

SAFETY DATA SHEET

CAMPBELLS NITRO-P



Date of Issue: December 2016

1. IDENTIFICATION

Product Identifier: **Campbells Nitro P**

Other Means of Identification: Ammonium polyphosphate, ammonium salts of polyphosphoric acids

Recommended Use of the Chemical and Restrictions on Use: **Liquid complex fertilizer**

Details of Manufacturer or Importer: Campbells Fertilisers Australasia
18 Raymond Road, Laverton North, Victoria, 3026
(03) 9931 2211
(03) 9931 2201
www.campbellsfert.com.au

Emergency Telephone Number: (03) 9931 2211 (business hours only 8.30 am to 5.00 pm)
0418 350 726 (after business hours)
Poison Information Centre Australia 131126

2. HAZARD(S) IDENTIFICATION

GHS Classification: Not classified as hazardous according to the GHS.

ADG Classification: Based on available information, not classified as a Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition

SUSMP Classification: Exempt from Poison Scheduling

Other Hazards: When substance is heated to decomposition temperature (above 150°C), the toxic fumes of ammonia and oxides of nitrogen release to environment. If the rules of handling are violated, this product may cause the pollution of the environment.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Substance Name	CAS Number	Weight % content	
		In water solution	As solids
Main Constituent			
Ammonium Polyphosphate	68333-79-9	35-37	58-62
Ammonium Dihydrogenorthophosphate	7722-76-1	9-10	15-17
Diammonium Hydrogenorthophosphate	7783-28-0	8-9	13-15
Water	7732-18-5	38-45	-

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Impurities			
Aluminium Orthophosphate	7784-30-7	3-4	5-7
Iron Orthophosphate	10045-86-0	3-4	5-7
Ammonium sulphate	7783-20-2	<2	<3

4. FIRST AID MEASURES

Description of Necessary First Aid Measures:

Inhalation:	Provide access to fresh air. If breathing is difficult, give oxygen.
Skin contact:	Wash skin thoroughly with water and mild soap. Remove contaminated clothing and shoes. Wash clothing before re-using.
Eye contact:	Immediately rinse the eyes with clean water within 10-15 minutes. If symptoms persist, consult with a doctor.
Ingestion:	Give water to drink. Do not induce vomiting, if patient is unconscious. Seek professional medical care if required.
First Aid Facilities:	Ensure washing facilities, including an eyewash, are available and maintained.

Symptoms caused by Exposure:

Inhalation:	Scratching in the throat, cough.
Skin:	Not available
Eye:	Can cause irritation of eyes.
Ingestion:	Clinical picture of acute poisoning: general weakness, headache, nausea, vomiting, abdominal pain, diarrhoea.
Medical Attention and Special Treatment:	None known

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Equipment:	Any extinguishing media can be used: water, carbon dioxide, foam, dry powder.
Specific Hazards arising from the Chemical:	The product is not flammable. When substance is heated to decomposition temperature (above 150 °C), toxic fumes of ammonia and oxides of nitrogen release to environment.
Special Protective Equipment and Precautions for Fire Fighters:	Suitable respiratory equipment, protective suits for the whole body protection, gloves, goggles and boots must be worn.

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:	Wear appropriate personal protection equipment (see section 8). Keep away from incompatible products (see sections 7 and 10).
Environmental Precautions:	Prevent from entering the sewer and drinking water supply systems.
Methods and Materials for Containment and Cleaning Up:	Stop a leak in accordance with precaution measures. Pump the substance to the clean tank (see section 13). The area, where the leak has occurred, should be washed and cleaned with water thoroughly. Process water after washing and cleaning should be sent to the wastewater treatment plant.

7. HANDLING AND STORAGE

Precautions for Safe Handling:	Ensure adequate ventilation and level control at the workplace. Prevent from getting into water bodies. Use personal protective equipment (see section 8). Avoid contact with skin and eyes. Wash hands and other exposed parts of body with water and mild soap before eat, drink or smoke and when leaving work.
Conditions for Safe Storage, including any Incompatibilities:	This product is stored in railway storages for fertilizers and in buried tanks. It is possible to store this substance in ammonia water tanks. In domestic conditions, this product should be kept in dry, out of the reach of children and animals. This substance should not be stored with organic substances, acids or alkali. Keep away from incompatible products (see section 10). The vessels should be preliminary washed, cleaned from contaminants and corrosion, closed and equipped with air valve. Packaging materials: Plastics (PP, PE), metal tank.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:	Short-term DNEL of 36 mg/m ³ (50 ppm) Long-term DNEL of 14 mg/m ³ (20 ppm) ACGIH – American Conference of Governmental Industrial Hygienists: STEL (ACGIH): 24 mg/m ³ (35 ppm), TWA (ACGIH): 17 mg/m ³ (25 ppm)
	Monitoring procedure: BS EN 14042:2003 Title identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
	<u>No Observed Adverse Effect Level (Concentration) for workers:</u> Acute Systemic Effects: Dermal NOAEL 68.0 mg/kg bw/day (based on AF of 10)

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Inhalation NOAEC 476 mg/m³ (based on AF of 10)
Acute Local Effects:
Dermal No-threshold effect and/or no dose-response information available
Inhalation NOAEC: 36 mg/m³
Long-term Systemic Effects:
Dermal NOAEL 68.0 mg/kg bw/day (based on AF of 10)
Inhalation NOAEC 476.0 mg/m³ (based on AF of 10)
Long-term Local Effects:
Dermal No-threshold effect and/or no dose-response information available
Inhalation NOAEC: 14 mg/m³

No Observed Adverse Effect Level (Concentration) for general population:

Acute Systemic Effects:
Dermal NOAEL 68.0 mg/kg bw/day (based on AF of 10)
Inhalation NOAEC 476 mg/m³ (based on AF of 10)
Oral NOAEL: 68.0 mg/kg bw/d (based on AF of 10)
Acute Local Effects:
Dermal No-threshold effect and/or no dose-response information available
Inhalation NOAEC: 36.0 mg/m³ (based on AF of 5)
Long-term Systemic Effects:
Dermal NOAEL 68.0 mg/kg bw/day (based on AF of 10)
Inhalation NOAEC 476.0 mg/m³ (based on AF of 10)
Oral NOAEL: 68.0 mg/kg bw/d (based on AF of 10)
Long-term Local Effects:
Dermal No-threshold effect and/or no dose-response information available
Inhalation NOAEC: 14 mg/m³

Predicted No Effect Concentration (PNEC):

Aqua (freshwater): 20 mg/L
Aqua (marine water): 20 mg/L
Aqua (intermittent releases): 10 mg/L

Biological Monitoring:

Not specified

Control Banding:

Not specified

Engineering Controls:

Production area must be adequately ventilated (general combined air suction and air supply ventilation system).
Personal protection equipment should be available on site.
The source of running water and shower should be provided on-site.

Individual Protection Measures e.g. Personal Protective Equipment (PPE):

Respiratory Protection:
Use respirator if necessary.
Skin Protection:
Wear wool or cotton protective suits; impervious rubber shoes or leather boots. Wear rubber gloves.
Eye Protection:
Wear safety goggles.
Thermal Hazards: None known.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Greenish-brown liquid
Odour:	Gentle odour
Odour threshold:	Not applicable
pH:	6-7
Crystallization temperature:	Not below minus 20°C
Conversion level:	Not less than 65%
Decomposition temperature:	>150°C
Initial Boiling Point and Boiling Range:	Boiling point could not be determined before decomposition
Flash Point:	Not applicable
Evaporation Rate	Not applicable
Flammability:	Non flammable
Upper/lower flammability or explosive limits:	Non flammable
Ammonia vapour pressure:	1.39 Pa at 40°C 110 Pa at 60°C 400 Pa at 80°C
Vapour Density:	Not applicable
Density:	1.44±0.03 g/cm ³ at 20°C
Solubility:	Water solubility >100 g/L at 20°C
Partition Coefficient: n-octanol/water:	Not applicable
Auto-ignition temperature:	Does not contain groups that may react with oxygen and therefore will not auto-ignite at temperatures between room temperature and melting
Viscosity:	Not more than 80.0 mPa at 20°C
Explosive Properties:	Non-explosive
Oxidizing Properties:	No oxidizing properties

10. STABILITY AND REACTIVITY

	Components (MAP, DAP) of this product can react with acids and alkalis
Reactivity:	
Chemical Stability:	Product is stable under normal conditions of storage, handling and use.
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Heating up to more than 150°C (see section 5)
Incompatible Materials:	Alkalis cause product decomposition followed by ammonia emission. Strong acids cause product decomposition followed by phosphoric acid release.
Hazardous Decomposition	Does not decompose when used for intended uses. When substance is heated to decomposition temperature (above

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Products: 150°C), toxic fumes of ammonia and oxides of nitrogen are released.
Alkalis exposure - ammonia gas.

11. TOXICOLOGICAL INFORMATION

Toxicological Information of the Mixture: Data about the product are not available.
Parameters are given for the components Ammonium Dihydrogenorthophosphate (MAP) and Diammonium Hydrogenorthophosphate (DAP).

Acute Toxicity	
Oral	LD50 (oral): >2000 mg/kg bw rat (Sprague-Dawley) male/female <i>OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)</i>
Inhalation	LC50 (inhalation): >5000 mg/m ³ air rat (CrI:WI(Han)) male/female <i>OECD Guideline 403 (Acute Inhalation Toxicity)</i>
Dermal	LD50 (dermal): >5000 mg/kg bw rat (Sprague-Dawley) male/female <i>OECD Guideline 402 (Acute Dermal Toxicity)</i>
Acute Toxicity, human information	No information is available
Skin Corrosion/Irritation	Not irritating rabbit (Vienna White) <i>OECD Guideline 404 (Acute Dermal Irritation / Corrosion) - equivalent or similar</i>
Serious Eye Damage/Irritation	Not irritating rabbit (Vienna White) <i>OECD Guideline 405 (Acute Eye Irritation / Corrosion) - equivalent or similar</i>
Respiratory or Skin Sensitization	Skin - not sensitizing mouse (CBA) female <i>OECD Guideline 429 (Skin Sensitization: Local Lymph Node Assay)</i>
Germ Cell Mutagenicity:	Bacterial reverse mutation assay (Ames test) (gene mutation): Negative <i>S. typhimurium</i> TA 1535, TA 1537, TA 98 and TA 100 (met. act.: with and without) <i>E. coli</i> WP2 uvr A (met. act.: with and without) <i>OECD Guideline 471 (Bacterial Reverse Mutation Assay)</i> Mouse lymphoma L5178Y cells (met. act.: with and without) Negative for mouse lymphoma L5178Y cells(strain/cell type: Test system L5178Y/TK+/-3.7.2C); met. act.: with and without; Cytotoxicity: No <i>OECD Guideline 476 (In vitro Mammalian Cell</i>

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	<p><i>Gene Mutation Test</i> <i>In vitro</i> mammalian chromosome aberration test: Negative. Chinese hamster Ovary (CHO) (met. act.: with and without) <i>OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)</i></p>
Carcinogenicity:	In accordance with column 2 of REACH Annex X, no carcinogenicity study needs to be proposed as MAP (DAP) is not genotoxic
Reproductive Toxicity:	<p>Fertility: NOAEL (P and F): ≥ 1500 mg/kg bw/day (actual dose received) rat (Sprague-Dawley) male/female (combined repeated dose and reproduction / developmental screening) <i>OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)</i></p> <p>Developmental toxicity NOAEL (developmental toxicity): ≥ 1500 mg/kg bw/day (actual dose received) rat (Sprague-Dawley) <i>OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)</i></p>
Specific Target Organ Toxicity (STOT) - Single Exposure:	No data available
Specific Target Organ Toxicity (STOT) - Repeated Exposure:	No data available
Aspiration Hazard:	See section 4

Likely Routes Of Exposure: Potential health effects/symptoms - see section 4

12. ECOLOGICAL INFORMATION

Data about the product are not available. Parameters are given for the components Ammonium Dihydrogenorthophosphate (MAP) and Diammonium Hydrogenorthophosphate (DAP).

Ecotoxicity:

Short-term toxicity to fish:

MAP
 LC50 for freshwater fish *Oncorhynchus mykiss* (96 h): > 85.9 mg/L
OECD Guideline 203 (Fish, Acute Toxicity Test)

DAP
 LC50 for freshwater fish *Cirrhinus mrigala/Labeo rohita* (96 h): 1700 mg/L
Standard Methods for the Examination of Water and wastewater (APHA-1985)

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Long-term toxicity to fish:

No long term toxicity testing is proposed, as the chemical safety assessment does not indicate a need to further investigate the effects on fish. All data available on MAP(DAP) itself and on the other phosphates show a very low toxicity of the substance.

Short-term toxicity to aquatic invertebrates:

EC50/LC50 for freshwater invertebrates *Daphnia carinata* (water flea):
1790 mg/L

Standard methods for the examination of water and wastewater. 14th ed., American Public Health Association, New York (1975)

Long-term toxicity to aquatic invertebrates:

No long term toxicity testing is proposed as the chemical safety assessment does not indicate a need to further investigate the effects on aquatic invertebrates. All data available on MAP(DAP) itself and on the other phosphates show a very low toxicity of the substance.

Algae and aquatic plants:

EC50/LC50 for freshwater algae: >100 mg/L

EC10/LC10 or NOEC for freshwater algae: 100 mg/L

Pseudokirchnerella subcapitata (reported as *Selenastrum capricornutum*) (algae)

OECD Guideline 201 (Algae, Growth Inhibition Test)

Sediment organisms:

No long term toxicity testing is proposed as the chemical safety assessment does not indicate a need to further investigate the effects on sediment organisms. All data available on MAP(DAP) itself and on the other phosphates show a very low toxicity of the substance.

Other aquatic organisms:

No information available

Soil macro-organisms except arthropods:

Terrestrial arthropods:

Terrestrial plants:

Soil micro-organisms:

Studies of soil organisms does not seem to be necessary. All data available on MAP(DAP) itself and on the other phosphates show a very low toxicity of the substance.

Microbiological activity in sewage treatment systems: Toxicity to aquatic micro-organisms:

EC50/LC50 for aquatic micro-organisms: >100 mg/L

EC10/LC10 or NOEC for aquatic micro-organisms: 100 mg/L

Activated sludge of a predominantly domestic sewage

OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

Persistence and Degradability:

Abiotic degradation: Not applicable

Biotic degradation: In wastewater plant:

During the anaerobic transformation of ammonium, one group

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Bioaccumulative Potential:	of bacteria oxidizes ammonium to nitrite while another group oxidizes nitrite to nitrate. The average biodegradation value in wastewater plant at 20°C is 52 g N/kg dissolved solid/day. MAP (DAP) has a low bioaccumulative potential.
Mobility in Soil:	Due to the water solubility and the ionic nature, MAP (DAP) is not expected to be bioaccumulative. Due to the water solubility and the ionic nature, MAP (DAP) is not expected to be adsorbed by soil and volatilize from soil. In soil, nitrification and de-nitrification processes occur as well as in secondary wastewater treatment processes.
Other Adverse Effects:	None known

13. DISPOSAL CONSIDERATIONS

Product Disposal:	Depending on degree of contamination, use the fertilizers as raw material for liquid fertilizer, or send to an authorized disposal facility in accordance with local/national regulations.
Container Disposal:	Utilize contaminated empty packages in a safe way and in accordance with local and national regulations.

14. TRANSPORT INFORMATION

Classification:	Based on available information, not classified as Dangerous Goods for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail, 7 th Edition.
UN Number:	Not applicable
Proper Shipping Name or Technical Name:	Not applicable
Transport Hazard Class:	Not applicable
Packing Group:	Not applicable
Environmental Hazards for Transport Purposes:	Product is a marine pollutant according to the IBC Code
Special Precautions for User:	See section 7
HAZCHEM Code:	Not applicable

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15. REGULATORY INFORMATION

SUSMP:	Exempt from Poison Scheduling
APVMA:	Exempt from registration
State Departments of Agriculture / Primary Industries:	Registration not required
Australian Inventory of Chemical Substances (AICS):	All components listed

16. OTHER INFORMATION

Edition:	Initial edition
Revision Due:	December 2021
Reason for Revision:	Initial version
Preparation Information:	Prepared by Campbells Fertilisers Australasia
Data Sources:	Supplier SDS

Glossary:

APVMA	Australian Pesticides and Veterinary Medicines Authority
CAS	Chemical Abstract Services number, used to uniquely identify chemical compounds
PPE	Personal protective equipment
STEL	Short Term Exposure Limit. A limit value above which exposure should not occur and which is related to a 15 minute period
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
TWA	Time Weighted Average. Measured or calculated in relation to a reference period of eight hours as a time-weighted average.
SWA	Safe Work Australia
HCIS	Hazardous Chemical Information System
GHS	Global Harmonised System of Classification and Labelling of Chemicals

This SDS summarises our best knowledge of the health and safety hazard information available for this product and how to safely handle and use it. Since the use of this information and the conditions of the use of this product are not under the control of Campbell's Fertilisers, it is the user's responsibility to determine conditions of safe use of the product.

END OF SDS