# SAFETY DATA SHEET

**Creation Date** 10-Dec-2009 **Revision Date** 16-Dec-2015 **Revision Number** 2

## 1. Identification

**Product Name** **Ammonium persulfate**

**Cat No. :** **AC201530000; AC201530010; AC201530050; AC201531000**

**Synonyms** Ammonium peroxydisulfate

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

**Company**
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

**Entity / Business Name**
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

**Emergency Telephone Number**
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
**CHEMTREC** Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

## 2. Hazard(s) identification

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

| | |
|---|---|
| Oxidizing solids | Category 3 |
| Acute oral toxicity | 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 |
| Target Organs - Respiratory system. | |

**Label Elements**

**Signal Word**
Danger

**Hazard Statements**
May intensify fire; oxidizer
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause respiratory irritation

**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
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep/Store away from clothing/ other combustible materials
Take any precaution to avoid mixing with combustibles
**Inhalation**
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
**Skin**
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
**Eyes**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
**Ingestion**
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
**Fire**
In case of fire: Use CO2, dry chemical, or foam for extinction
**Storage**
Store in a well-ventilated place. Keep container tightly closed
Store locked up
**Disposal**
Dispose of contents/container to an approved waste disposal plant
**Hazards not otherwise classified (HNOC)**
None identified

## 3. Composition / information on ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| Ammonium persulfate | 7727-54-0 | 98 |

## 4. First-aid measures

**General Advice** If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. SPEEDY ACTION IS

CRITICAL, GET MEDICAL AID IMMEDIATELY. Remove and wash contaminated clothing before re-use.

**Inhalation** Move to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Consult a physician.

**Ingestion** Do not induce vomiting. Call a physician or Poison Control Center immediately. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.

**Most important symptoms/effects** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. . Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available
**Method -** No information available

**Autoignition Temperature**
**Explosion Limits**
**Upper** No data available
**Lower** No data available
**Oxidizing Properties** Oxidizer

**Sensitivity to Mechanical Impact** No information available
**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**
Oxidizer: Contact with combustible/organic material may cause fire. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors. May ignite combustibles (wood paper, oil, clothing, etc.).

**Hazardous Combustion Products**
Nitrogen oxides (NOx) Sulfur oxides Ammonia Oxygen
**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.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 2 | 1 | 2 | OX |

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental Precautions** Should not be released into the environment. See Section 12 for additional ecological information. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Keep combustibles (wood, paper, oil, etc) away from spilled material. Soak up

with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

**Handling**

Wear personal protective equipment. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Keep away from clothing and other combustible materials. Pay attention to flashback. No information available.

**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|---|---|---|
| Ammonium persulfate | TWA: 0.1 mg/m³ | | |

| Component | Quebec | Mexico OEL (TWA) | Ontario TWAEV |
|---|---|---|---|
| Ammonium persulfate | | | TWA: 0.1 mg/m³ |

*Legend*

*ACGIH - American Conference of Governmental Industrial Hygienists*

**Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection**

Tightly fitting safety goggles.

**Skin and body protection**

Long sleeved clothing. Impervious gloves.

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

## 9. Physical and chemical properties

| | |
|---|---|
| **Physical State** | Powder Solid |
| **Appearance** | White |
| **Odor** | Odorless |
| **Odor Threshold** | No information available |
| **pH** | 3.2 100 g/L |
| **Melting Point/Range** | 120 °C / 248 °F |
| **Boiling Point/Range** | No information available |
| **Flash Point** | No information available |
| **Evaporation Rate** | Not applicable |
| **Flammability (solid,gas)** | No information available |
| **Flammability or explosive limits** | |
| **Upper** | No data available |
| **Lower** | No data available |
| **Vapor Pressure** | negligible |
| **Vapor Density** | Not applicable |
| **Specific Gravity** | 1.980 |
| **Bulk Density** | 900-1100 kg/m³ |
| **Solubility** | Soluble in water |

| | |
|---|---|
| **Partition coefficient; n-octanol/water** | No data available |
| **Autoignition Temperature** | |
| **Decomposition Temperature** | > 120°C |
| **Viscosity** | Not applicable |
| **Molecular Formula** | H8 N2 O8 S2 |
| **Molecular Weight** | 228.19 |

## 10. Stability and reactivity

**Reactive Hazard** Yes

**Stability** Oxidizer: Contact with combustible/organic material may cause fire. Moisture sensitive.

**Conditions to Avoid** Avoid dust formation. Combustible material. Excess heat. Exposure to moisture. Incompatible products.

**Incompatible Materials** Reducing agents, Metals, Peroxides, Strong oxidizing agents, Strong reducing agents, Combustible material,

**Hazardous Decomposition Products** Nitrogen oxides (NOx), Sulfur oxides, Ammonia, Oxygen

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Acute Toxicity**

**Product Information**

**Component Information**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Ammonium persulfate | LD50 = 495 mg/kg ( Rat ) | > 2000 mg/kg | LC50 = 520 mg/L ( Rat ) 1 h |

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** Irritating to eyes, respiratory system and skin

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| Ammonium persulfate | 7727-54-0 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects,both acute and delayed** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

**Ecotoxicity**

Do not empty into drains. Contains a substance which is:. Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|---|---|---|---|---|
| Ammonium persulfate | Not listed | LC50: = 323 mg/L, 96h (Poecilia reticulata)<br>LC50: = 76.3 mg/L, 96h static (Oncorhynchus mykiss)<br>LC50: = 103 mg/L, 96h static (Lepomis macrochirus) | Not listed | EC50: = 120 mg/L, 48h (Daphnia magna) |

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

- **UN-No** UN1444
- **Proper Shipping Name** AMMONIUM PERSULFATE
- **Hazard Class** 5.1
- **Packing Group** III

**TDG**

- **UN-No** UN1444
- **Proper Shipping Name** AMMONIUM PERSULFATE
- **Hazard Class** 5.1
- **Packing Group** III

**IATA**

- **UN-No** UN1444
- **Proper Shipping Name** AMMONIUM PERSULPHATE
- **Hazard Class** 5.1
- **Packing Group** III

**IMDG/IMO**

- **UN-No** UN1444
- **Proper Shipping Name** AMMONIUM PERSULPHATE
- **Hazard Class** 5.1
- **Packing Group** III

## 15. Regulatory information

**All of the components in the product are on the following Inventory lists:** X = listed

**International Inventories**

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonium persulfate | X | X | - | 231-786-5 | - | | X | X | X | X | X |

**Legend:**
**X - Listed**

**E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.**
**F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.**
**N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.**
**P - Indicates a commenced PMN substance**
**R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.**
**S - Indicates a substance that is identified in a proposed or final Significant New Use Rule**
**T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.**
**XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).**
**Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.**
**Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.**

## U.S. Federal Regulations

**TSCA 12(b)** Not applicable

**SARA 313**

| Component | CAS-No | Weight % | SARA 313 - Threshold Values % |
|---|---|---|---|
| Ammonium persulfate | 7727-54-0 | 98 | 1.0 |

**SARA 311/312 Hazard Categories**

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

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA** Occupational Safety and Health Administration
Not applicable

**CERCLA**
Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---|---|---|---|---|---|
| Ammonium persulfate | - | X | - | - | - |

**U.S. Department of Transportation**

| | |
|---|---|
| Reportable Quantity (RQ): | N |
| DOT Marine Pollutant | N |
| DOT Severe Marine Pollutant | N |

**U.S. Department of Homeland Security**
This product does not contain any DHS chemicals.

## Other International Regulations

**Mexico - Grade** No information available

**Canada**
**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and**

**the MSDS contains all the information required by the CPR**

**WHMIS Hazard Class**

C Oxidizing materials
D1B Toxic materials
D2A Very toxic materials

## 16. Other information

**Prepared By**

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**Creation Date** 10-Dec-2009
**Revision Date** 16-Dec-2015
**Print Date** 16-Dec-2015
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

**Disclaimer**

**The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text**

**End of SDS**