

1. IDENTIFICATION

Product Name Diammonium phosphate (DAP)

Other Names Ammonium hydrogen phosphate; Ammonium phosphate; Diammonium hydrogen orthophosphate; Diammonium

hydrogen phosphate; Diammonium orthophosphate

Uses Chemical reagent, flameproofing agent, fertiliser, food additive.

Chemical Family Phosphates
Chemical Formula (NH4)2HPO4

Chemical Name Phosphoric acid, diammonium salt

Product Description No Data Available

Contact Details of the Supplier of this Safety Data Sheet

OrganisationLocationTelephoneRedox Ltd2 Swettenham Road
Minto NSW 2566+61-2-97333000

Australia

Redox Ltd 11 Mayo Road +64-9-2506222

Wiri Auckland 2104
New Zealand

Redox Inc. 3960 Paramount Boulevard +1-424-675-3200

Suite 107

Lakewood CA 90712

USA

Redox Chemicals Sdn Bhd Suite 13A.03, Menara Summit +60-3-5614-2111

Persiaran Kewajipan USJ1 47600 UEP Subang Jaya Selangor, Malaysia

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

OrganisationLocationTelephonePoisons Information CentreAustralia – Westmead NSW1800-251525
131126ChemcallAustralia1800-127406
+64-4-9179888ChemcallMalaysia+64-4-9179888

National Poison Centre Malaysia +60-4-6536-999

Chemcall New Zealand 0800-243622 +64-4-9179888

National Poisons Centre New Zealand 0800-764766

CHEMTREC USA & Canada 1-800-424-9300 CN723420

+1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Redox Ltd
Corporate Office Sydney
Locked Bag 15 Minto NSW 2566 Australia
2 Swettenham Road Minto NSW 2566 Australia
All Deliveries: 4 Holmes Road Minto NSW 2566 Australia

 Phone
 +61 2 9733 3000

 Fax
 +61 2 9733 3111

 E-mail
 sydney@redox.com

 Web
 www.redox.com

 ABN
 92 000 762 345

ı

Adelaide

Brisbane

Sydney

Melbourne

New Zealand Auckland Christchurch Hawke's Bay UK Malaysia
Kuala Lumpur
USA
Los Angeles
Oakland
Mexico
Saltillo



Globally Harmonised System

Hazard Classification NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of

Chemicals (GHS)

Signal Word None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods

by Road & Rail (ADG Code)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification NOT hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Diammonium phosphate	(NH4)2HPO4	7783-28-0	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get medical advice/attention if you feel

unwell.

Eye IF IN EYES: Rinse cautiously with water for several minutes, holding eyelids open and occasionally lifting the upper and

lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation

persists, get medical advice/attention.

Skin IF ON SKIN: Wash with plenty water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get

medical advice/attention.

Inhaled IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms

persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is

difficult.

Advice to Doctor Treat symptomatically.

*Most important symptoms and effects, both acute and delayed: None known.

 $\label{thm:medical conditions Aggravated by} \ \ \mbox{No information available}.$

Exposure

5. FIRE FIGHTING MEASURES

General Measures If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.

Dike fire-control water for later disposal.

Flammability Conditions Non-combustible; Material does not burn.

Extinguishing Media If material is involved in a fire, use extinguishing media appropriate to the surrounding fire conditions.

Fire and Explosion Hazard Decomposes on heating, emitting toxic fumes.

Hazardous Products of

Combustion

Fire or heat will produce irritating and/or toxic gases, including Nitrogen oxides, Phosphorus oxides, Ammonia.

Special Fire Fighting Instructions Contain runoff from fire control or dilution water - Runoff may cause pollution.

Personal Protective Equipment Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only

provide limited protection.

Flash Point

No Data Available

Lower Explosion Limit

No Data Available

Upper Explosion Limit

No Data Available

Auto Ignition Temperature

No Data Available

Hazchem Code

No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dusts

or mists and contact with eyes, skin and clothing.

Clean Up Procedures With clean shovel, place material into clean, dry container and cover loosely; move containers from spill area.

Containment Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas.

Decontamination No information available.

Environmental Precautionary

Measures

Do not allow undiluted product or large quantities to reach groundwater, watercourse or sewage system.

Evacuation Criteria Spill or leak area should be isolated immediately. Keep unauthorised personnel away.

7. HANDLING AND STORAGE

Handling Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure

adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dusts or mists and contact with eyes, skin and clothing. Do not ingest. Use personal

protective equipment as required (see SECTION 8).

Storage Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat

and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10).

Container Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General No specific exposure standards are available for this product. For dusts from solid substances without specific

occupational exposure standards:

- Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m3 (measured as inhalable dust).

- New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m3 (total); TWA = 3 mg/m3 (respirable).

- OSHA PEL (Particulates not otherwise regulated): TWA = 15 mg/m3 (total): TWA = 5 mg/m3 (respirable).

Exposure Limits No Data Available

Biological Limits No information available.

Engineering MeasuresA system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing

dispersion of it into the general work area.

Personal Protection Equipment - Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Wear a dust mask

where exposure to dust is light. Where the dust nuisance is high, use a properly fitted particulate filter respirator, either

full face-piece or half mask plus goggles (refer to AS/NZS 1715 & 1716).

- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Wear safety glasses with

side shields.

- Hand protection: Wear protective gloves. Recommended: Cotton gloves, which can be washed or disposed of if heavily

soiled, will suffice under most circumstances. Use impervious PVC or rubber gloves in high risk situations.

- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Where skin

contact may occur, wear ankle length and long sleeved clothing or overalls.

Special Hazards Precaustions No information available.

Work Hygienic Practices Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the

toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid

Appearance Crystals, granules or powder

Odour Weak, ammonia-like

Colour White **pH** 7.6 - 8.2

Vapour PressureNo Data AvailableRelative Vapour DensityNo Data AvailableBoiling PointNo Data AvailableMelting Point155 °C (decomposes)Freezing PointNo Data Available

Solubility Soluble in water - Insoluble in alcohol and acetone

Specific Gravity0.87 - 1.619Flash PointNo Data AvailableAuto Ignition TempNo Data AvailableEvaporation RateNo Data AvailableBulk DensityNo Data AvailableCorrosion RateNo Data Available

Decomposition Temperature 155 °C

Density No Data Available **Specific Heat** No Data Available **Molecular Weight** No Data Available **Net Propellant Weight** No Data Available **Octanol Water Coefficient** No Data Available **Particle Size** No Data Available **Partition Coefficient** No Data Available **Saturated Vapour Concentration** No Data Available **Vapour Temperature** No Data Available Viscosity No Data Available **Volatile Percent** No Data Available **VOC Volume** No Data Available

Additional Characteristics No information available. **Potential for Dust Explosion** No information available.

Fast or Intensely Burning Characteristics

No information available.

Flame Propagation or Burning **Rate of Solid Materials**

No information available.

Non-Flammables That Could Contribute Unusual Hazards to a No information available.

Properties That May Initiate or Contribute to Fire Intensity

Fire

Non-combustible; Material does not burn.

Reactions That Release Gases or **Vapours**

Fire or heat will produce irritating and/or toxic gases, including Nitrogen oxides, Phosphorus oxides, Ammonia.

Release of Invisible Flammable

No information available.

Vapours and Gases

10. STABILITY AND REACTIVITY

General Information DAP is compatible in dry blends with most fertilisers. Compatibility with superphosphate is limited. This product is not

recommended for use in the preparation of aqueous solutions (liquid fertilisers).

Chemical Stability Stable under normal temperatures and pressures.

Conditions to Avoid Avoid generating dust. Avoid exposure to moisture. Keep away from heat and sources of ignition.

Materials to Avoid Incompatible with oxidising agents (e.g. hypochlorites) and acids (e.g. nitric acid).

Hazardous Decomposition

Products

Decomposes on heating, emitting toxic gases, including Nitrogen oxides, Phosphorus oxides, Ammonia.

Hazardous Polymerisation Polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

General Information

Information on toxicological effects:

- Acute toxicity: Based on available data, the classification criteria are not met.
- Skin corrosion/irritation: Not classified as causing skin irritation.
- Serious eye damage/irritation: Not classified as causing eye irritation.
- Respiratory/skin sensitisation: Not classified as causing skin or respiratory sensitisation.
- Germ cell mutagenicity: Not classified as a mutagen.
- Carcinogenicity: Not classified as a carcinogen.
- Reproductive toxicity: Not classified as a reproductive toxin.
- STOT (single exposure): Not classified as causing organ damage from single exposure.
- STOT (repeated exposure): Not classified as causing organ damage from repeated exposure.
- Aspiration toxicity: Not classified as causing aspiration.

Information on possible routes of exposure:

- Ingestion: Ingestion of large quantities may result in nausea, vomiting and gastrointestinal irritation, and potential disturbances in calcium metabolism.
- Eye contact: Contact may result in mild irritation, lacrimation and redness.
- Skin contact: Contact may result in mild irritation, rash and dermatitis.
- Inhalation: Over exposure may result in irritation of the nose and throat, with coughing.

Chronic effects: No information available.

Acute

Ingestion Acute toxicity (Oral):

- LD50, Rat: >5,000 mg/kg

None

Carcinogen Category

12. ECOLOGICAL INFORMATION

Ecotoxicity Diammonium phosphate contains nitrogen and phosphorus, both of which can stimulate weed and algal growth if lost to

static surface waterways. Algae affect water quality and taste. Depending on the concentration and species, ammonium may be toxic to fish. In the soil, ammonium is converted to nitrate. Nitrate is susceptible to leaching and may contaminate

groundwater. High nitrate concentrations may render water unsuitable for human and livestock consumption.

Persistence/Degradability No information available.

Mobility No information available.

Environmental Fate Slightly hazardous for water. Do not allow undiluted product or large quantities to reach groundwater, watercourse or

sewage system.

Bioaccumulation Potential No information available.

Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Dispose of contents/container in accordance with local/regional/national regulations.

Special Precautions for Land Fill Beneficial reuse is the preferred disposal option. For fertiliser that is physically degraded but not contaminated in any

way, this may necessitate using different application equipment and methods to apply it. If the fertiliser is contaminated with other fertilisers, soil, or other non-harmful substances, and it can be satisfactorily applied, use it for its nutrient value in pasture, crops or on a recreational area, e.g. lawns and parks. If contaminated with other materials, e.g. fuel, oil or

chemicals, the fertiliser waste must be disposed of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name Diammonium phosphate

Class No Data Available
Subsidiary Risk(s) No Data Available

No Data Available

UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

Comments NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name Diammonium phosphate

Class No Data Available
Subsidiary Risk(s) No Data Available

No Data Available No Data Available No Data Available No Data Available

Special Provision No Data Available

Comments NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)

NZS5433

UN Number

Pack Group

Hazchem

Proper Shipping Name Diammonium phosphate

Class No Data Available
Subsidiary Risk(s) No Data Available
No Data Available

UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

Comments NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)

US DOT

Proper Shipping Name Diammonium phosphate

Class No Data Available
Subsidiary Risk(s) No Data Available

No Data Available

UN NumberNo Data AvailableHazchemNo Data AvailablePack GroupNo Data AvailableSpecial ProvisionNo Data Available

Comments NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name Diammonium phosphate

Class No Data Available
Subsidiary Risk(s) No Data Available
UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available
EMS No Data Available

Marine Pollutant No

Comments NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name Diammonium phosphate

Class No Data Available

Subsidiary Risk(s)No Data AvailableUN NumberNo Data AvailableHazchemNo Data AvailablePack GroupNo Data AvailableSpecial ProvisionNo Data Available

Comments NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the Criteria of the Australian Code for the Transport of Dangerous Goods

by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information No Data Available
Poisons Schedule (Aust) Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code Not Hazardous

National/Regional Inventories

Australia (AIIC) Listed

Canada (DSL) Listed

Canada (NDSL) Not Listed

China (IECSC) Listed

Europe (EINECS) Listed

Europe (REACh) Not Determined

Japan (ENCS/METI) Listed

Korea (KECI) Listed

Malaysia (List of Classified Substances) Not Listed

New Zealand (NZIoC) Listed

Philippines (PICCS) Listed

Taiwan (TCSI) Listed

USA (TSCA) Listed

Mexico (INSQ) Listed

16. OTHER INFORMATION

Related Product Codes

DIAMAB1000, DIAMAB1001, DIAMAB2000, DIAMAG1000, DIAMAG1001, DIAMAG1002, DIAMAG1003, DIAMAG1004, DIAMAG1005, DIAMAG1006, DIAMAG1007, DIAMAG1008, DIAMAG1009, DIAMAG1010, DIAMAG1011, DIAMAG1012, DIAMAG1013, DIAMAG1014, DIAMAG1015, DIAMAG1016, DIAMAG1017, DIAMAG1018, DIAMAG1019, DIAMAG1020, DIAMAG1030, DIAMAG1033, DIAMAG1100, DIAMAG1500, DIAMAG2000, DIAMAG3000, DIAMAG3100, DIAMFO2400, DIAMMF1013, DIAMMF1015, DIAMMF1025, DIAMMF1045, DIAMMF1800, DIAMMF1900, DIAMMF2000, DIAMMF2100, DIAMMF2200, DIAMMF2201, DIAMMF2300, DIAMMF2401, DIAMMF2501, DIAMMF2510, DIAMMF2515, DIAMMF2516, DIAMMF2517, DIAMMF2518, DIAMMF2540, DIAMMF2650, DIAMMF2700, DIAMMF2715, DIAMMF2716, DIAMMF2717, DIAMMF2718, DIAMMF2730, DIAMMF2731, DIAMMF2732, DIAMMF2733, DIAMMF2734, DIAMMF2750, DIAMMF2800, DIAMMF3900, DIAMMF3000, DIAMMF3500, DIAMMF3508, DIAMMF3510, DIAMMF3514, DIAMMF3520, DIAMMF3524, DIAMMF3530, DIAMMF3534, DIAMMF3535, DIAMMF3544, DIAMMF9600, DIAMMF9603, DIAMMF9605, DIAMMF9610, DIAMMF9615, DIAMMF9625, DIAMMF9700, DIAMMO1000, DIAMMO1001, DIAMMO1002, DIAMMO1003, DIAMMO1004, DIAMMO1005, DIAMMO1006, DIAMMO1007, DIAMMO1008, DIAMMO1009, DIAMMO1010, DIAMMO1011, DIAMMO1012, DIAMMO1014, DIAMMO1015, DIAMMO1016, DIAMMO1017, DIAMMO1018, DIAMMO1019, DIAMMO1020, DIAMMO1021, DIAMMO1022, DIAMMO1100, DIAMMO1200, DIAMMO1210, DIAMMO1600, DIAMMO1700, DIAMMO1801, DIAMMO1802, DIAMMO1803, DIAMMO1804, DIAMMO1805, DIAMMO1806, DIAMMO1807, DIAMMO1808, DIAMMO1809, DIAMMO1810, DIAMMO1811, DIAMMO1812, DIAMMO1813, DIAMMO1814, DIAMMO1815, DIAMMO1816, DIAMMO1817, DIAMMO1818, DIAMMO1819, DIAMMO1820, DIAMMO1821, DIAMMO1822, DIAMMO1823, DIAMMO1824, DIAMMO1825, DIAMMO1826, DIAMMO1827, DIAMMO1828, DIAMMO1829, DIAMMO1830, DIAMMO1831, DIAMMO1832, DIAMMO1833, DIAMMO2001, DIAMMO2500, DIAMMO2502, DIAMMO2503, DIAMMO2600, DIAMMO2601, DIAMMO2800, DIAMMO2805, DIAMMO2806, DIAMMO2810, DIAMMO2850, DIAMMO3300, DIAMMO3305, DIAMMO3310, DIAMMO3311, DIAMMO3350, DIAMMO3400, DIAMMO3401, DIAMMO3410, DIAMMO3420, DIAMMO3450, DIAMMO3500, DIAMMO3501, DIAMMO3510, DIAMMO4000, DIAMMO4100, DIAMMO4101, DIAMMO4102, DIAMMO4103, DIAMMO4104, DIAMMO4105, DIAMMO4106, DIAMMO4107, DIAMMO4108, DIAMMO4109, DIAMMO4110, DIAMMO4111, DIAMMO4200, DIAMMO4300, DIAMMO4301, DIAMMO4302, DIAMMO4303, DIAMMO4500, DIAMMO5000, DIAMMO5100, DIAMMO5101, DIAMMO5105, DIAMMO5106, DIAMMO5150, DIAMMO5500, DIAMMO5501, DIAMMO5505, DIAMMO5506, DIAMMO5550, DIAMMO5570, DIAMMO6300, DIAMMO6400, DIAMMO6405, DIAMMO7000, DIAMMO7001, DIAMMO7100, DIAMMO7400, DIAMMO7500, DIAMMO7600, DIAMMO8100, DIAMMO9000, DIAMMO9100, DIAMMO9200, DIAMMO9300, DIAMMO9500, DIAMMO9501, DIAMMO9600, DIAMMO9601, DIAMMO9800

Revision

Revision Date 25 Nov 2022
Key/Legend < Less Than

> Greater Than

5

AICS Australian Inventory of Chemical Substances

atm Atmosphere

CAS Chemical Abstracts Service (Registry Number)

cm² Square CentimetresCO2 Carbon Dioxide

COD Chemical Oxygen Demand **deg C (°C)** Degrees Celcius

EPA (New Zealand) Environmental Protection Authority of New Zealand

deg F (°F) Degrees Farenheit

g Grams

g/cm³ Grams per Cubic Centimetre

g/I Grams per Litre

HSNO Hazardous Substance and New Organism **IDLH** Immediately Dangerous to Life and Health **immiscible** Liquids are insoluable in each other.

inHg Inch of Mercury inH2O Inch of Water

K Kelvin **kg** Kilogram

kg/m³ Kilograms per Cubic Metre

Ib Pound

LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

Itr or L Litre

m³ Cubic Metre

mbar Millibar

mg Milligram

mg/24H Milligrams per 24 Hours

mg/kg Milligrams per Kilogram

mg/m³ Milligrams per Cubic Metre

Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH20 Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Heath and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight