

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ammonium persulfate

Product Number : A6600

Brand : ACP

Product Use : For laboratory use only.

Supplier : ACP Chemicals Inc
4601, boul. Des Grandes Prairies
St Leonard, Qc, H1R 1A5
CANADA

Telephone : +1 5143270323

Fax : +1 5143278474

Emergency Phone # (For both supplier and manufacturer) : +1-613-996-6666 (CANUTEC)

2. HAZARDS IDENTIFICATION

Emergency Overview

WHMIS Classification

C	Oxidizing Material	Oxidizer
D2A	Very Toxic Material Causing Other Toxic Effects	Respiratory sensitiser
D2B	Toxic Material Causing Other Toxic Effects	Moderate respiratory irritant
E	Corrosive Material	Skin sensitiser
		Corrosive to metals
		Corrosive to skin
		Corrosive

GHS Classification

Oxidizing solids (Category 3)

Acute toxicity, Oral (Category 4)

Acute toxicity, Dermal (Category 5)

Skin corrosion/irritation (Category 2)

Serious eye damage/eye irritation (Category 2A)

Respiratory sensitisation (Category 1)

Skin sensitisation (Category 1)

Specific target organ toxicity - single exposure (Category 3), Respiratory system

Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H272 : May intensify fire; oxidizer.

H302 : Harmful if swallowed.

H313 : May be harmful 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.
 H335 May cause respiratory irritation.
 H402 Harmful to aquatic life.

Precautionary statement(s)

P220 Keep away from clothing and other combustible materials.
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P280 Wear protective gloves.
 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: 2
Flammability: 0
Physical hazards: 1

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : AP
 Ammonium peroxodisulfate
 APS
 PER
 Ammonium peroxydisulfate

Formula : $H_8N_2O_8S_2$
 Molecular weight : 228.20 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Diammonium peroxodisulphate			
7727-54-0	231-786-5	016-060-00-6	<=100%

4. 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.

5. 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 firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO_x), Sulphur oxides

Explosion data - sensitivity to mechanical impact

No data available

Explosion data - sensitivity to static discharge

No data available

Further information

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

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, 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 wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. 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

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

Moisture sensitive. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Diammonium peroxodisulphate	7727-54-0	TWA	0.100000 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWAEV	0.100000 mg/m ³	Canada. Ontario OELs
		TWA	0.100000 mg/m ³	Canada. British Columbia OEL
		TWA	0.1 mg/m ³	Canada. British Columbia OEL
		TWA	0.100000 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)

		TWA	0.1 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
--	--	-----	-----------------------	---

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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, 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 and safety officer 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.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. 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 Decomposes before melting.

Boiling point Decomposes below the boiling point.

Flash point No data available

Ignition temperature No data available

Auto-ignition No data available

temperature	
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Density	1.980 g/cm ³
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

10. 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

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO_x), Sulphur oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - Rat - 689 mg/kg

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

Eyes - Rabbit - Mild eye irritation - OECD Test Guideline 405

Respiratory or skin sensitisation

May cause allergic respiratory and skin reactions

Guinea pig - Causes sensitisation. - OECD Test Guideline 406

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.

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

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 76 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 120 mg/l - 48 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: 1444 Class: 5.1 Packing group: III

Proper shipping name: Ammonium persulfate

Reportable Quantity (RQ):

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 1444 Class: 5.1 Packing group: III EMS-No: F-A, S-Q

Proper shipping name: AMMONIUM PERSULPHATE

Marine pollutant: No

IATA

UN number: 1444 Class: 5.1 Packing group: III

Proper shipping name: Ammonium persulphate

15. REGULATORY INFORMATION**WHMIS Classification**

C	Oxidizing Material	Oxidizer
D2A	Very Toxic Material Causing Other Toxic Effects	Respiratory sensitiser
D2B	Toxic Material Causing Other Toxic Effects	Moderate respiratory irritant
E	Corrosive Material	Skin sensitiser
		Corrosive to metals
		Corrosive to skin
		Corrosive

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION**Further information**

ACP Chemicals Inc. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. ACP Chemicals Inc and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.