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A Geno Technology, Inc. (USA) brand name

Safety Data Sheet

Ammonium Persulfate (APS)

Cat. # P011-B



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diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 7/29/2015 Revision date: 1/17/2025 Supersedes: 1/14/2025 Version: 10.0

SECTION 1 Identification

1.1. Product identifier

Product form : Substance
Substance name : diammonium peroxodisulphate
CAS-No. : 7727-54-0
Product code : P011_203A_205A
Formula : (NH₄)₂S₂O₈
BIG No : 10676

1.2. Other means of identification

Synonyms : ammonium peroxodisulfate / ammonium peroxodisulphate / ammonium peroxydisulfate / ammonium persulfate / ammonium persulphate / APS (=ammonium peroxodisulphate) / diammonium peroxodisulfate / diammonium peroxodisulphate / diammonium peroxydisulfate / diammonium peroxydisulphate / diammonium persulfate / diammonium persulphate / diammonium salt peroxy disulfuric acid / PER (=ammonium peroxodisulphate) / peroxydisulfuric acid ((HO)S(O)₂-]2-O₂), diammonium salt / peroxydisulfuric acid, diammonium salt / peroxydisulphuric acid, diammonium salt

EC Index No. (Report) : 016-060-00-6
EC-No. : 231-786-5

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemical

1.4. Supplier's details

G-Biosciences/ Geno Technology, Inc.
9800 Page Avenue
St. Louis, MO 63132-1429, USA
Tel. 1-800-628-7730
www.GBiosciences.com

1.5. Emergency phone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

| | | |
|---|------|--|
| Oxidising solid, Category 3 | H272 | May intensify fire; oxidizer. |
| Acute toxicity (oral), Category 4 | H302 | Harmful if swallowed. |
| Skin corrosion/irritation, Category 2 | H315 | Causes skin irritation. |
| Serious eye damage/eye irritation, Category 2 | H319 | Causes serious eye irritation. |
| Respiratory sensitization, Category 1 | H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitization, Category 1 | H317 | May cause an allergic skin reaction. |
| Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation | H335 | May cause respiratory irritation. |

Full text of H statements : see section 16

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
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

Precautionary statements (GHS US)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 - Keep/Store away from clothing and other combustible materials
P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves.
P284 - Wear respiratory protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P302+P352 - If on skin: Wash with plenty of water.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a poison center or doctor if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.
P337+P313 - If eye irritation persists: Get medical advice or attention.
P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use appropriate media to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 3 Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

| Name | Common Name (Synonyms) | Product identifier | % | GHS US classification |
|-----------------------------|--|--------------------|-----|--|
| diammonium peroxodisulphate | ammonium peroxodisulfate / ammonium peroxodisulphate / ammonium peroxydisulfate / ammonium persulfate / ammonium persulphate / APS (=ammonium peroxodisulphate) / diammonium peroxodisulfate / diammonium peroxodisulphate / diammonium peroxydisulfate / diammonium peroxydisulphate / diammonium persulfate / diammonium persulphate / diammonium salt peroxy disulfuric acid / PER (=ammonium peroxodisulphate) / peroxydisulfuric acid ([[(HO)S(O)2-]2-O2), diammonium salt / peroxydisulfuric acid, diammonium salt / peroxydisulphuric acid, diammonium salt | CAS-No.: 7727-54-0 | 100 | Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 |

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

| | |
|---------------------------------------|---|
| First-aid measures general | : Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms. |
| First-aid measures after inhalation | : Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service. |
| First-aid measures after skin contact | : If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service. |
| First-aid measures after eye contact | : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service. |
| First-aid measures after ingestion | : Rinse mouth with water. Immediately consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center. |
| Self protection of the first-aider | : First aid workers will be equipped with suitable personal protective equipment. |

4.2. Most important symptoms/effects, acute and delayed

| | |
|---|---|
| Potential Adverse human health effects and symptoms | : Harmful if swallowed. Causes skin irritation. Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). May cause respiratory irritation. Causes serious eye irritation. |
| Symptoms/effects after inhalation | : Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coughing. Dry/sore throat. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of lung oedema. |
| Symptoms/effects after skin contact | : Tingling/irritation of the skin. |
| Symptoms/effects after eye contact | : Irritation of the eye tissue. |
| Symptoms/effects after ingestion | : Vomiting. Nausea. Abdominal pain. |
| Chronic symptoms | : Skin rash/inflammation. Respiratory difficulties. Possible inflammation of the respiratory tract. Itching. Runny nose. Conjunctivitis. |

4.3. Indication of immediate medical attention and special treatment needed, if necessary

| | |
|-----------------------------------|--------------------------|
| Other medical advice or treatment | : Treat symptomatically. |
|-----------------------------------|--------------------------|

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | : Water. Quick-acting ABC powder extinguisher. Quick-acting CO2 extinguisher. Quantities of water. |
| Unsuitable extinguishing media | : Foam. Foam. |

5.2. Specific hazards arising from the chemical

| | |
|--|--|
| Fire hazard | : DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: May intensify fire; oxidiser. Reactions involving a fire hazard: see "Reactivity Hazard". |
| Explosion hazard | : DIRECT EXPLOSION HAZARD: No direct explosion hazard. INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard". |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. |

5.3. Special protective equipment and precautions for fire-fighters

| | |
|--------------------------------|--|
| Precautionary measures fire | : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows. |
| Firefighting instructions | : Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. |
| Protection during firefighting | : Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137). |

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No open flames. No smoking. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137). Dust cloud production: dust-tight suit (EN 13982).

Emergency procedures : Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes.

Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area. Evacuate unnecessary personnel.

Environmental precautions : Prevent spreading in sewers.

6.2. Methods and materials for containment and cleaning up

For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray.

Methods for cleaning up : Prevent dust cloud formation. Collect the spill only if it is in a dry state in synthetic bags. Carefully collect the spill/leftovers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

Other information : Dispose of materials or solid residues at an authorized site.

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep container tightly closed. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Always wash hands after handling the product.

Additional hazards when processed : Hazardous waste due to potential risk of explosion.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep cool. Keep only in the original container in a cool, well ventilated place away from : Keep in fireproof place. Keep container tightly closed. Store locked up. Store in a well-ventilated place.

Storage area : Meet the legal requirements. Store at ambient temperature. Store in a dry area.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. Combustible materials.

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| | |
|------------------------------|--|
| Information on mixed storage | : KEEP SUBSTANCE AWAY FROM: (strong) bases. reducing agents. metals. combustible materials. organic materials. oils-fats. |
| Storage temperature | : Store at ambient temperature |
| Heat-ignition | : KEEP SUBSTANCE AWAY FROM: heat sources. |
| Special rules on packaging | : SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers. |
| Packaging materials | : SUITABLE MATERIAL: stainless steel. glass. synthetic material. MATERIAL TO AVOID: iron. copper. paper. wood. aluminium. |

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

diammonium peroxodisulphate (7727-54-0)

USA - ACGIH - Occupational Exposure Limits

| | |
|-----------------|-----------------------|
| ACGIH® TLV® TWA | 0.1 mg/m ³ |
|-----------------|-----------------------|

8.2. Appropriate engineering controls

| | |
|----------------------------------|--|
| Appropriate engineering controls | : Ensure good ventilation of the work station. |
| Environmental exposure controls | : Avoid release to the environment. |

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Materials for protective clothing:

Excellent resistance: butyl rubber. Good resistance: neoprene (chloroprene rubber). chlorosulfonated polyethylene. Polyethylene. Polyvinylchloride (PVC)

Hand protection:

Protective gloves against chemicals (EN 374)

Eye protection:

Face shield (EN 166). In case of dust production: protective goggles (EN 166)

Skin and body protection:

Protective clothing (EN 14605 or EN 13034). In case of dust production: head/neck protection. In case of dust production: dustproof clothing (EN 13982)

Respiratory protection:

Dust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus (EN 136 + EN 137)

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

| | |
|---|--|
| Physical state | : Solid |
| Appearance | : Crystalline solid. Crystalline powder. |
| Color | : White to light yellow |
| Odor | : Odourless |
| Odor threshold | : No data available |
| pH | : 4 – 6 (850 g/l, 25 °C) |
| Melting point | : Not applicable (decomposes), EU Method A.1: Melting/freezing point |
| Freezing point | : Not applicable |
| Boiling point | : Not applicable (decomposes), EU Method A.2: Boiling point |
| Flash point | : Not applicable |
| Flammability (solid, gas) | : Non flammable. |
| Vapor pressure | : < 0.01 hPa (25 °C, OECD 104: Vapour Pressure) |
| Relative vapor density at 20°C | : Not applicable (solid) |
| Relative density | : 1.26 (20 °C, EU Method A.3: Relative Density) |
| Density | : 1260 kg/m ³ (20 °C, EU Method A.3: Relative Density) |
| Molecular mass | : 228.22 g/mol |
| Solubility | : Soluble in water. Water: 85 g/100ml (25 °C) |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : 120 °C (EU Method A.1: Melting/freezing point, 1087 hPa) |
| Viscosity, kinematic | : Not applicable |
| Viscosity, dynamic | : Not applicable (solid) |
| Explosion limits | : Not applicable |
| Explosive properties | : Not explosive. |
| Oxidizing properties | : May intensify fire; oxidiser. |
| Particle characteristics | : Particle size : 140 — 900 µm (D50, OECD 110: Particle Size Distribution/Fibre Length and Diameter Distributions) |

9.2. Data relevant with regard to physical hazard classes (supplemental)

| | |
|------------------|------------------------------|
| VOC content | : Not applicable (inorganic) |
| Other properties | : Acid reaction. |

SECTION 10 Stability and reactivity

10.1. Reactivity

Reacts violently with many compounds e.g.: with (strong) reducers, with combustible materials and with organic material: risk of spontaneous ignition. Violent to explosive reaction with (some) metal powders. Reacts with (some) bases: release of heat. Decomposes on exposure to temperature rise: oxidation which increases fire hazard.

10.2. Chemical stability

Unstable on exposure to moisture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Overheating. Open flame. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition.

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.5. Incompatible materials

Strong acids. Strong bases. Combustible materials.

10.6. Hazardous decomposition products

Hazardous decomposition products. fume. Carbon monoxide. Carbon dioxide.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

| diammonium peroxodisulphate (7727-54-0) | |
|---|--|
| LD50 oral rat | 700 – 742 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rat | > 2000 mg/kg body weight (EPA OPP 81-2, Rat, Male / female, Experimental value, Dermal) |
| LC50 Inhalation - Rat | ≥ 2.95 mg/l air (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s)) |
| ATE US (oral) | 700 mg/kg body weight |

Skin corrosion/irritation : Causes skin irritation.
pH: 4 – 6 (850 g/l, 25 °C)

| diammonium peroxodisulphate (7727-54-0) | |
|---|------------------------|
| pH | 4 – 6 (850 g/l, 25 °C) |

Serious eye damage/irritation : Causes serious eye irritation.
pH: 4 – 6 (850 g/l, 25 °C)

| diammonium peroxodisulphate (7727-54-0) | |
|---|------------------------|
| pH | 4 – 6 (850 g/l, 25 °C) |

Respiratory or skin sensitization : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.

| diammonium peroxodisulphate (7727-54-0) | |
|---|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

| diammonium peroxodisulphate (7727-54-0) | |
|---|----------------|
| Viscosity, kinematic | Not applicable |

| diammonium peroxodisulphate (7727-54-0) | |
|---|----------------|
| Viscosity, kinematic | Not applicable |

Potential Adverse human health effects and symptoms : Harmful if swallowed. Causes skin irritation. Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). May cause respiratory irritation. Causes serious eye irritation.
Symptoms/effects after inhalation : Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coughing. Dry/sore throat. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of lung oedema.

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| | |
|-------------------------------------|--|
| Symptoms/effects after skin contact | : Tingling/irritation of the skin. |
| Symptoms/effects after eye contact | : Irritation of the eye tissue. |
| Symptoms/effects after ingestion | : Vomiting. Nausea. Abdominal pain. |
| Chronic symptoms | : Skin rash/inflammation. Respiratory difficulties. Possible inflammation of the respiratory tract. Itching. Runny nose. Conjunctivitis. |

SECTION 12 Ecological information

12.1. Ecotoxicity

| | |
|---|---|
| Ecology - general | : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008. |
| Ecology - air | : Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573). Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590). |
| Ecology - water | : Slightly harmful to crustacea. Harmful to fishes. No inhibition of activated sludge. Slightly harmful to algae. May cause eutrophication. Hydrolysis in water. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified |

| diammonium peroxodisulphate (7727-54-0) | |
|---|--|
| LC50 - Fish [1] | 76.3 mg/l (FIFRA 72-1, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal) |
| EC50 - Crustacea [1] | 120 mg/l (FIFRA 72-2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect) |
| EC50 72h - Algae [1] | 320 mg/l (OECD 201: Alga, Growth Inhibition Test, Phaeodactylum, Static system, Salt water, Experimental value, Nominal concentration) |

12.2. Persistence and degradability

| diammonium peroxodisulphate (7727-54-0) | |
|---|--------------------|
| Persistence and degradability | Rapidly degradable |

| diammonium peroxodisulphate (7727-54-0) | |
|---|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |

12.3. Bioaccumulative potential

| diammonium peroxodisulphate (7727-54-0) | |
|---|----------------------|
| Bioaccumulative potential | Not bioaccumulative. |

12.4. Mobility in soil

| diammonium peroxodisulphate (7727-54-0) | |
|---|---|
| Surface tension | No data available in the literature |
| Ecology - soil | No (test)data on mobility of the substance available. |

12.5. Other adverse effects

| | |
|------------------------------|------------------|
| Ozone | : Not classified |
| Fluorinated greenhouse gases | : No |

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other information : Avoid release to the environment.

SECTION 13 Disposal considerations

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Waste treatment methods.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.
Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / TDG / IATA

14.1. UN number

UN-No. (DOT) : UN1444
UN-No. (TDG) : UN1444
UN-No. (IATA) : 1444

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Ammonium persulfate
Proper Shipping Name (TDG) : AMMONIUM PERSULFATE
Proper Shipping Name (IATA) : Ammonium persulphate

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 5.1
Hazard labels (DOT) : 5.1



TDG

Transport hazard class(es) (TDG) : 5.1
Hazard labels (TDG) : 5.1



IATA

Transport hazard class(es) (IATA) : 5.1
Hazard labels (IATA) : 5.1

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations



14.4. Packing group

| | |
|----------------------|-------|
| Packing group (DOT) | : III |
| Packing group (TDG) | : III |
| Packing group (IATA) | : III |

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

| | |
|--|---|
| UN-No. (DOT) | : UN1444 |
| DOT Special Provisions (49 CFR 172.102) | : A1 - Single packaging are not permitted on passenger aircraft. A29 - Combination packaging consisting of outer expanded plastic boxes with inner plastic bags are not authorized for transportation by aircraft. IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner. T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 152 |
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : 213 |
| DOT Packaging Bulk (49 CFR 173.xxx) | : 240 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 25 kg |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : 100 kg |
| DOT Vessel Stowage Location | : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel. |

TDG

| | |
|---|----------|
| UN-No. (TDG) | : UN1444 |
| Explosive Limit and Limited Quantity Index | : 5 kg |
| Excepted quantities (TDG) | : E1 |
| Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index | : 25 kg |

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

IATA

| | |
|--|-----------------------------|
| Special provision (IATA) | : A803 |
| Transport regulations (IATA) | : Subject to the provisions |
| PCA Excepted quantities (IATA) | : E1 |
| PCA Limited quantities (IATA) | : Y546 |
| PCA limited quantity max net quantity (IATA) | : 10kg |
| PCA packing instructions (IATA) | : 559 |
| PCA max net quantity (IATA) | : 25kg |
| CAO packing instructions (IATA) | : 563 |
| CAO max net quantity (IATA) | : 100kg |
| ERG code (IATA) | : 5L |

SECTION 15 Regulatory information

15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

| Name | CAS-No. | Listing | Commercial status | Flags |
|-----------------------------|-----------|-------------|-------------------|-------|
| diammonium peroxodisulphate | 7727-54-0 | Not present | - | |

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. State regulations

No additional information available

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| | |
|-------------------|-------------|
| Revision date | : 1/17/2025 |
| Date of issue | : 7/29/2015 |
| Other information | : None. |

| Full text of hazard classes and H-statements | |
|--|---|
| H272 | May intensify fire; oxidizer |
| H302 | Harmful if swallowed |
| 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 |

diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Abbreviations and acronyms | |
|----------------------------|---|
| ACGIH | American Conference of Government Industrial Hygienists |
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| CAS-No. | Chemical Abstract Service number |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| COD | Chemical oxygen demand (COD) |
| CSA | Chemical safety assessment |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| ED | Endocrine disruptor |
| EN | European Standard |
| EWC | European waste catalogue |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| Log Kow | Partition coefficient n-octanol/water (Log Kow) |
| Log Pow | Partition coefficient n-octanol/water (Log Pow) |
| MAK | maximum workplace concentration |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| N.O.S. | Not Otherwise Specified |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| OSHA | Occupational Safety & Health Administration |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |

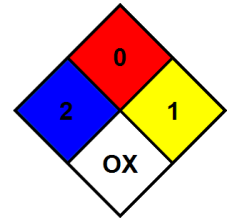
diammonium peroxodisulphate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Abbreviations and acronyms | |
|----------------------------|--|
| PPE | Personal protection equipment |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| TF | Technical function |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |
| TWA | Time Weighted Average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and Very Bioaccumulative |
| UFI | Unique Formula Identifier |

- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
- NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.
- NFPA specific hazard : OX - Materials that possess oxidizing properties.



Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.