1. PRODUCT AND COMPANY INFORMATION

INVITROGEN CORPORATION
1600 FARADAY AVE.
CARLSBAD, CA 92008
760/603-7200

GIBCO PRODUCTS
INVITROGEN CORPORATION
3175 STALEY ROAD P.O. BOX 68
GRAND ISLAND, NY 14072
716/774-6700

INVITROGEN CORPORATION
3 FOUNTAIN DR.
INCHINNAN BUSINESS PARK
PAISLEY, PA4 9RF
SCOTLAND
44-141 814-6100

INVITROGEN CORPORATION
P.O. BOX 12-502
PENROSE
AUCKLAND 1135
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64-9-579-3024

INVITROGEN CORPORATION
2270 INDUSTRIAL ST.
BURLINGTON, ONT
CANADA L7P 1A1
905/335-2255

EMERGENCY NUMBER (SPILLS, EXPOSURES): 301/431-8585 (24 HOUR)
800/451-8346 (24 HOUR)
NON-EMERGENCY INFORMATION: 800/955-6288

Product Name:
AMMONIUM PERSULPHATE

NOTE: If this product is a kit or is supplied with more than one material, please refer to the MSDS for each component for hazard information.

Product Use:
These products are for laboratory research use only and are not intended for human or animal diagnostics, therpeutic, or other clinical uses.

Synonyms:
Not available.

2. COMPOSITION, INFORMATION ON INGREDIENTS

The following list shows components of this product classified as hazardous based on physical properties and health effects:

Component	CAS No.	Percent
AMMONIUM PERSULFATE	7727-54-0	60 - 100

3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********
Danger!
Corrosive to tissue.
Harmful if swallowed.
Harmful by inhalation.
May cause allergic skin reaction.
Oxidizer.
****

Potential Health Effects:
Eye:
Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in tearing and reddening, but not likely to permanently injure eye tissue. Temporary vision impairment (cloudy or blurred vision) is possible.
Oxidizer.

Skin:
Corrosive to skin tissue. Can cause chemical burns.
Continued or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

Inhalation:
Can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache.
Other possible symptoms include; wheezing and coughing due to pulmonary edema (fluid build-up in lungs). Upon prolonged or repeated exposure this product may cause sensitization. Avoid prolonged or repeated exposure. If sensitized, exposure below the TLV or PEL , or at low levels can result in respiratory irritation and shortness of breath. These asthma-type symptoms may develop immediately or be delayed up to several hours.
Harmful! Can cause systemic damage (see "Target Organs).

Ingestion:
Corrosive to tissue. Can cause severe and permanent damage to mouth, throat, stomach. Aspiration may lead to lung damage.
Harmful if swallowed. May cause systemic poisoning.

Chronic:
No data on cancer.

4. FIRST AID MEASURES

Eye:
Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention

4. FIRST AID MEASURES (CONT.)

and monitor the eye daily as advised by your physician.

Skin:
Wash with soap and water under a drench shower. Remove contaminated clothing, launder immediately, and discard contaminated leather goods. Get medical attention immediately.

Inhalation:
Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately.

Ingestion:
Corrosive. Do not induce vomiting! Drink one glass of water followed by milk if available. Seek medical attention immediately and give the medical care provider with this MSDS.

Note To Physician:
Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flashpoint Deg C: Not available.

Upper Flammable Limit %: Not available.

Lower Flammable Limit %: Not available.

Autoignition Temperature Deg C: Not available.

Extinguishing Media:
Not combustible. Use extinguishing media appropriate for surrounding fire. Use water spray/fog for cooling.

Firefighting Techniques/Equipment:
Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products.

Hazardous Combustion Products:
Includes carbon dioxide, carbon monoxide, dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Accidental releases may be subject to special reporting requirements and other regulatory mandates. Refer to Section 8 for personal protection equipment recommendations.

Spill Cleanup:
Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section VIII of this MSDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.
Ventilate the contaminated area.
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section VIII at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

7. HANDLING AND STORAGE

Storage of some materials is regulated by federal, state, and/or local laws.

Storage Pressure:
Ambient

Handling Procedures:
Highly toxic or corrosive material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area.
Keep closed or covered when not in use.

Storage Procedures:
Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed.
Suitable for most general chemical storage areas.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits:

Component	OSHA PEL (ppm)	AGCIH TWA (ppm)
AMMONIUM PERSULFATE	Not established.	Not established.

Engineering Controls:

8. EXPOSURE CONTROLS, PERSONAL PROTECTION (CONT.)

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment:

Eye:
An eye wash station must be available where this product is used. Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.

Skin:
Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Have a safety shower available.

Respiratory:
NIOSH approved air purifying respirator with dust/mist filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/physical state:	White or light-straw-colored crystals.
Odor:	Slight.
Odor:	Acrid.
Boiling Point (C):	*
Melting Point (C):	248 119.99
Solubility in water:	79 @ 20C
pH:	Not established.
Vapor Pressure:	Not established.
Vapor Density:	Not established.
Specific Gravity/Density:	1.982
Octanol/water Partition Coeff:	<1
Volatiles:	-0
Evaporation Rate:	Not established.
Viscosity:	Not established.

10. STABILITY AND REACTIVITY

Stability:
Stable under normal conditions.

10. STABILITY AND REACTIVITY (CONT.)

Conditions to Avoid:
Strong oxidizing agents. Organic materials. Strong reducing agents. Aluminum. High temperatures.

Hazardous Decomposition Products:
Oxygen gas. Nitrogen oxides. Sulfur containing gases.

Hazardous Polymerization:
Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Dermal/Skin:
Not determined.

Inhalation/Respiratory:
Not determined.

Oral/Ingestion:
689 MG/KG

Target Organs: No data found.

Carcinogenicity:

NTP:
Not tested.

IARC:
Not listed.

OSHA:
Not regulated.

Other Toxicological Information

12. Ecological Information

Ecotoxicological Information: No ecological information available.

Environmental Fate (Degradation, Transformation, and Persistence):
Bioconcentration is not expected to occur.

13. DISPOSAL CONSIDERATIONS

Regulatory Information:
Not applicable.

Disposal Method:
Clean up and dispose of waste in accordance with all federal, state, and local environmental regulations.

14. TRANSPORT INFORMATION

Proper Shipping Name: Ammonium persulfate.
Hazard Class: 5.1
Subsidiary Hazards:
ID Number: UN1444
Packing Group: III
Label Required: Oxidizer.

15. REGULATORY INFORMATION

UNITED STATES:

TSCA:
This product is solely for research and development purposes only and may not be used, processed or distributed for a commercial purpose. It may only be handled by technically qualified individuals.

Prop 65 Listed Chemicals: PROP 65 PERCENT
No Prop 65 Chemicals.

No 313 Chemicals

CANADA:

DSL/NDSL:
Not determined.

COMPONENT	WHMIS Classification
AMMONIUM PERSULFATE	C D2B

EUROPEAN UNION:

PRODUCT RISK PHRASES:
None assigned.
PRODUCT SAFETY PHRASES:

15. REGULATORY INFORMATION (CONT.)

None assigned.

PRODUCT CLASSIFICATION:

Xn O

Component	EINECS Number
AMMONIUM PERSULFATE	231-786-5

16. OTHER INFORMATION

HMIS Rating 0-4:
FIRE: Not determined.
HEALTH: Not determined.
REACTIVITY: Not determined.

Abbreviations
N/A - Data is not applicable or not available
SARA - Superfund and Reauthorization Act
HMIS - Hazard Material Information System
WHMIS - Workplace Hazard Materials Information System
NTP - National Toxicology Program
OSHA - Occupational Health and Safety Administration
IARC - International Agency for Research on Cancer
PROP 65 - California Safe Drinking Water and Toxic Enforcement Act of 1986
EINECS - European Inventory of Existing Commercial Chemical Substances

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