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

<table>
<thead>
<tr>
<th><strong>Product Identifier</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Name</strong></td>
<td>SAOB™ Component B</td>
</tr>
<tr>
<td><strong>Product No</strong></td>
<td>941609B</td>
</tr>
<tr>
<td><strong>Pure substance/mixture</strong></td>
<td>Mixture</td>
</tr>
</tbody>
</table>

**Relevant identified uses of the substance or mixture and uses advised against**

<table>
<thead>
<tr>
<th><strong>Recommended Use</strong></th>
<th>Use as laboratory reagent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uses advised against</strong></td>
<td>No Information available</td>
</tr>
</tbody>
</table>

**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 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  White  Physical State  Powder or crystals  Odor  None

Precautionary Statements

Hazards not otherwise classified (HNOC)
No information available

Other Information
No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ascorbic Acid</td>
<td>50-81-7</td>
<td>&gt;90.0%</td>
</tr>
</tbody>
</table>

*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.

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
This product does not contain any known or suspected reproductive hazards.

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face Protection
Safety glasses with side-shields.

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
Powder or crystals

Appearance
White

Odor
None

Odor Threshold
No information available

PH Range
No information available

Property
Melting point/freezing point
Boiling Point/Range
Flash Point (High in °C)
Evaporation Rate
Flammability (solid, gas)
Flammability Limit in Air
Vapor pressure
Vapor Density
Specific Gravity
Water Solubility
Solubility in other solvents
Partition coefficient
Autoignition Temperature
Decomposition Temperature
Kinematic viscosity
Dynamic viscosity
Explosive Properties
Oxidizing Properties

Values
No information available
No information available
N/A
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available
No information available

Remarks • Method

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

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ascorbic Acid</td>
<td>LD50 = 11900 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>50-81-7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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) 11900 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment

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.

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  Complies
ENCS  Complies
IECSC  Complies
KECL  Complies
PICCS  Complies
AICS  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

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

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)
Not applicable

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

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: 09-Aug-2016
Reason for revision: SDS sections updated.

Disclaimer
IMPORTANT: The information contained in this SDS is correct to the best of our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties of any kind as to the accuracy or completeness of the information contained herein or the merchantability or fitness of the product or this information for a particular purpose. It is the responsibility of each individual

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End of Safety Data Sheet