

## MSDS

Version 2.0  
Revision Date: 07/29/2025

### Product and Company Identification

**Product Name:** Ammonium Persulfate (APS)  
**Cat #:** APS-100, APS-200, APS-OEM  
**Product Use:** For Research Use Only. Not for use in diagnostic procedures  
**Company:** Molecular Cloning Laboratories (MCLAB)  
320 Harbor Way  
South San Francisco  
CA 94080  
**Telephone:** 888-MCLAB-88  
650-871-8771  
**Fax:** 650-871-8796

### Hazards Identification

#### Emergency Overview

#### OSHA Hazards

Oxidizer, Harmful by ingestion., Harmful by skin absorption., Skin and respiratory sensitizer, Irritant

#### GHS Classification

Oxidizing solids (Category 3)  
Acute toxicity, Oral (Category 4)  
Acute toxicity, Dermal (Category 4)  
Skin irritation (Category 2)  
Eye irritation (Category 2A)  
Respiratory sensitization (Category 1)  
Skin sensitization (Category 1)  
Specific target organ toxicity - single exposure (Category 3)  
Acute aquatic toxicity (Category 3)

#### GHS Label elements, including precautionary statements

Pictogram



Signal word                      Danger

#### Hazard statement(s)

H272                                May intensify fire; oxidiser.  
H302 + H312                      Harmful if swallowed or in contact with skin  
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.

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H335 May cause respiratory irritation.

H402 Harmful to aquatic life.

#### Precautionary statement(s)

P220 Keep/Store away from clothing/ combustible materials.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves/ protective clothing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

#### HMIS Classification

Health hazard: 3

Chronic Health Hazard: \*

Flammability: 0

Physical hazards: 3

#### NFPA Rating

Health hazard: 3

Fire: 0

Reactivity Hazard: 3

#### Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.

Skin Harmful if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Ingestion Harmful if swallowed.

## Composition/Information On Ingredients

Synonyms : AP  
Ammonium peroxodisulfate  
APS  
PER  
Ammonium peroxydisulfate

Formula :  $H_8N_2O_8S_2$

Molecular Weight : 228.2 g/mol

Component	Concentration
Diammonium peroxodisulphate	
CAS-No.	7727-54-0
EC-No.	231-786-5
Index-No.	016-060-00-6

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## First Aid Measures

### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## Firefighting Measures

### Conditions of flammability

Not flammable or combustible.

### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### Specific hazards arising from the chemical

Container explosion may occur under fire conditions.

### Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO<sub>x</sub>), Sulphur oxides

### Further information

May intensify fire; oxidiser. Use water spray to cool unopened containers.

## Accidental Release Measures

### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

## Handling And Storage

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition -

No smoking. Keep away from heat and sources of ignition.

### Conditions for safe storage

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Keep container tightly closed in a dry and well-ventilated place.  
Moisture sensitive. Keep in a dry place.

## Exposure Controls/Personal Protection

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Diammonium peroxodisulphate	7727-54-0	TWA	0.1 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Skin irritation varies			

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Immersion protection

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (Aldrich Z677272, Size M)

#### Splash protection

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial

Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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## Physical And Chemical Properties

### Appearance

Form	powder
Colour	white

### Safety data

pH	1.0 - 2 at 228 g/l at 25 °C (77 °F)
Melting point/freezing point	no data available
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	1.980 g/cm <sup>3</sup>
Water solubility	228 g/l at 20 °C (68 °F) - completely soluble
Partition coefficient: n-octanol/water	no data available
Relative vapour density	7.88 - (Air = 1.0)
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

## Stability And Reactivity

### Chemical stability

May decompose on exposure to moist air or water. Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Strong reducing agents, Organic materials, Powdered metals

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO<sub>x</sub>), Sulphur oxides  
Other decomposition products - no data available

## Toxicological Information

### Acute toxicity

Oral LD50

LD50 Oral - rat - 689 mg/kg

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Inhalation LC50

no data available

Dermal LD50

LD50 Dermal - rat - 2,000 mg/kg

Other information on acute toxicity

no data available

**Skin corrosion/irritation**

Skin - rabbit - No skin irritation

**Serious eye damage/eye irritation**

Eyes - rabbit - No eye irritation

**Respiratory or skin sensitization**

May cause allergic respiratory and skin reactions

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

no data available

**Teratogenicity**

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System) May cause respiratory irritation.**

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

- |            |   |
|------------|---|
| Inhalation | May be harmful if inhaled. Causes respiratory tract irritation. |
| Ingestion  | Harmful if swallowed.   |
| Skin       | Harmful if absorbed through skin. Causes skin irritation.       |
| Eyes       | Causes eye irritation.  |

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

no data available

**Additional Information**

RTECS: SE0350000



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Oxidizer, Harmful by ingestion., Harmful by skin absorption., Skin and respiratory sensitizer, Irritant

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Diammonium peroxodisulphate	7727-54-0	2007-03-01

**SARA 311/312 Hazards**

Reactivity Hazard, Acute Health Hazard

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Diammonium peroxodisulphate	7727-54-0	2007-03-01

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Diammonium peroxodisulphate	7727-54-0	2007-03-01

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Other Information

**For research use only.** The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.