

Revision Date 13-Jun-2016

WAI1 - AGHS - OSHA

Revision Number 10

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product Identifier**

**Product Name** Optimum Results™ A Reference Filling Solution  
**Product No** 900061  
**Synonyms** 219585-A01  
**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

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## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

### Label Elements

#### **Emergency Overview**

The product contains no substances which at their given concentration, are considered to be hazardous to health

**Appearance** Clear

**Physical State** Liquid

**Odor** None

### Precautionary Statements

#### **Hazards not otherwise classified (HNOC)**

No information available

#### **Other Information**

No information available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component          | CAS-No    | Weight %   |
|--------------------|-----------|------------|
| Water              | 7732-18-5 | 70 - 80%   |
| Potassium Nitrate  | 7757-79-1 | 10 - 20%   |
| Potassium Chloride | 7447-40-7 | 1 - 10%    |
| Sodium Chloride    | 7647-14-5 | 0.1 - 1.0% |
| Silver Chloride    | 7783-90-6 | <0.1%      |
| Triton® X-100      | 9002-93-1 | <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.

|                                   |                                                                                                                                                                                                                                                                                          |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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>Protection of First-aiders</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. |

**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.

**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/vapors/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 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** Clear  
**Odor** None  
**Odor Threshold** No information available  
**PH Range** 5.0 - 8.5

| <b><u>Property</u></b>              | <b><u>Values</u></b>     | <b><u>Remarks • Method</u></b> |
|-------------------------------------|--------------------------|--------------------------------|
| <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>     | N/A                      |                                |
| <b>Evaporation Rate</b>             | No information available |                                |
| <b>Flammability (solid, gas)</b>    | No information available |                                |
| <b>Flammability Limit in Air</b>    |                          |                                |
| Upper flammability limit:           | No information available |                                |
| Lower flammability limit:           | 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 |                                |

**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<br>7732-18-5              | LD50 > 90 mL/kg ( Rat )   | -                         | -                                      |
| Potassium Nitrate<br>7757-79-1  | LD50 = 3015 mg/kg ( Rat ) | -                         | -                                      |
| Potassium Chloride<br>7447-40-7 | LD50 = 2600 mg/kg ( Rat ) | -                         | -                                      |
| Sodium Chloride<br>7647-14-5    | LD50 = 3 g/kg ( Rat )     | LD50 > 10 g/kg ( Rabbit ) | LC50 > 42 g/m <sup>3</sup> ( Rat ) 1 h |
| Triton® X-100<br>9002-93-1      | LD50 = 1800 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

|                                 |                           |
|---------------------------------|---------------------------|
| <b>Mutagenic Effects</b>        | No information available  |
| <b>Carcinogenicity</b>          | No information available. |
| <b>Reproductive Effects</b>     | No information available  |
| <b>STOT - single exposure</b>   | No information available  |
| <b>STOT - repeated exposure</b> | No information available  |
| <b>Aspiration hazard</b>        | No information available  |

#### Numerical measures of toxicity - Product Information

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

|                        |               |
|------------------------|---------------|
| <b>ATEmix (oral)</b>   | 13225 mg/kg   |
| <b>ATEmix (dermal)</b> | 1001000 mg/kg |

## **12. ECOLOGICAL INFORMATION**

### Ecotoxicity

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

| <b>Component</b>                | <b>Freshwater Algae</b>                             | <b>Freshwater Fish</b>                                                                                                                                                                                                                                                                                                                                                                         | <b>Water Flea</b>                                                                                 |
|---------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Potassium Chloride<br>7447-40-7 | EC50: = 2500 mg/L, 72h<br>(Desmodesmus subspicatus) | LC50: 750 - 1020 mg/L, 96h static<br>(Pimephales promelas)<br>LC50: = 1060 mg/L, 96h static<br>(Lepomis macrochirus)                                                                                                                                                                                                                                                                           | EC50: = 83 mg/L, 48h Static<br>(Daphnia magna)<br>EC50: = 825 mg/L, 48h (Daphnia magna)           |
| Sodium Chloride<br>7647-14-5    | -                                                   | LC50: 4747 - 7824 mg/L, 96h<br>flow-through (Oncorhynchus mykiss)<br>LC50: 6420 - 6700 mg/L, 96h static<br>(Pimephales promelas)<br>LC50: = 7050 mg/L, 96h semi-static<br>(Pimephales promelas)<br>LC50: 6020 - 7070 mg/L, 96h static<br>(Pimephales promelas)<br>LC50: = 12946 mg/L, 96h static<br>(Lepomis macrochirus)<br>LC50: 5560 - 6080 mg/L, 96h<br>flow-through (Lepomis macrochirus) | EC50: 340.7 - 469.2 mg/L, 48h<br>Static (Daphnia magna)<br>EC50: = 1000 mg/L, 48h (Daphnia magna) |

### 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<br>7757-79-1 | Ignitable<br>Reactive |
| Silver Chloride<br>7783-90-6   | Toxic                 |

#### 14. TRANSPORT INFORMATION

**DOT** Not regulated

**ICAO** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

#### 15. REGULATORY INFORMATION

##### International Inventories

**USINV** Complies  
**CANINV** Complies  
**EINECS/ELINCS** Does not Comply  
**ENCS** Complies  
**IECSC** Complies  
**KECL** Does not Comply  
**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                     | Weight % | SARA 313 - Threshold Values % |
|-------------------------------|----------|-------------------------------|
| Potassium Nitrate - 7757-79-1 | 10 - 20% | 1.0                           |

##### 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)

| Component                    | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Silver Chloride<br>7783-90-6 | -                           | X                      | -                         | -                          |

**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

**U.S. State Right-to-Know Regulations**

| Component                      | New Jersey | Massachusetts | Pennsylvania |
|--------------------------------|------------|---------------|--------------|
| Water<br>7732-18-5             | -          | -             | X            |
| Potassium Nitrate<br>7757-79-1 | X          | X             | X            |
| Silver Chloride<br>7783-90-6   | 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** 13-Jun-2016

**Reason for revision** SDS sections updated.

**Disclaimer**

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**End of Safety Data Sheet**