelmsford, MA 01824, USA 1-978-232-6000
<b>Prepared For</b>	Mettler-Toledo GmbH Analytical
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<b>Reason for revision</b>	SDS sections updated.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**