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SAFETY DATA SHEET

Ammonium Nitrate Solution 96%

Section 1. Identification

Product name : Ammonium Nitrate Solution 96%
Product type : Liquid (Melt)
Product code : PA08FL
ADG Class : HOT AMMONIUM NITRATE, LIQUID

Uses

Area of application : Industrial applications, Professional applications

Supplier

Supplier's details : YARA PILBARA FERTILISERS PTY LTD

Address

Street : Level 5, 182 St Georges Terrace
Postal code : 6000
City : Perth
Country : Australia

Telephone number : +61 8 9183 4000
Fax no. : +61 8 9185 6776
e-mail address of person responsible for this SDS : Info.yara.pilbara@yara.com
Emergency telephone number (with hours of operation) : 1800 117 506 (24 HRS)

National advisory body/Poison Center

Name : WA Poisons Information Centre
Telephone number : 131126
Hours of operation : 24 hours, within Australia only

Section 2. Hazards identification

Classification and labelling have been performed following the guidelines and recommendation of GHS and the intended use.

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 5
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms :



- Signal word** : Warning
- Hazard statements** : May be harmful if swallowed.
Causes serious eye irritation.

Precautionary statements

- Prevention** : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take any precaution to avoid mixing with combustibles. Wear protective gloves/clothing and eye/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take any precaution to avoid mixing with combustibles. Wear protective gloves/clothing and eye/face protection.
- Response** : 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 attention.
In case of fire: Use flooding quantities of water to extinguish.
- Statement of hazardous/dangerous nature** : HAZARDOUS SUBSTANCE.
NON-DANGEROUS GOODS.
- Other hazards which do not result in classification** : Not available.

Section 3. Composition/information on ingredients

- Substance/mixture** : Yes.

Product / ingredient name	Identifiers	%
ammonium nitrate	CAS: 6484-52-2	>=90 - <100

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures**Description of necessary first aid measures**

- Eye contact** : Rinse with plenty of running water. Check for and remove any contact lenses. If irritation persists, get medical attention. Get medical attention.
- Inhalation** : Avoid inhalation of vapor, spray or mist. If inhaled, remove to fresh air. Get medical attention if you feel unwell.
- Skin contact** : Wash with soap and water. Get medical attention if irritation develops.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Get medical attention.

Most important symptoms/effects, acute and delayed**Potential acute health effects**

- | | | |
|---------------------|---|--|
| Eye contact | : | Irritating to eyes. |
| Inhalation | : | Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| Skin contact | : | May cause skin irritation. |
| Ingestion | : | No known significant effects or critical hazards. |

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

- | | | |
|-----------------------------------|---|---|
| Notes to physician | : | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Specific treatments | : | No specific treatment. |
| Protection of first-aiders | : | No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |

See toxicological information (section 11)

Section 5. Fire-fighting measures**Extinguishing media**

- | | | |
|---|---|--|
| Suitable extinguishing media | : | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | : | None identified. |
| Specific hazards arising from the chemical | : | Contact with combustible material may cause fire. This material increases the risk of fire and may aid combustion. In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products | : | Decomposition products may include the following materials: nitrogen oxides
Avoid breathing dusts, vapors or fumes from burning materials.
In case of inhalation of decomposition products in a fire, symptoms may be delayed. |
| Special protective actions for fire-fighters | : | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| Special protective equipment for fire-fighters | : | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| Remark | : | None. |

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

- | | | |
|---|---|---|
| Personal precautions, protective equipment and | : | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep |
|---|---|---|

emergency procedures unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Precautions for safe handling : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from combustible material. Empty containers retain product residue and can be hazardous. Do not reuse container. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-

ventilated area, away from incompatible materials (see section 10) and food and drink. Separate from reducing agents and combustible materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Combustible liquid : Not applicable.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. A washing facility or water for eye and skin cleaning purposes should be present.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. chemical splash goggles. Recommended: Tightly-fitting goggles CEN: EN166
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
> 8 hours (breakthrough time): Protective gloves should be worn under normal conditions of use.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: In case of inadequate ventilation wear respiratory protection. Filter P2 (EN 143)

Personal protective equipment :
(Pictograms)



Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid [Melt]
Color	: Not determined.
Odor	: Not determined.
Odor threshold	: Not determined.
pH	: Not determined.
Melting/freezing point	: Not determined.
Boiling/condensation point	: Not determined.
Sublimation temperature	: Not determined.
Flash point	: Not determined.
Evaporation rate	: Not determined.
Flammability	: Non-flammable.
Lower and upper explosive (flammable) limits	: Lower: Not determined. Upper: Not determined.
Vapor pressure	: Not determined.
Relative density	: Not determined.
Solubility	: Not determined.
Partition coefficient: n-octanol/water	: Not determined.
Auto-ignition temperature	: Not determined.
Decomposition temperature	: Not determined.
Viscosity	: Dynamic: Not determined. Kinematic: Not determined.
Explosive properties	: None.
Oxidizing properties	: Oxidizer

Section 10. Stability and reactivity

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: contact with combustible materials Reactions may include the following: risk of causing or intensifying fire
Conditions to avoid	: Drying on clothing or other combustible materials may cause fire.
Incompatible materials	: Reactive or incompatible with the following materials: alkalis combustible materials reducing materials organic materials acids

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product / ingredient name	Result	Species	Dose	Exposure	References
ammonium nitrate					
	LD50 Oral	Rat	2,950 mg/kg OECD 401	Not applicable.	IUCLID 5
	LD50 Dermal	Rat	> 5,000 mg/kg OECD 402	Not applicable.	IUCLID 5

Conclusion/Summary : No known significant effects or critical hazards.

Irritation/Corrosion

Product / ingredient name	Result	Species	Score	Exposure	Observation	References
ammonium nitrate	Eyes - Irritant OECD 405	Rabbit	Not applicable.		Not applicable.	IUCLID 5

Conclusion/Summary

Skin : Heated material will cause thermal burns. Heated material will cause thermal burns.

Eyes : Causes serious eye irritation. Heated material will cause thermal burns. Causes serious eye irritation. Heated material will cause thermal burns.

Respiratory : May be irritating to the respiratory system. May be irritating to the respiratory system.

Sensitization

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Respiratory : No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Product /	Maternal	Fertility	Development	Species	Dose	Exposure	References
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ingredient name	toxicity		toxin				
ammonium nitrate	Not applicable.	Negative	Negative	Rat	Oral: > 1500 mg/kg bw/day OECD 422	28 days	IUCLID 5

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Specific target organ toxicity (repeated exposure)

Aspiration hazard

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Irritating to eyes.
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : May cause skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Product / ingredient name	Result	Species	Dose	Exposure	References
ammonium nitrate	NOAEL Oral	Rat	256 mg/kg OECD 422	28days	IUCLID 5
ammonium nitrate	No-observable-effect-concentration Dusts and mists Inhalation	Rat	> 185 mg/kg OECD 412	2weeks 5 hours per day	IUCLID 5

- Conclusion/Summary** : No known significant effects or critical hazards.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : Not available.

Numerical measures of toxicity**Acute toxicity estimates**

Not available.

Section 12. Ecological information**Toxicity**

Product / ingredient name	Result	Species	Exposure	References
ammonium nitrate				
	Acute LC50 447 mg/l Fresh water	Fish - Labeo boga	48 h	IUCLID 5
	Acute EC50 490 mg/l Fresh water	Aquatic invertebrates.	48 h	IUCLID 5
	Acute EC50 1,700 mg/l Salt water	Aquatic plants	10 d	IUCLID 5

- Conclusion/Summary** : No known significant effects or critical hazards.

Persistence/degradability

Product / ingredient name	Aquatic half-life	Photolysis	Biodegradability
ammonium nitrate			
	Not applicable.	Not applicable.	Not relevant for inorganic substances.

- Conclusion/Summary** : No known significant effects or critical hazards.

Bioaccumulative potential

- Conclusion/Summary** : No known significant effects or critical hazards.

Mobility in soil

- Soil/water partition coefficient (KOC)** : Not available.
- Mobility** : Not available.
- Other adverse effects** : No known significant effects or critical hazards.

Section 13. Disposal considerations**Product**


- Methods of disposal** : The generation of waste should be avoided or minimized


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wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulation: UN Class	
14.1 UN number	2426
14.2 UN proper shipping name	HOT AMMONIUM NITRATE, LIQUID
14.3 Transport hazard class(es)	5.1 
14.4 Packing group	
14.5 Environmental hazards	No.
Additional information	
<u>Environmental hazards</u>	: No.

Regulation: IMDG	
14.1 UN number	2426
14.2 UN proper shipping name	HOT AMMONIUM NITRATE, LIQUID
14.3 Transport hazard class(es)	5.1 
14.4 Packing group	
14.5 Environmental hazards	No.
Additional information	
<u>Marine pollutant</u>	: No.
<u>IMDG Code Segregation group</u>	: SG02
<u>Emergency schedules (EmS)</u>	: F-H, S-Q

Regulation: IATA	
14.1 UN number	2426
14.2 UN proper shipping name	HOT AMMONIUM NITRATE, LIQUID
14.3 Transport hazard class(es)	5.1 
14.4 Packing group	
14.5 Environmental hazards	No.
Additional information	
<u>Marine pollutant</u>	: No.

14.6 Special precautions for user : Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.

IMSBC : Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

Standard for the Uniform Scheduling of Drugs and Poisons

- Not regulated.

Model Work Health and Safety Regulations - Scheduled Carcinogens

Not applicable.

Australia inventory (AICS) : All components are listed or exempted.
EU Classification : O, R8
 Xi, R36

International lists

Philippines inventory (PICCS): All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Korea inventory: All components are listed or exempted.

Japan inventory: All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Australia inventory (AICS): All components are listed or exempted.

Canada inventory (DSL and NDSL): All components are listed or exempted.

Malaysia Inventory (EHS Register): All components are listed or exempted.

Taiwan inventory (CSNN): All components are listed or exempted.

United States inventory (TSCA 8b): All components are listed or exempted.

EC INVENTORY (EINECS/ELINCS): All components are listed or exempted.

Safety, health and : No known other specific national and/or regional regulations

environmental regulations
specific for the product

applicable to this product (including its ingredients).

Section 16. Other information

Key to abbreviations

- : ADN/ADNR = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- : ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- : ATE = Acute Toxicity Estimate
- : BCF = Bioconcentration Factor
- : bw = Body weight
- : GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- : IATA = International Air Transport Association
- : IBC = Intermediate Bulk Container
- : IMDG = International Maritime Dangerous Goods
- : LogPow = logarithm of the octanol/water partition coefficient
- : MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- : NOHSC - National Occupational Health and Safety Commission
- : RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- : SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons
- : UN = United Nations

References

- : EU REACH IUCLID5 CSR.
- : National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
- : IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.
- : EU REACH IUCLID5 CSR.
- : National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
- : IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.

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|| 1) Indicates information that has changed from previously issued version.

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