

# 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. 453/2010

Revision Date 18-May-2015

WAI2 - EGHS - EUROPEAN

Revision Number 1

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

### 1.1. Product Identifier

**Product Name** Zero Oxygen Solution  
**Product Number(s)** 00653-00  
**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/Supplier** Thermo Orion Inc. (Part of Thermo Fisher Scientific, Inc.)  
Water Analysis Instruments  
22 Alpha Road  
Chelmsford, MA 01824, USA  
1-978-232-6000

**E-mail address** [wai.techservbev@thermofisher.com](mailto:wai.techservbev@thermofisher.com)

**Made in** USA

**1.4. Emergency telephone number** 24 Hour Emergency Phone Number  
CHEMTREC®  
Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: 1-703-527-3887  
(collect calls accepted)

**SECTION 2: HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture****Classification - Mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16.

**Symbol(s)**

Not dangerous goods

**2.2. Label elements****Product Identifier****Signal Word**

None

EUH210 - Safety data sheet available on request

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

**2.3. Other hazards**

No information available

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

Component	Chemical Formula	EC-No.	CAS-No	Weight %	DSD Classification - 67/548/EEC	CLP Classification - Regulation (EC) No 1272/2008	REACH Reg. No
Water	No information available	EEC No. 231-791-2	7732-18-5	90 - 100%	-		No information available
Sodium Sulfite	No information available	EEC No. 231-821-4	7757-83-7	0 - 10%	-		No information available
Cobalt (II) Chloride, Hexahydrate	No information available	-	7791-13-1	0 - 10%	-		No information available

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

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16.

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. Obtain 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. If symptoms persist, obtain medical attention.
<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>Protection of First-aiders</b>	Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce 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**

**Most important symptoms/effects** No information available

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

**Notes to Physician** Treat symptomatically

**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**

**Personal Precautions** Use personal protective equipment. Evacuate personnel to safe areas.

**6.2. Environmental precautions**

**Environmental Precautions** Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

### 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/vapours/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**

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
Cobalt (II) Chloride, Hexahydrate 7791-13-1	-	STEL: 0.3 mg/m <sup>3</sup> 15 min TWA: 0.1 mg/m <sup>3</sup> 8 hr Resp. Sens.	-	TWA / VLA-ED: 0.02 mg/m <sup>3</sup> (8 horas)	Haut
Component	Italy	Portugal	The Netherlands	Finland	Denmark
Cobalt (II) Chloride, Hexahydrate 7791-13-1	-	TWA: 0.02 mg/m <sup>3</sup> 8 horas	-	TWA: 0.02 mg/m <sup>3</sup> 8 tunteina	
Component	Austria	Switzerland	Poland	Norway	Ireland
Cobalt (II) Chloride, Hexahydrate 7791-13-1	Haut	Haut/Peau TWA: 0.05 mg/m <sup>3</sup> 8 Stunden		TWA: 0.02 mg/m <sup>3</sup> 8 timer	

**Derived No Effect Level (DNEL)** No information available

**Predicted No Effect Concentration (PNEC)** No information available

**8.2. Exposure controls**

**Engineering Measures**                      Showers  
    Eyewash stations  
    Ventilation systems

**Personal protective equipment**

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

**Environmental exposure controls**      No information available

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

**Physical State**                                Liquid  
**Appearance**                                 Clear  
**Odor**     No information available  
**Odor Threshold**                             No information available  
**pH Range**                                      7.5 - 12.0

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

**9.2. Other information**

**Softening Point**                                No information available  
**Molecular Weight**                            No information available  
**VOC Content(%)**                                No information available  
**Density**    No Information available  
**Bulk Density**                                    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**                    0.3% 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)**                                15,185.00 mg/kg

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	> 90 mL/kg ( Rat )		
Sodium Sulfite	= 820 mg/kg ( Rat )		> 22 mg/L ( Rat ) 1 h
Cobalt (II) Chloride, Hexahydrate	= 766 mg/kg ( Rat )	> 2 g/kg ( Rat )	

**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**

0.3% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Sodium Sulfite	-	220 - 460: 96 h Leuciscus idus mg/L LC50 static	330: 24 h Psammechinus miliaris mg/L LC50

**12.2. Persistence and degradability**

No information available

**12.3. Bioaccumulative potential**

No information available

Component	log Pow
Sodium Sulfite	-4

**12.4. Mobility in soil**

No information available

**Mobility**

**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

**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 Not Regulated
- 14.2 Proper Shipping Name Not Regulated
- 14.3 Hazard Class Not Regulated
- Subsidiary Hazard Class Not Regulated
- 14.4 Packing Group Not Regulated
- 14.5 Marine Pollutant Not Applicable
- 14.6 Special Provisions None
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

**RID**

- 14.1 UN-No Not Regulated
- 14.2 Proper Shipping Name Not Regulated

<b>14.3 Hazard Class</b>	Not Regulated
<b>14.4 Packing Group</b>	Not Regulated
<b>14.5 Environmental hazard</b>	Not Applicable
<b>14.6 Special Provisions</b>	None

**ADR**

<b>14.1 UN-No</b>	Not Regulated
<b>14.2 Proper Shipping Name</b>	Not Regulated
<b>14.3 Hazard Class</b>	Not Regulated
<b>14.4 Packing Group</b>	Not Regulated
<b>14.5 Environmental hazard</b>	Not Applicable
<b>14.6 Special Provisions</b>	None

**ICAO**

<b>14.1 UN-No</b>	Not Regulated
<b>14.2 Proper Shipping Name</b>	Not Regulated
<b>14.3 Hazard Class</b>	Not Regulated
<b>Subsidiary Hazard Class</b>	Not Regulated
<b>14.4 Packing Group</b>	Not Regulated
<b>14.5 Environmental hazard</b>	Not Applicable
<b>14.6 Special Provisions</b>	None

**IATA**

<b>14.1 UN-No</b>	Not Regulated
<b>14.2 Proper Shipping Name</b>	Not Regulated
<b>14.3 Hazard Class</b>	Not Regulated
<b>14.4 Packing Group</b>	Not Regulated
<b>14.5 Environmental hazard</b>	Not Applicable
<b>14.6 Special Provisions</b>	None

**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**

<b>USINV</b>	Does not Comply
<b>CANINV</b>	Does not Comply
<b>EINECS/ELINCS</b>	Does not Comply
<b>ENCS</b>	Does not Comply
<b>IECSC</b>	Complies
<b>KECL</b>	Does not Comply
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

**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 R-phrases referred to under sections 2 and 3**

R22 - Harmful if swallowed

**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>	Environmental, Health and Safety
<b>Prepared For</b>	Thermo Fisher Scientific Inc.
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<b>Reason for revision</b>	Update to CLP Format

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

**Disclaimer**

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**End of Safety Data Sheet**