

Material Safety Data Sheet

According to OSHA and ANSI

Printing date 08/09/2011

Reviewed on 08/04/2011

1 Identification of the substance/mixture and of the company/undertaking**Product identifier****Product name:** Ammonium peroxydisulfate**Stock number:** A10533, L15042**CAS Number:**

7727-54-0

EC number:

231-786-5

Index number:

016-060-00-6

Relevant identified uses of the substance or mixture and uses advised against.**Sector of Use** SU24 Scientific research and development**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Alfa Aesar, A Johnson Matthey Company

Johnson Matthey Catalog Company, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

Information Department: Health, Safety and Environmental Department**Emergency telephone number:**

During normal hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

2 Hazards identification**Classification of the substance or mixture**

GHS03 Flame over circle

H272 May intensify fire; oxidizer.



GHS08 Health hazard

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R22: Harmful if swallowed.



Xi; Irritant

R36/37/38-42/43: Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.



O; Oxidizing

R8: Contact with combustible material may cause fire.

Information concerning particular hazards for human and environment: Not applicable**Label elements****Labelling according to EU guidelines:****Code letter and hazard designation of product:**

Xn Harmful

O Oxidizing

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Risk phrases:

- 8 Contact with combustible material may cause fire.
 22 Harmful if swallowed.
 36/37/38 Irritating to eyes, respiratory system and skin.
 42/43 May cause sensitization by inhalation and skin contact.

Safety phrases:

- 2 Keep out of the reach of children.
 22 Do not breathe dust.
 24 Avoid contact with skin.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 37 Wear suitable gloves.

Hazard description:**WHMIS classification**

- C - Oxidizing materials
 D2A - Very toxic material causing other toxic effects

**Classification system****HMIS ratings (scale 0-4)**

(Hazardous Materials Identification System)

HEALTH	2	Health (acute effects) = 2
FIRE	0	Flammability = 0
REACTIVITY	2	Reactivity = 2

Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients**Chemical characterization: Substances****CAS# Description:**

7727-54-0 Ammonium peroxydisulfate

Identification number(s):

EC number: 231-786-5

Index number: 016-060-00-6

4 First aid measures**Description of first aid measures****After inhalation**

Supply fresh air and to be sure call for a doctor.

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek immediate medical advice.

Information for doctor**Most important symptoms and effects, both acute and delayed**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Firefighting measures**Extinguishing media****Suitable extinguishing agents**

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

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Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Nitrogen oxides (NOx)

Sulfur oxides (SOx)

This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Advice for firefighters**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**Handling****Precautions for safe handling**

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Prevent formation of dust.

Information about protection against explosions and fires:

Substance/product can reduce the ignition temperature of flammable substances.

This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Conditions for safe storage, including any incompatibilities**Storage****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:**

Store away from flammable substances.

Store away from reducing agents.

Do not store with organic materials.

Store away from metal powders.

Store away from water/moisture.

Further information about storage conditions:

Store under dry inert gas.

This product is moisture sensitive.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Protect from humidity and water.

Specific end use(s) No further relevant information available.**8 Exposure controls/personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters**Components with limit values that require monitoring at the workplace:**

7727-54-0 Ammonium peroxydisulfate (100.0%)

TLV (T) 0.1 mg/m³**Additional information:** No data

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Exposure controls**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Breathing equipment: Use suitable respirator when high concentrations are present.**Protection of hands:**

Check protective gloves prior to each use for their proper condition.

Impervious gloves

Material of gloves

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses**Body protection:** Protective work clothing.**9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Crystalline powder
Color:	White
Odor:	Not determined
Odour threshold:	Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range:	120°C (248 °F) (dec)
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined

Flammability (solid, gaseous): Contact with combustible material may cause fire.**Ignition temperature:** Not determined**Decomposition temperature:** Not determined**Auto igniting:** Not determined.**Explosion limits:**

Lower:	Not determined
Upper:	Not determined

Vapor pressure: Not applicable.**Density at 20°C (68 °F):** 1.982 g/cm³ (16.54 lbs/gal)**Bulk density at 20°C (68 °F):** 900 kg/m³**Relative density:** Not determined.**Vapour density:** Not applicable.**Evaporation rate:** Not applicable.**Solubility in / Miscibility with****Water at 20°C (68 °F):** 582 g/l**Segregation coefficient (n-octanol/water):** Not determined.**Viscosity:**

dynamic:	Not applicable.
kinematic:	Not applicable.

Other information: No further relevant information available.**10 Stability and reactivity****Reactivity****Chemical stability****Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions

Reacts with reducing agents

Reacts with flammable substances

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Incompatible materials:

Reducing agents
Organic materials
Metal powders
Water/moisture

Hazardous decomposition products:

Nitrogen oxides
Sulfur oxides (SOx)

11 Toxicological information**Information on toxicological effects****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	689 mg/kg (rat)
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Primary irritant effect:**on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute and/or other multiple dose toxicity data for components in this product.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.**13 Disposal considerations****Waste treatment methods****Recommendation** Consult state, local or national regulations to ensure proper disposal.**Uncleaned packagings:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**14 Transport information****UN-Number**

DOT, ADR, IMDG, IATA

UN1444

UN proper shipping name

DOT, IMDG, IATA

AMMONIUM PERSULPHATE

ADR

1444 AMMONIUM PERSULPHATE

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Transport hazard class(es)

DOT, IMDG, IATA



Class 5.1 Oxidising substances.
Label 5.1

ADR



Class 5.1 (O2) Oxidizing substances
Label 5.1

Packing group

DOT, ADR, IMDG, IATA III

Environmental hazards:

Marine pollutant: No

Special precautions for user

Warning: Oxidizing substances

Danger code (Kemler):

50

EMS Number:

F-A,S-Q

Segregation groups

Ammonium compounds

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

UN "Model Regulation":

UN1444, AMMONIUM PERSULPHATE, 5.1, III

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Product related hazard informations:**Hazard symbols:**

Xn Harmful
 O Oxidizing

Risk phrases:

8 Contact with combustible material may cause fire.
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National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
 All components of this product are listed on the Canadian Domestic Substances List (DSL).

Information about limitation of use: For use only by technically qualified individuals.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

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Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Contact:

Zachariah C. Holt
Global EHS Manager

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

USA