

Revision Date 29-Mar-2016

WAI1 - AGHS - OSHA

Revision Number 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product Identifier****Product Name** Chlorine Dioxide**Product No** AC4099-AMP**Pure substance/mixture** Mixture**Relevant identified uses of the substance or mixture and uses advised against****Recommended Use** Use as laboratory reagent**Uses advised against** No Information available**Manufacturer, Importer, Supplier** Thermo Fisher Scientific©
Water and Lab Products
22 Alpha Road
Chelmsford, MA 01824, USA
1-978-232-6000**E-mail address** info.water@thermo.com**Made in** USA**Emergency Telephone** 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)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious Eye Damage/Eye Irritation	Category 2
Flammable liquids	Category 4

Label Elements

Emergency Overview

Warning

Hazard Statements

Causes serious eye irritation
Combustible liquid



Appearance Colorless to pale pink

Physical State Liquid

Odor Odorless

Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Wear protective gloves/protective clothing/eye protection/face protection

IF IN EYES: 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
In case of fire: Use CO2, dry chemical, or foam for extinction

Storage

Store in a well-ventilated place. Keep cool

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No information available

Other Information

No information available

Unknown Acute Toxicity

1.2 percent of the mixture consists of ingredient(s) of unknown acute toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %	Trade Secret
Water	7732-18-5	>90.0%	*
Acetone	67-64-1	1 - 10%	*
Proprietary Ingredients	999-99-9	1 - 10%	*
Potassium Dihydrogen Phosphate	7778-77-0	0.1 - 1.0%	*
N,N-diethyl-p-phenylenediamine oxalate	62637-92-7	<0.1%	*

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

4. FIRST AID MEASURES

First aid measures

General Advice	Use first aid treatment according to the nature of the injury. Get medical attention immediately if symptoms occur. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Obtain medical attention.
Skin Contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. In case of skin reactions, consult a physician.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately.
Protection of First-aiders	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.

Most important symptoms and effects, both acute and delayed

Most important symptoms/effects No information available

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media

No information available

Specific Hazards Arising from the Chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions	Use personal protective equipment. For further specification, refer to section 8 of the SDS. Evacuate personnel to safe areas.
<u>Environmental Precautions</u>	Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

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.

7. HANDLING AND STORAGE

Precautions for Safe Handling

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
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Conditions for Safe Storage, Including any Incompatibilities

Storage	Keep container tightly closed in a dry and well-ventilated place Store at room temperature in the original container Keep away from direct sunlight
Incompatible Products	No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetone 67-64-1	TWA: 250 ppm STEL: 500 ppm	(Vacated) TWA: 750 ppm (Vacated) TWA: 1800 mg/m ³ (Vacated) STEL: 2400 mg/m ³ (Vacated) STEL: 1000 ppm TWA: 1000 ppm TWA: 2400 mg/m ³	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m ³

Appropriate engineering controls

Engineering Measures	Showers Eyewash stations Ventilation systems
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Individual protection measures, such as personal protective equipment

Eye/face Protection	Wear chemical splash goggles and face shield. If splashes are likely to occur, wear: Face-shield.
Skin and Body Protection	Wear protective gloves/clothing.
Respiratory Protection	None under normal use conditions. In case of inadequate ventilation wear respiratory protection.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless to pale pink
Odor	Odorless
Odor Threshold	No information available
PH Range	4.8-7.8

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point/freezing point	No information available	
Boiling Point/Range	94 °C / 201.2 °F	
Flash Point (High in °C)	75 °C / 167 °F	
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	

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

10. STABILITY AND REACTIVITY

Reactivity

No Information available

Chemical Stability

Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing

Conditions to Avoid

Extremes of temperature and direct sunlight

Incompatible Materials

No information available

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

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

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water 7732-18-5	LD50 > 90 mL/kg (Rat)	-	-
Acetone 67-64-1	LD50 = 5800 mg/kg (Rat)	-	LC50 = 50100 mg/m ³ (Rat) 8 h
Potassium Dihydrogen Phosphate 7778-77-0	-	LD50 > 4640 mg/kg (Rabbit)	-

Information on Toxicological Effects

Symptoms No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available
Mutagenic Effects	No information available
Carcinogenicity	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

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 1.2 percent of the mixture consists of ingredient(s) of unknown acute toxicity

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

ATEmix (inhalation-dust/mist) 2505 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

2.2% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Acetone 67-64-1	-	LC50: = 8300 mg/L, 96h (Lepomis macrochirus) LC50: 6210 - 8120 mg/L, 96h static (Pimephales promelas) LC50: 4.74 - 6.33 mL/L, 96h (Oncorhynchus mykiss)	EC50: 12600 - 12700 mg/L, 48h (Daphnia magna) EC50: 10294 - 17704 mg/L, 48h Static (Daphnia magna)

Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available

Mobility

No information available.

Component	log Pow
Acetone 67-64-1	-0.24

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods

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.

Component	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Acetone 67-64-1		Included in waste stream: F039		U002

Component	CAWAST
Acetone 67-64-1	Ignitable

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

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

USINV/ TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CANINV/ DSL/NDL - 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

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs	RQ
Acetone 67-64-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Component	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Acetone 67-64-1	X	X	X

U.S. EPA Label Information

No information available

16. OTHER INFORMATION

Prepared By	Environmental, Health and Safety
Prepared For	Thermo Fisher Scientific Inc.©
Issue Date	No information available
Revision Date	29-Mar-2016
Reason for revision	SDS sections updated.

Disclaimer

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End of Safety Data Sheet