Conforms: GHS (rev 3)(2009)

(This Safety Data Sheet conforms to the requirements of the Hazard Communication Standard (HCS)

(29 CFR 1910.1200(g)), revised in 2012.) - United States

Date of issue/ Date of revision 05/13/2015 00/00/0000 Date of previous issue

Version 1.0



SAFETY DATA SHEET

YaraLiva UCAN-17

Section 1. Identification

Product name YaraLiva UCAN-17

Product type Liquid Product code PYN22U

Uses

Area of application Professional applications

Material uses Fertilizers.

Supplier

Supplier's details Yara North America, Inc.

Address

Street 100 North Tampa Street, Suite 3200

Postal code 33602 City **TAMPA** Country **United States**

Telephone number +1 813 222 5700 Fax no. +1 813 875 5735 e-mail address of person yna-hesq@yara.com

responsible for this SDS

(with hours of operation)

Emergency telephone number

US: Chemtrec 24-hours Emergency Response: 1-800-424-

Canada: 24 Hour Emergency Service, (Canutec 613-996-

6666)

National advisory body/Poison Center

Name The National Poisons Emergency number

Telephone number 1 800 222 1222

Section 2. Hazards identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard

Communication Standard (29 CFR 1910.1200).

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

Classification of the ACUTE TOXICITY (oral) - Category 4

substance or mixture SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS label elements

Hazard pictograms





Signal word : Danger

Hazard statements : Harmful if swallowed.

Causes serious eye damage.

Precautionary statements

Prevention : Wear protective gloves and eye protection. Do not eat, drink

or smoke when using this product. Wash hands thoroughly

after handling.

Response : IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue

rinsing. Immediately call a POISON CENTER or

doctor/physician.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Hazards not otherwise classified

DO NOT allow any pump handling the product to run dry or over-heat e.g. due to blockage or closed valve in the associated lines, resulting in pumping against a dead-end. Under such conditions if over-heating occurs this may cause vaporization and possible decomposition of the product. This can create pressure build-up in the pump and, if unchecked, lead to an explosion. Ensure that the pump is used correctly according to the manufacturers instructions at all times when pumping the product.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product / ingredient name	CAS number	%
Nitric acid, calcium salt (2:1)	CAS: 10124-37-5	>=25 - <30
Nitric acid ammonium salt (1:1)	CAS: 6484-52-2	>=15 - <20

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: 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 : Avoid inhalation of vapor, spray or mist. If inhaled, remove to

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fresh air. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

Wash with soap and water. Get medical attention if irritation.

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 if you feel unwell.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Vapor may be irritating to eyes and respiratory system.

Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and

stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:

stomach pains

May cause burns to mouth, throat and stomach.

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

Use an extinguishing agent suitable for the surrounding fire.

it, or wear gloves.

See toxicological information (section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Unsuitable extinguishing

: None identified.

media

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Specific hazards arising from the chemical

Hazardous thermal decomposition products In a fire or if heated, a pressure increase will occur and the

container may burst.

Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides ammonia

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.

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 Non-flammable.

None. Remark

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

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. Do not breathe vapor or mist. 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

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. 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. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. 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

Date of issue: 05/13/2015 Page:4/16 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). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. DO NOT allow any pump handling the product to run dry or over-heat e.g. due to blockage or closed valve in the associated lines, resulting in pumping against a dead-end. Under such conditions if over-heating occurs this may cause vaporization and possible decomposition of the product. This can create pressure build-up in the pump and, if unchecked, lead to an explosion. Ensure that the pump is used correctly according to the manufacturers instructions at all times when pumping the product.

Advice on general occupational hygiene

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

Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. 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. The tank/container should be placed within a bunker able to take the whole tank/container volume. 60° C Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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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, gases or dusts. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: Wear tightly-sealed safety glasses.

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.

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.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid Color : Clear. Odor : None.

Odor threshold : Not determined.

pH : 6 - 6.5

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- : Not determined.

octanol/water

Auto-ignition temperature : Not determined.

Decomposition temperature : Not determined.

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Viscosity : Dynamic: Not determined. : Kinematic: Not determined.

Explosive properties : None. **Oxidizing properties** : None.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this

product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous

reactions

: Urea reacts with calcium hypochlorite or sodium hypochlorite

to form the explosive nitrogen trichloride.

Conditions to avoid : Avoid contamination by any source including metals, dust and

organic materials.

Incompatible materials : alkalis

combustible materials reducing materials

Urea reacts with calcium hypochlorite or sodium hypochlorite

to form the explosive nitrogen trichloride.

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
Nitric acid, calci	um salt (2:1)			•	
	LD50 Oral	Rat - Female	500 mg/kg OECD 423	-	IUCLID 5
Nitric acid amm	onium salt (1:1)				
	LD50 Oral	Rat	2,950 mg/kg OECD 401	-	IUCLID 5
	LD50 Dermal	Rat	> 5,000 mg/kg OECD 402	-	IUCLID 5

Conclusion/Summary : Harmful if swallowed.

Irritation/Corrosion

Product / ingredient name	Result	Species	Score	Exposur e	Observatio n	References
Nitric acid, calcium salt (2:1)	Eyes - Severe irritant OECD 405	Rabbit		24 - 72 h	-	
Nitric acid ammonium salt (1:1)	Eyes - Irritant OECD 405	Rabbit			-	IUCLID 5

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Conclusion/Summary

Skin : No known significant effects or critical hazards.

Eyes : Causes serious eye damage.

Respiratory : No known significant effects or critical hazards.

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

Classification

Product / ingredient	OSHA	IARC	NTP
name			
Nitric acid, calcium		2A	
salt (2:1)			!

Nitric acid ammonium	2A	
salt (1:1)		

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

Reproductive toxicity

Product / ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure	References
Nitric acid, calcium salt (2:1)	-	Negative	Negative	Rat	Oral: > 1500 mg/kg bw/day Repea ted dose OECD 422		IUCLID 5
Nitric acid ammonium salt (1:1)	-	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

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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 : Causes serious eye damage.

Inhalation : Vapor may be irritating to eyes and respiratory system.

Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact: No known significant effects or critical hazards.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and

stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:

stomach pains

May cause burns to mouth, throat and stomach.

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
Nitric acid, calcium salt (2:1)	NOAEL Or	al Rat	> 1000 mg/kg OECD 407	28days	IUCLID 5
Nitric acid ammonium salt (1:1)	NOAEL Or	al Rat	256 mg/kg OECD	28days	IUCLID 5

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			422		
Nitric acid ammonium salt (1:1)	NOEC 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.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:

stomach pains

May cause burns to mouth, throat and stomach.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	1,564.7 mg/kg

Section 12. Ecological information

Toxicity

Product / ingredient	Result	Species	Exposure	References			
name							
Nitric acid, calcium salt (2:1)							
	Acute LC50 1,378 mg/l Fresh water OECD 203	Fish - Labeo boga	96 h	IUCLID 5			
	Acute LC50 2,400 mg/l Fresh water	Fish - Lepomis macrochirus	4 d	Proc. Acad. Nat. Sci. Philadelphia106: 185-205			
	Acute LC50 490 mg/l Fresh water	Aquatic invertebrates Daphnia	48 h	IUCLID 5			
	Acute EC50 > 1,700 mg/l Salt water	Aquatic plants - Heterosigma akashiwo	10 d	IUCLID 5			
Nitric acid ammonium salt (1:1)							
	Acute LC50 447 mg/l Fresh water	Fish - Labeo boga	48 h	IUCLID 5			

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Acute EC50 490 mg/l Fresh water	Aquatic invertebrates Daphnia	48 h	IUCLID 5
Acute EC50 1,700 mg/l Salt water	Aquatic plants - Heterosigma akashiwo	10 d	IUCLID 5

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

Persistence/degradability

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

Product / ingredient name	Aquatic half-life	Photolysis	Biodegradability
Nitric acid ammonium salt (1:1)			
			Not relevant for
			inorganic
			substances.

Bioaccumulative potential

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

Mobility in soil

Soil/water partition coefficient (KOC)

Mobility (KOC)

Not available.

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. 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.

United States - RCRA Acute hazardous waste "P" List:

Not listed

United States - RCRA Toxic hazardous waste "U" List:

Not listed

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Section 14. Transport information

Regulation: UN Class		
14.1 UN number	Not regulated.	
14.2 UN proper shipping name		
14.3 Transport hazard class(es)		
14.4 Packing group		
14.5 Environmental hazards	No.	
14.6 Additional information Environmental hazards	: No.	

Regulation: IMDG		
14.1 UN number	Not regulated.	
14.2 UN proper shipping name		
14.3 Transport hazard class(es)		
14.4 Packing group		
14.5 Environmental hazards		
14.6 Additional information		
Marine pollutant	:	

Regulation: IATA			
14.1 UN number	Not regulated.		
14.2 UN proper shipping name			
14.3 Transport hazard class(es)			
14.4 Packing group			
14.5 Environmental hazards			
14.6 Additional information			

Regulation: DOT Classification		
14.1 UN number	Not regulated.	
14.2 UN proper shipping name		
14.3 Transport hazard class(es)		
14.4 Packing group		
14.5 Environmental hazards	No.	
14.6 Additional information		
Environmental hazards	: No.	

Regulation: TDG Class	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	

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14.3 Transport hazard class(es)	
14.4 Packing group	
14.4 Facking group	
14.5 Environmental hazards	No.
14.6 Additional information	
Environmental hazards	: No.

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 available.

Section 15. Regulatory information

United States

U.S. Federal regulations

 United States - TSCA 12(b) - Chemical export notification: None of the components are listed.

United States - TSCA 4(a) - Final Test Rules: Not listed United States - TSCA 4(e) - ITC Priority list: Not listed United States - TSCA 4(a) - Proposed test rules: Not listed

United States - TSCA 4(f) - Priority risk review: Not listed

United States - TSCA 5(a)2 - Final significant new use rules: Not listed

United States - TSCA 5(a)2 - Proposed significant new

use rules: Not listed

United States - TSCA 5(e) - Substances consent order:

Not listed

United States - TSCA 6 - Final risk management: Not

listed

United States - TSCA 6 - Proposed risk management:

Not listed

United States - TSCA 8(a) - Chemical risk rules: Not

listed

United States - TSCA 8(a) - Dioxin/Furane precusor:

Not listed

United States - TSCA 8(a) - Chemical Data Reporting

(CDR): Not determined

United States - TSCA 8(a) - Preliminary assessment

report (PAIR): Not listed

United States - TSCA 8(c) - Significant adverse

reaction (SAR): Not listed

United States - TSCA 8(d) - Health and safety studies:

Not listed

United States - EPA Clean water act (CWA) section

307 - Priority pollutants: Not listed

United States - EPA Clean water act (CWA) section

311 - Hazardous substances: Not listed

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United States - EPA Clean air act (CAA) section 112 -

Accidental release prevention - Flammable

substances: Not listed

United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Toxic substances:

Not listed

United States - Department of commerce - Precursor

chemical: Not listed

Clean Air Act Section 112(b)

Hazardous Air Pollutants

(HAPs)

Clean Air Act Section 602

Class I Substances

Clean Air Act Section 602

Class II Substances

DEA List I Chemicals

(Precursor Chemicals)
DEA List II Chemicals

(Essential Chemicals)

Not listed

Not listed

Not listed

Not listed

Not listed

SARA 302/304

Not applicable.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

SARA 313

		Product name	CAS number	<u>Concentration</u>
Form R - Reporting requirements	:	Nitric acid, calcium salt (2:1)	10124-37-5	25 - 30
		Nitric acid ammonium salt (1:1)	6484-52-2	15 - 20
Supplier notification	:	Nitric acid, calcium salt (2:1)	10124-37-5	25 - 30
		Nitric acid ammonium salt (1:1)	6484-52-2	15 - 20

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed:

Nitric acid ammonium salt (1:1)

New York : None of the components are listed.
New Jersey : The following components are listed:

Nitric acid, calcium salt (2:1)
Nitric acid ammonium salt (1:1)

Pennsylvania : The following components are listed:

Nitric acid ammonium salt (1:1)

California Prop. 65

Not available.

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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.

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.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		0
Physical hazards		0

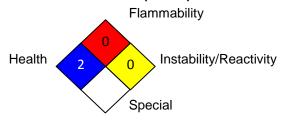
Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Chronic toxicity:

- -: No data available.
- *: Carcinogen, Target organs, Reproductive effects, Sensitizer to lungs

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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

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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

Date of printing: 05/18/2015Date of issue/Date of revision: 05/13/2015Date of previous issue: 00/00/0000

Version : 1.0

Prepared by : 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.

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