

Date of issue/ Date of revision : 24.03.2015  
Date of previous issue : 15.08.2013  
Version : 2.0



# SAFETY DATA SHEET

## Anhydrous Ammonia

### Section 1. Identification

**Product name** : Anhydrous Ammonia  
**Other means of identification** : ammonia, anhydrous  
**Product type** : gas (Liquefied gas.)  
**Product code** : PA01HL  
**ADG Class** : AMMONIA, ANHYDROUS

#### Uses

**Area of application** : Industrial applications, Professional applications  
**Material uses** : Manufacture of fertilizers and technical ammonium nitrate.

#### 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** : FLAMMABLE GASES - Category 2  
GASES UNDER PRESSURE - Liquefied gas  
ACUTE TOXICITY (INHALATION) - Category 3  
SKIN CORROSION/IRRITATION - Category 1B  
AQUATIC TOXICITY (ACUTE) - Category 1  
AQUATIC TOXICITY (CHRONIC) - Category 2

#### GHS label elements

- Hazard pictograms** : 
- Signal word** : Danger
- Hazard statements** : Flammable gas.  
Contains gas under pressure; may explode if heated.  
Toxic if inhaled.  
Causes severe skin burns and eye damage.  
Very toxic to aquatic life.  
Toxic to aquatic life with long lasting effects.

**Precautionary statements**

- Prevention** : Wear protective gloves/clothing and eye/face protection. Do not breathe gas or vapour.

- Response** : **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.  
**IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water.

- Storage** : Protect from sunlight and store in well-ventilated place.

**Classification according to Directive 67/548/EEC [DSD]**

- Classification** : R10  
T, R23  
C, R34  
N, R50/53
- Risk phrases** : R10 - Flammable.  
R23 - Toxic by inhalation.  
R34 - Causes burns.  
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Statement of hazardous/dangerous nature** : HAZARDOUS SUBSTANCE.  
DANGEROUS GOODS.  
Anhydrous ammonia is classified for physicochemical hazards and specified as dangerous in the Australian code for Transport of dangerous Goods by Road and rail (ADG code) 6th edition.
- Other hazards which do not result in classification** : Liquid can cause burns similar to frostbite.

**Section 3. Composition/information on ingredients**

- Substance/mixture** : Substance
- CAS number/other identifiers**  
**Other means of identification** : ammonia, anhydrous

CAS number : 7664-41-7  
 EC number : 231-635-3

Product / ingredient name	Identifiers	%
ammonia, anhydrous	CAS: 7664-41-7	>=99.5 -

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.**

Remark : 99.5 % (wt/wt) anhydrous ammonia, remainder water

Chemical formula : NH<sub>3</sub>

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses. Get medical attention immediately.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.
- Ingestion** : As this product is a gas, refer to the inhalation section.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Corrosive to eyes. Causes burns. Liquid can cause burns similar to frostbite.
- Inhalation** : Toxic by inhalation. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Corrosive to the skin. Causes burns. Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
- Ingestion** : May cause burns to mouth, throat and stomach. Ingestion of liquid can cause burns similar to frostbite.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness  
 frostbite (Cryogenic burn)
- Inhalation** : Adverse symptoms include the following:  
 coughing  
 wheezing and breathing difficulties  
 asthma

**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
 frostbite (Cryogenic burn)

**Ingestion** : Adverse symptoms may include the following:  
 frostbite (Cryogenic burn)

**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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (section 11)

**Section 5. Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing media** : In case of fire, allow gas to burn if flow cannot be shut off immediately. Use an extinguishing agent suitable for the surrounding fire. Apply water from a safe distance to cool container and protect surrounding area.

**Unsuitable extinguishing media** : None identified.

**Specific hazards arising from the chemical** : Hazchem Code: ZRE. Contains gas under pressure. Flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst or explode. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**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. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire

- from protected location or maximum possible distance.  
Eliminate all ignition sources if safe to do so.
- 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. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep 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. Do not breathe gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### Methods and material for containment and cleaning up

- Small spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.
- Large spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.  
Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not get in eyes or on skin or clothing. Do not breathe gas. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate

- Advice on general occupational hygiene** : container.  
 : 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. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Australian Standard AS 2022: Anhydrous ammonia storage and handling. Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10). Store locked up. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

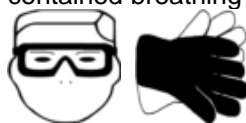
Ingredient name	Exposure limits
ammonia, anhydrous	<p><b>NOHSC (1995-05-01)</b> Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL. 24 mg/m<sup>3</sup>, 35 ppm</p> <p><b>NOHSC (1995-05-01)</b> Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week. 17 mg/m<sup>3</sup>, 25 ppm</p>

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- 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** : 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. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: full-face mask
- 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. If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn.  
> 8 hours (breakthrough time): butyl rubber, PTFE, Viton  
< 1 hour (breakthrough time): Insulated gloves suitable for low temperatures
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.
- Other skin protection** : Appropriate footwear and any additional skin protection measures 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: ammonia filter (Type K) self-contained breathing apparatus (SCBA)
- Personal protective equipment (Pictograms)** :



## Section 9. Physical and chemical properties

### Appearance

- Physical state** : gas [Liquefied gas.]
- Color** : Colorless.
- Odor** : Pungent.
- Odor threshold** : 5 ppm
- pH** : Not determined.
- Melting/freezing point** : Decomposes: -78 °C
- Boiling/condensation point** : -33 °C  
(27.40- °F)
- Sublimation temperature** : Not determined.
- Flash point** : Not determined.
- Evaporation rate** : Not determined.
- Flammability** : Not determined.
- Lower and upper explosive (flammable) limits** : **Lower:** 15 %(V)  
**Upper:** 27 %(V)
- Vapor pressure** : 8,611 hPa @ 20 °C (68.00 °F)

<b>Vapor density</b>	: 0.6 [Air = 1]
<b>Relative density</b>	: 0.682 @ -33.4 °C (28.12- °F)
<b>Solubility</b>	: Not determined.
<b>Solubility in water</b>	: 510 - 531 g/l @ 20 °C (68.00 °F)
<b>Partition coefficient: n-octanol/water</b>	: Not determined.
<b>Auto-ignition temperature</b>	: 651 °C (1203.80 °F)
<b>Decomposition temperature</b>	: -78 °C (108.40- °F)
<b>Viscosity</b>	: <b>Dynamic:</b> 0.22 mPa.s
	: <b>Kinematic:</b> Not determined.
<b>Explosive properties</b>	: Not determined.
<b>Oxidizing properties</b>	: None.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
<b>Incompatible materials</b>	: Reacts violently with halogens. Reactive with acids and oxide. Corrosive to galvanized metal. Corrosive to brass, Cu, Zn, Ag and Hg.
<b>Hazardous decomposition products</b>	: 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
ammonia, anhydrous					
	LC50 Inhalation	Rat	9.85 mg/l	1 h	IUCLID 5
	LC50 Inhalation	Rat	7.939 mg/l	1 h	IUCLID 5

**Conclusion/Summary** : Toxic by inhalation.



**Irritation/Corrosion****Conclusion/Summary**

- Skin** : Corrosive.
- Eyes** : Causes serious eye damage.
- Respiratory** : Corrosive to the respiratory system.

**Sensitization****Conclusion/Summary**

- Skin** : Not sensitizing
- Respiratory** : Not sensitizing

**Mutagenicity**

- Conclusion/Summary** : No mutagenic effect.

**Carcinogenicity**

Product / ingredient name	Result	Species	Dose	Exposure	References
ammonia, anhydrous	Negative - Oral - NOAEL 453 Combined Chronic Toxicity/Carcinogenicity Studies	Rat	67 mg/kg bw/day	-	IUCLID 5

- Conclusion/Summary** : No carcinogenic effect.

**Reproductive toxicity**

Product / ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure	References
ammonia, anhydrous	-	Negative	-	Rat	Oral: 408 mg/kg bw/day OECD 422	28 days	IUCLID 5
ammonia, anhydrous	-	-	Negative	Rabbit	Oral: 100 mg/kg bw/day OECD 414	28 days	IUCLID 5
ammonia, anhydrous	-	-	Negative	Pig	Inhalation: 25 mg/m <sup>3</sup>	6 weeks	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)**

No known significant effects or critical hazards.

**Specific target organ toxicity (repeated exposure)**

No known significant effects or critical hazards.

**Aspiration hazard**

No known significant effects or critical hazards.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

- Eye contact** : Corrosive to eyes. Causes burns. Liquid can cause burns similar to frostbite.
- Inhalation** : Toxic by inhalation. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Corrosive to the skin. Causes burns. Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
- Ingestion** : May cause burns to mouth, throat and stomach. Ingestion of liquid can cause burns similar to frostbite.

**Symptoms related to the physical, chemical and toxicological characteristics**

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness  
frostbite (Cryogenic burn)
- Inhalation** : Adverse symptoms include the following:  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
frostbite (Cryogenic burn)
- Ingestion** : Adverse symptoms may include the following:  
frostbite (Cryogenic burn)

**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**

**Conclusion/Summary** : Corrosive to the respiratory tract.

- 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.

**Over-exposure signs/symptoms**

**Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness  
 frostbite (Cryogenic burn)

**Inhalation** : Adverse symptoms include the following:  
 coughing  
 wheezing and breathing difficulties  
 asthma

**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
 frostbite (Cryogenic burn)

**Ingestion** : Adverse symptoms may include the following:  
 frostbite (Cryogenic burn)

**Numerical measures of toxicity**

**Acute toxicity estimates**

Not available.

**Section 12. Ecological information**

**Toxicity**

Product / ingredient name	Result	Species	Exposure	References
ammonia, anhydrous				
	Acute LC50 0.89 mg/l Fresh water	Fish - Labeo boga	96 h	IUCLID 5
	Acute LC50 101 mg/l Fresh water	Aquatic invertebrates. - Daphnia	48 h	IUCLID 5
	Acute EC50 2,700 mg/l Fresh water	Aquatic plants - Heterosigma akashiwo	18 d	IUCLID 5
	Chronic <b>NOEC &lt;</b>	Fish - <b>Ictalurus</b>	<b>31 d</b>	IUCLID 5

	0.048 mg/l Fresh water 215 Fish, Juvenile Growth Test	punctatus		
	Chronic NOEC 0.79 mg/l Fresh water	Aquatic invertebrates. - Daphnia	96 h	IUCLID 5

**Conclusion/Summary** : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### Persistence/degradability

**Conclusion/Summary** : The methods for determining the biological degradability are not applicable to inorganic substances.

#### Bioaccumulative potential

Product / ingredient name	LogPow	BCF	Potential
ammonia, anhydrous	0.23	-	low

**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 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. Empty pressure vessels should be returned to the supplier. 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. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

<b>Regulation: UN Class</b>	
<b>14.1 UN number</b>	1005
<b>14.2 UN proper shipping name</b>	AMMONIA, ANHYDROUS

14.3 Transport hazard class(es)	2.3 
14.4 Packing group	
14.5 Environmental hazards	Yes.
14.6 Additional information <u>Environmental hazards</u>	: Yes.

<b>Regulation: IMDG</b>	
14.1 UN number	1005
14.2 UN proper shipping name	AMMONIA, ANHYDROUS
14.3 Transport hazard class(es)	2.3 
14.4 Packing group	
14.5 Environmental hazards	Yes.
14.6 Additional information <u>Marine pollutant</u>	: Yes.
<u>IMDG Code Segregation group</u>	: SG18
<u>Emergency schedules (EmS)</u>	: F-C, S-U

<b>Regulation: IATA</b>	
14.1 UN number	1005
14.2 UN proper shipping name	AMMONIA, ANHYDROUS
14.3 Transport hazard class(es)	2.3 
14.4 Packing group	
14.5 Environmental hazards	Yes.
14.6 Additional information <u>Marine pollutant</u>	Yes.

**Special precautions for user** : Transport within user's premises: always transport in closed containers that are upright and secure. 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 applicable.

## Section 15. Regulatory information

**Standard for the Uniform Scheduling of Drugs and Poisons**

- SUSDP Poison Schedule 6. Licensing is required.

**Model Work Health and Safety Regulations - Scheduled Carcinogens**

Not available.

**Australia inventory (AICS)** : All components are listed or exempted.  
**EU Classification** : R10  
 T, R23  
 C, R34  
 N, R50/53

**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.

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

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

**Safety, health and environmental regulations specific for the product** : No known other specific national and/or regional regulations 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.

**History**

<b>Date of printing</b>	:	01.05.2015
<b>Date of issue/Date of revision</b>	:	24.03.2015
<b>Date of previous issue</b>	:	15.08.2013
<b>Revision comments</b>	:	See Section 1 for supplier contact information., National advisory body/Poison Center
<b>Version</b>	:	2.0
<b>Prepared by</b>	:	Yara Product Classifications & Regulations.

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

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.