

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name Optimum Results™ B Reference Filling Solution

Product Number(s) 900062

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/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)

Carcinogenicity	Category 1B
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Label Elements

Emergency Overview

Danger		
Hazard Statements May cause cancer		
		
Appearance Clear	Physical State Liquid	Odor None

Safety data sheet available on request

Precautionary Statements

Do not handle until all safety information has been read and understood.

Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required

Response

IF exposed or concerned: Get medical attention/advice

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No information available

Other Information

Toxic to aquatic life with long lasting effects
Toxic to aquatic organisms

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %	Trade Secret
Potassium Nitrate	7757-79-1	10 - 20%	*
Potassium Chloride	7447-40-7	0 - 10%	*

*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 while removing all contaminated clothing and shoes. If skin reactions occur, contact a physician.
- Inhalation** Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, obtain medical attention.
- 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 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.

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. Refer to Section 8. Evacuate personnel to safe areas.

Environmental Precautions 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/vapours/spray
Ensure adequate ventilation, especially in confined areas

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
Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as 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 None required under normal usage. 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 Clear
Odor None
Odor Threshold No information available
pH Range 5.0 - 8.0

Property **Values** **Remarks • Method**
Melting point/freezing point No information available
Boiling Point/Range ~ 100 °C / 212 °F

Flash Point (High in °C)	N/A
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
Potassium Nitrate	= 3015 mg/kg (Rat)	-	-

7757-79-1			
Potassium Chloride 7447-40-7	= 2600 mg/kg (Rat)	-	-

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

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 27017 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

10.11% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Potassium Chloride 7447-40-7	2500: 72 h Desmodesmus subspicatus mg/L EC50	750 - 1020: 96 h Pimephales promelas mg/L LC50 static 1060: 96 h Lepomis macrochirus mg/L LC50 static	83: 48 h Daphnia magna mg/L EC50 Static 825: 48 h Daphnia magna mg/L EC50

Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available

Mobility

No information available.

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	CAWAST
Potassium Nitrate 7757-79-1	Ignitable Reactive

14. TRANSPORT INFORMATION

DOT

UN-No UN3082
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard Class 9
 Packing Group III
 Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
 Shipping Description UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III, Marine Pollutant
 Emergency Response Guide Number 171

TDG

UN-No UN3082
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard Class 9
 Packing Group III
 Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (SILVER NITRATE), 9, III, Marine Pollutant

MEX

UN-No UN3082
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard Class 9
 Special Provisions 274, 331, 335
 Packing Group III
 Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (SILVER NITRATE), 9, III

ICAO

UN-No UN3082
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard Class 9
 Packing Group III
 Special Provisions A97, A158
 Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (SILVER NITRATE), 9, III

IATA

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

IMDG/IMO

UN-No UN3082
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard Class 9
 Packing Group III
 EmS No. F-A, S-F
 Special Provisions 274, 335
 Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Silver nitrate), 9, III, Marine

Pollutant

RID

UN-No UN3082
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard Class 9
 Packing Group III
 Classification Code M6
 Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (SILVER NITRATE), 9, III
 ADR/RID-Labels 9

ADR

UN-No UN3082
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard Class 9
 Packing Group III
 Classification Code M6
 Tunnel restriction code (E)
 Special Provisions 274, 335, 601
 Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Silver nitrate), 9, III
 ADR/RID-Labels 9

ADN

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard Class 9
 Packing Group III
 Classification Code M6
 Special Provisions 274, 335, 601
 Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (SILVER NITRATE), 9, III
 Hazard Labels 9
 Limited Quantity 5 L

15. REGULATORY INFORMATION

International Inventories

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

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

Component	SARA 313 - Threshold Values %
Potassium Nitrate - 7757-79-1	1.0

SARA 311/312 Hazardous Categorization

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

Clean Water Act

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)

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

State Right-to-Know

Table with 4 columns: Component, New Jersey, Massachusetts, Pennsylvania. Row 1: Potassium Nitrate 7757-79-1, 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 18-May-2015
Expiration Date SDS is valid 3 years from revision date. Contact wai.techservbev@thermofisher.com for the latest revision.
Reason for revision Update to CLP Format

Disclaimer

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End of Safety Data Sheet