

# SAFETY DATA SHEET

Issuing Date 01-Aug-2023

Revision date 01-Aug-2023

Revision Number 1

## 1. Identification

### Product identifier

Product Name ATPase Developer

### Other means of identification

Product Code(s) CP31605

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended use For research use only. Not for use in diagnostic procedures

### Restrictions on use

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Abcam Inc  
152 Grove St.  
Waltham, MA 02453  
USA  
Tel: (617) 225-2272  
or 888-77-ABCAM (22226)  
(US toll free)  
Fax: (866) 739-9884  
or (866) 457-9616 (both US toll free)

E-mail us.technical@abcam.com, sds@abcam.com

#### Emergency telephone number

Emergency Telephone +1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. Hazard(s) identification

### Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 2

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

Signal word
Warning
<u>Hazard statements</u>

Causes skin irritation  
Causes serious eye irritation  
Suspected of damaging fertility or the unborn child



**Appearance** aqueous solution  
**Physical state** Liquid  
**Odor** No data available

#### Precautionary Statements - Prevention

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Wash face, hands and any exposed skin thoroughly after handling

#### Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention  
 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  
 IF ON SKIN: Wash with plenty of water and soap  
 If skin irritation occurs: Get medical advice/attention  
 Take off contaminated clothing and wash it before reuse

#### Precautionary Statements - Storage

Store locked up

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

#### Other information

Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

### **3. Composition/information on ingredients**

#### Substance

Not applicable.

#### Mixture

Chemical name	CAS No	Weight-%	Trade secret
Ammonium molybdate tetrahydrate	12054-85-2	25 - <50*	*
Sulphuric acid	7664-93-9	10 - <25*	*
Malachite green oxalate	2437-29-8	1 - <3*	*

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

### **4. First-aid measures**

#### Description of first aid measures

##### **General advice**

Show this safety data sheet to the doctor in attendance.

<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately if symptoms occur.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	See Section 2.2 for more information. May cause redness and tearing of the eyes. Burning sensation.
-----------------	---

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

<b>Note to physicians</b>	Treat symptomatically.
---------------------------	------------------------

**5. Fire-fighting measures**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.
-----------------------------	--

<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.
--------------------------	--

**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
--------------------------------	---

<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.
--------------------------------	--

## **7. Handling and storage**

### **Precautions for safe handling**

#### **Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.

### **Conditions for safe storage, including any incompatibilities**

#### **Storage Conditions**

Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place.

## **8. Exposure controls/personal protection**

### **Control parameters**

#### **Exposure Limits**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Ammonium molybdate tetrahydrate 12054-85-2	TWA: 0.5 mg/m <sup>3</sup> Mo respirable particulate matter	TWA: 5 mg/m <sup>3</sup> Mo (vacated) TWA: 5 mg/m <sup>3</sup> Mo	IDLH: 1000 mg/m <sup>3</sup> Mo
Sulphuric acid 7664-93-9	TWA: 0.2 mg/m <sup>3</sup> thoracic particulate matter	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>

### **Appropriate engineering controls**

#### **Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

### **Individual protection measures, such as personal protective equipment**

#### **Eye/face protection**

If splashes are likely to occur, wear safety glasses with side-shields.

#### **Hand protection**

Wear suitable gloves. Impervious gloves.

#### **Skin and body protection**

Wear suitable protective clothing. Long sleeved clothing.

#### **Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are likely to be exceeded or if irritation or other symptoms are experienced, NIOSH/MSHA or EN 136 approved respiratory protection should be worn.

#### **General hygiene considerations**

Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

## **9. Physical and chemical properties**

### **Information on basic physical and chemical properties**

#### **Physical state**

Liquid

#### **Appearance**

aqueous solution

#### **Color**

colorless

#### **Odor**

No data available

#### **Odor threshold**

No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<b>Other information</b>		
Explosive properties	No information available	
Oxidizing properties	No information available	
Softening point	No information available	
Molecular weight	No information available	
VOC content	No information available	
Liquid Density	No information available	
Bulk density	No information available	

## 10. Stability and reactivity

<b>Reactivity</b>	No information available.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Incompatible materials</b>	Strong acids. Strong bases. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### **Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).

**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Redness. May cause redness and tearing of the eyes.

**Acute toxicity**

**Numerical measures of toxicity**

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

ATEmix (oral) 35,958.30 mg/kg

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulphuric acid 7664-93-9	= 2140 mg/kg ( Rat )	-	= 0.375 mg/L ( Rat ) 4 h
Malachite green oxalate 2437-29-8	= 275 mg/kg ( Rat )	-	-

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

**Skin corrosion/irritation** Classification based on data available for ingredients. Irritating to skin.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye irritation.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ammonium molybdate tetrahydrate 12054-85-2	A3	-	-	-
Sulphuric acid 7664-93-9	A2	Group 1	Known	X
Malachite green oxalate 2437-29-8	-	Group 3	-	-

**Legend**

**ACGIH (American Conference of Governmental Industrial Hygienists)**

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

**NTP (National Toxicology Program)**

Known - Known Carcinogen

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

**Reproductive toxicity**

Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

## **12. Ecological information**

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sulphuric acid 7664-93-9	-	LC50: >500mg/L (96h, Brachydanio rerio)	-	-

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

**Other adverse effects** No information available.

## **13. Disposal considerations**

### **Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

## **14. Transport information**

**DOT** Not regulated

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

## **15. Regulatory information**

**TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Sulphuric acid	7664-93-9	X	Active
Malachite green oxalate	2437-29-8	X	Active

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Ammonium molybdate tetrahydrate - 12054-85-2	1.0
Sulphuric acid - 7664-93-9	1.0

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulphuric acid 7664-93-9	1000 lb	-	-	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).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Sulphuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Sulphuric acid - 7664-93-9	Carcinogen

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulphuric acid 7664-93-9	X	X	X

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**International Inventories**

<b>TSCA</b>	Does not comply
<b>DSL/NDSL</b>	Does not comply
<b>EINECS/ELINCS</b>	Does not comply
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Does not comply
<b>KECL</b>	Does not comply
<b>PICCS</b>	Does not comply
<b>AIIC</b>	Does not comply

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS
Sulphuric acid	ACTIVE	X	-	X	-
Malachite green oxalate	ACTIVE	X	-	X	-

Chemical name	ENCS	IECSC	KECL	PICCS	AIIC
Ammonium molybdate tetrahydrate	X	X	-	X	X
Sulphuric acid	X	X	X	X	X
Malachite green oxalate	X	X	X	X	X

**Legend:** X - Listed**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 2 *	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> X

Chronic Hazard Star Legend

\* = Chronic Health Hazard

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

---

World Health Organization

**Issuing Date** 01-Aug-2023

**Revision date** 01-Aug-2023

**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**