

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Ammonium Persulfate

Other means of identification

Product Code(s) A2146

UN/ID no. 1444

Synonyms No information available

Product Use For Laboratory Research Use Only.

Supplier/Manufacturer

Biomatik Corporation
9-140 McGovern Dr.
Cambridge, Ontario N3H 4R7
Canada

Telephone Number 1-519-489-7195

E-mail Address info@biomatik.com

Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

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

Acute Toxicity - Oral	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Oxidizing solids	Category 3

Label elements

Emergency Overview

Danger

Hazard statements

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 - May cause respiratory irritation

**Appearance** White**Physical State** Crystalline Powder**Odor** No information available**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapors/spray
 In case of inadequate ventilation wear respiratory protection
 Contaminated work clothing should not be allowed out of the workplace
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

Specific treatment (see .? on this label)
 IF ON SKIN: Wash with plenty of soap and water
 Take off contaminated clothing and wash before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
 Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not regulated

Other Information

• May be harmful if inhaled
 Unknown Acute Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	EC No.	Weight %	Trade Secret
Ammonium persulfate	7727-54-0	231-786-5	95-100	Not applicable

4. FIRST AID MEASURES

First Aid Measures

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation Move to fresh air. If not breathing, give artificial respiration.

Ingestion Never give anything by mouth to an unconscious person. Rinse mouth.

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

Dry chemical, CO₂, alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

This is a strong oxidizer and will react vigorously or explosively with many materials including fuels.

Hazardous Combustion Products Carbon oxides. Emits toxic fumes.

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 protection Use personal protective equipment. Ensure adequate ventilation.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological information.

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 Cover with dry lime or soda ash. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Mixing a solution of ammonium persulfate with powdered aluminum or iron may result in an explosion.
Violent reaction results from silver-catalyzed oxidation of ammonia to nitrogen.
The salt exploded during drying due possibly to the formation of tetraaminezinc peroxodisulfate from the interaction of ammonium persulfate with galvanized iron and ammonia.
A mixture with sodium peroxide explodes from friction due to grinding in a mortar, when heated above 75 C or on exposure to carbon dioxide or drops of water.
Catalytic decomposition can occur in the presence of metals such as lead, silver, copper, magnesium, zinc, cadmium, nickel, iron and cobalt. Handle in accordance with good

industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Hygroscopic. Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products Strong reducing agents. Finely powdered metals. Organic materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium persulfate	-	-	-

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. Avoid contact with eyes.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

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	Crystalline Powder	Odor	No information available
Appearance	White	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point/freezing point		
Boiling Point/Range	No information available	
Flash Point (High in °C)	>93.3 °C	
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	Very soluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition Temperature	No information available	
Decomposition Temperature	No information available	
Kinematic viscosity	No information available	

Dynamic viscosity No information available
Explosive Properties No information available
Oxidizing Properties Strong oxidizer

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 data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Hygroscopic.

Incompatible Materials

Strong reducing agents. Finely powdered metals. Organic materials.

Hazardous Decomposition Products

Nitrogen oxides (NOx). Sulfur oxides. Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Causes skin, eye and respiratory tract irritation Sensitizer

Inhalation There is no data available for this product.

Eye Contact There is no data available for this product.

Skin Contact There is no data available for this product.

Ingestion There is no data available for this product.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium persulfate	= 495 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	= 520 mg/L (Rat) 1 h

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.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ammonium persulfate	-	-	-	-

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Eyes, Lungs, Nose, Throat.

Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Chemical Name	Algae/aquatic plants	Toxicity to Fish	Crustacea
Ammonium persulfate	-	103: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 76.3: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 323: 96 h <i>Poecilia reticulata</i> mg/L LC50	120: 48 h <i>Daphnia magna</i> mg/L EC50

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Chemical Name	Partition coefficient
Ammonium persulfate	-

Other Adverse Effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging Do not re-use empty containers.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Ammonium persulfate	-	-	-	-

Chemical Name	California Hazardous Waste Status
Ammonium persulfate	-

14. TRANSPORT INFORMATION

DOT

UN/ID no. 1444
Proper shipping name *Ammonium Persulfate*
Hazard Class 5.1
Packing Group III

IATA

UN/ID no. 1444
Proper shipping name *Ammonium Persulfate*
Hazard Class 5.1
Packing Group III

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend

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 Commercial Chemical Substances/EU 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
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 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:

Component	SARA 313 - Threshold Values %
Ammonium persulfate	1.0

SARA 311/312 Hazard Categories

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

Clean Water Act

This product does not contain any substances regulated as 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
Ammonium persulfate	-	-	-	-

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

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Ammonium persulfate	-	-	-

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

Chemical Name	California Prop. 65
Ammonium persulfate	-

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ammonium persulfate	X	-	-

U.S. EPA Label Information

EPA Pesticide Registration Number Not regulated

16. OTHER INFORMATION**Disclaimer**

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet