SAFETY DATA SHEET

Conforms to regulation (EC) no. EU 453/2010

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: Ammonium Persulfate **Product Number:** EC-504

1.2 Relevant Identified Uses of the Substance/Mixture and Uses Advised Against

Investigational research by professional users

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer
National Diagnostics
305 Patton Drive
Atlanta, GA 30036
(404) 699-2121
(800) 526-3867
info@nationaldiagnostics.com

1.4 Emergency Telephone Number

ChemTel Inc.
Contract number MIS8894340
1-800 255-3924 (United States, Canada, Puerto Rico & US Virgin Islands)
01-800-099-0731 (Mexico)
400-120-0751 (China)
000-800-100-4086 (India)
1-300-954-583 (Australia)
0-800-591-6042 (Brazil)
+1-813-255-3924 (All other regions)

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]
Germ Cell Mutagenicity (Category 1)

2.2 Label Elements

GHS LABEL ELEMENTS AND CLASSIFICATION

GHS Label Elements

DANGER
H273 - May intensify fire; oxidizer.
H302 - Harmful if swallowed
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H317 - May cause an allergic skin reaction.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
P210 - Keep away from heat/sparks/open flames/hot surfaces---no smoking.
P221 - Take any precaution to avoid mixing with combustibles/...
P285 - In case of inadequate ventilation wear respiratory protection.
P302+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P405 - Store locked up.
P501 - Dispose of contents/containers to an approved waste disposal plant.

2.3 Other Hazards

None found.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Chemical Names/Description
Ammonium Peroxydisulfate; Peroxydisulfuric Acid; Diammonium Salt; Diammonium peroxydisulfate.

Chemical Formula
$H_8N_2O_8S_2$

Component List

Component	% Comp.	CAS #	EC #
Ammonium Persulfate	99	7727-54-0	231-786-5

SECTION 4 - FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

Do not induce vomiting. If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Inhalation

Sore throat, shortness of breath, inflammation of nasal passages, coughing, and wheezing. Allergic reaction may cause asthma-like symptoms and life-threatening shock.

Ingestion

Abdominal pain, nausea, and vomiting.

Skin

Pain, redness, dermatitis.

Eyes

Pain, redness, tearing.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Unknown/not applicable

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Dry powder, foam, carbon dioxide. Do not use water (Contact with water releases oxygen which may intensify combustion in an existing fire).

5.2 Special Hazards Arising from the Substance/Mixture

Hazardous Combustion Products

Nitrogen oxides, sulfur oxides, and sulfuric acid.

Hazardous Decomposition Products

Decomposed by moisture to form oxygen and ozone. Burning may produce nitrogen oxides, sulfur oxides, and sulfuric acid.

Hazardous Polymerization

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

5.3 Advice for Firefighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

5.4 Further Information

No data available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Wear appropriate protective equipment as specified in Section 8.

6.2 Environmental Precautions

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Ventilate area. Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Wear appropriate personal protective equipment as specified in section 8.

6.4 References to Other Sections

For disposal information, see Section 13. For protective clothing and equipment, see Section 8.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

7.2 Conditions for Safe Storage (including any incompatibles)

Keep in a tightly closed container, stored in a cooled, dry, ventilated area away from sources of heat or ignition. Protect from physical damage. Isolate from incompatible materials (section 10). Avoid storage on wood floors.

Incompatibles

Reducing agents, organic material, sodium peroxide, water and powdered metals especially aluminum.

7.3 Specific End Uses

Investigational research by professional users

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

8.1 Control Parameters

ACGIH Threshold Limit Value (TLV): 5 mg/m3 (TWA)
OSHA Permissible Exposure Limit (PEL): None established

8.2 Exposure Controls

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection

If exposure limits are exceeded, wear a full-face respirator with organic vapor cartridge and high efficiency dust mist filter. Beyond fifty times exposure limits or when exposure levels are not known, wear a full-face piece positive pressure respirator.

Eye Protection

Use chemical safety goggles and/or a full face shield where contact is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a. Appearance	White crystals	**b. Odor**	None
c. Odor Threshold	N.A.	**d. pH**	N.A.
e. Melting/Freezing Point (^{O}C)	120	**f. Boiling point (^{O}C)**	N.A.
g. Flash Point (^{O}C)	N.D.	**h. Evaporation Rate**	No Data
i. Flammability	N.A.	**j. Upper/Lower Flammability or Explosive Limits**	N.D.
k. Vapor Pressure	No Data	**l. Vapor Density (Air = 1)**	No Data
m. Relative Density	1.98 @ 20C	**n. Water Solubility**	80 g/100 ml @ 25 C
o. Partition Coefficient n-octanol/water	N.A.	**p. Autoignition Temperature (^{O}C)**	N.D.
q. Decomposition Temperature (^{O}C)	N.A.	**r. Viscosity**	N.A.
s. Explosive Properties	None by thermal or mechanical means.	**t. Oxidizing Properties**	Strong Oxidizer

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

Oxidizer- reacts with reducing agents and combustibles.

10.2 Chemical Stability

Stable under ordinary conditions of use and storage. Stability decreases in the presence of moisture.

10.3 Possibility of Hazardous Reactions

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

10.4 Conditions to Avoid

Moisture, combustible materials, and incompatibles.

10.5 Incompatible Materials

Reducing agents, organic material, sodium peroxide, water and powdered metals especially aluminum.

10.6 Hazardous Decomposition Products
Decomposed by moisture to form oxygen and ozone. Burning may produce nitrogen oxides, sulfur oxides, and sulfuric acid.

SECTION 11 - TOXICOLOGICAL INFORMATION
Product LD50 Values
Oral Rat LD50 (mg/kg)
696

Dermal Rabbit LD50 (mg/kg)
> 10 g/kg

Component Cancer List Status

	NTP Carcinogen		
	Known	Anticipated	IARC Category
Ammonium Persulfate	No	No	None

Potential Health Effects
Inhalation
May irritate the mucous membranes. May cause lung edema. Any exposure may cause an allergic reaction. Asthma-like symptoms and life-threatening shock may result.

Ingestion
Corrosive. Harmful if swallowed.

Skin
Corrosive. May cause skin burns. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Eyes
May cause severe irritation and pain.

Carcinogenicity
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Mutagenicity
No information found.

Reproductive Toxicity
No information found.

Teratogenic Effects
No information found.

Routes of Entry
No information found.

Target Organ Statement
Persons with impaired respiratory function may be more susceptible to the effects of this substance.

SECTION 12 - ECOLOGICAL INFOMATION
12.1 Toxicity

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	LC50 (96hr, rainbow trout) 76mg/L	EC50(5day, abra alba) 11mg/L	EC50 (72hr) 136mg/L	No data

	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

12.2 Persistence and Degradability
No data

12.3 Bioaccumulative Potential
No data

12.4 Mobility in Soil
No data

12.5 Results of PBT and vPvB Assessment
No data

12.6 Other Adverse Effects
None

SECTION 13 - DISPOSAL CONSIDERATIONS
13.1 Waste Treatment Methods
Offer surplus or non-recyclable product to licensed disposal company. Disposal is subject to user compliance with applicable law and product characteristics at time of disposal. Dispose of packaging as product.

SECTION 14 - TRANSPORT INFORMATION

	ADR/RID	IATA	IMO	DOT
14.1 UN Number	1444	1444	1444	1444
14.2 Shipping Name	Ammonium Persulfate	Ammonium Persulfate	Ammonium Persulfate	Ammonium Persulfate
14.3 Hazard Class	5.1	5.1	5.1	5.1
14.4 Packing Group	III	III	III	III
14.5 Environmental Hazards	N.A.	N.A.	N.A.	N.A.
14.6 Special Precautions	N.A.	N.A.	N.A.	N.A.

SECTION 15 - REGULATORY INFORMATION
15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance/Mixture
United States
TSCA Regulatory Statement
All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Ammonium Persulfate	No	No	Yes	Yes	Yes

Europe
EEC Regulatory
All intentional ingredients are listed on the European EINECS Inventory.

SECTION 16 - OTHER INFORMATION
Revisional Updates
4/26/2019 - Updated Section 1.4
5/29/2015 - Updated Sections 2.1 and 3.1
11/14/2013 - Released Version 1.0

NFPA Codes
Health 1 **Flammability** 0 **Reactivity** 1

MANUFACTURER DISCLAIMER: The information given herein is offered in good faith as accurate, but without guarantee. Conditions of the use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.