

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II / Regulation (EU) No. 2015/830.

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SAFETY DATA SHEET

UltrAN 80

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : UltrAN 80
Product code : PA113P
Product type : Solid
Other means of identification : Ammonium nitrate 5-7-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Notes : The safety data sheet and any attached exposure scenario are compiled in accordance with the REACH regulation and in no way reflects the specification, purity or quality standards required for specific applications and use of the product identified in section 1.1.

Identified uses
Industrial distribution. Industrial USE to formulate chemical product mixtures. Industrial USE as chemical intermediate.

Uses advised against	: Other non-specified industry
Reason	: Due to lack of related experience or data, the supplier cannot approve this use.

1.3 Details of the supplier of the safety data sheet

Address : Yara AB
Industrial
Street : Östra Varvsgatan
Number : 4
Postal code : 211 75

Date of issue : 16.06.2017

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City : MALMÖ
Country : Sweden
P.O. Box Address
P.O. Box : 4505
Postal code : 203 20
City : MALMÖ
Country : Sweden
Telephone number : +46 101396000
Fax no. : +46 101396001
e-mail address of person responsible for this SDS : kundtjanst.industrial@yara.com

1.4 Emergency telephone number

National advisory body/Poison Center

Name : Eitrunarmiðstöð Landspítala (Poison Center)
Telephone number : (+354) 543-2222
Hours of operation : 24h

Supplier

Telephone number : +46856642573 /44 1235 239670 (Carechem)
Hours of operation : 24 h

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification : Ox. Sol. 3, H272
 Eye Irrit. 2, H319

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms : 

Signal word : Warning

Hazard statements : H272 May intensify fire; oxidizer.
 H319 Causes serious eye irritation.

Precautionary statements

Prevention	:	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
		P221-a	Take any precaution to avoid mixing with combustibles.
Response	:	P280-a	Wear eye protection.
		P305	IF IN EYES:
		P351	Rinse cautiously with water for several minutes.
		P338	Remove contact lenses, if present and easy to do. Continue rinsing.
		P337	If eye irritation persists:
		P313-a	Get medical attention.
		P370	In case of fire:
		P378-b	Use flooding quantities of water to extinguish.

Hazardous ingredients : ammonium nitrate

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Applicable, Table 58, 65.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.
Tactile warning of danger : Not applicable.

2.3 Other hazards

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII : Not applicable.
Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : Not applicable.
Other hazards which do not result in classification : Product forms slippery surface when combined with water.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product / ingredient name	Identifiers	%	Classification	Type
			Regulation (EC) No. 1272/2008 [CLP]	
ammonium nitrate	RRN: 01-2119490981-27 EC: 229-347-8 CAS : 6484-52-2	>= 90 - < 100	Ox. Sol. 3, H272 Eye Irrit. 2, H319	[1]

Type

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

See Section 16 for the full text of the H statements declared above.

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Rinse with plenty of running water. Check for and remove any contact lenses. If irritation persists, get medical attention.
- Inhalation** : If inhaled, remove to fresh air. 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.
- 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. Do not induce vomiting unless directed to do so by medical personnel.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : 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** : Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- 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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use flooding quantities of water for extinction.
- Unsuitable extinguishing media** : Do NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Oxidizing material. May intensify fire. The product itself is not combustible but it can support combustion, even in absence of air. On heating it melts and further heating can cause decomposition, releasing toxic fumes containing nitrogen

oxides and ammonia. It has high resistance to detonation. Heating under strong confinement can lead to explosive behaviour.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
 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.

5.3 Advice for firefighters

- Special precautions 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

- Additional information** : None.

SECTION 6: Accidental release measures

6.1 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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".

- 6.2 - 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).

6.3 Methods and material for containment and cleaning up

Small spill : Move containers from spill area. If contaminated with combustible material or reactive chemicals, use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. If contaminated with combustible material or reactive chemicals, use spark-proof tools and explosion-proof equipment.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).
Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from clothing, incompatible materials and combustible materials. Keep away from heat. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

7.2 Conditions for safe storage, including any incompatibilities

Recommendations : 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. Keep away from: organic materials, oil and grease.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Ammonium nitrate	350 t	2.500 t

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Remark : No exposure limit value known.

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 monitoring standards, such as the following:
European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy)

European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)

European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents)

Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product / ingredient name	Type	Exposure	Value	Population	Effects
ammonium nitrate	DNEL	Long term Dermal	21,3 mg/kg bw/day	Workers	Systemic
ammonium nitrate	DNEL	Long term Inhalation	37,6 mg/m ³	Workers	Systemic

PNECs

Product / ingredient name	Type	Compartment Detail	Value	Method Detail
ammonium nitrate	PNEC	Fresh water	0,45 mg/l	Assessment Factors
ammonium nitrate	PNEC	Marine water	0,045 mg/l	Assessment Factors
ammonium nitrate	PNEC	Intermittent release	4,5 mg/l	Assessment Factors
ammonium nitrate	PNEC	Sewage Treatment Plant	18 mg/l	Assessment Factors

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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. 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. For general applications, we recommend gloves with a thickness typically greater than

0.35 mm. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material.

> 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.
- 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** : In case of inadequate ventilation wear respiratory protection. Recommended: Filter P2 (EN 143)
- 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Solid
- Color** : White.
- Odor** : Odorless.
- Odor threshold** : Not determined.
- pH** : > 4,5 [Conc. (% w/w): 100 g/l]
- Melting point/freezing point** : 169,6 °C
Decomposition temperature: > 210 °C
- Initial boiling point and boiling range** : Not determined
- Flash point** : Not determined
- Evaporation rate** : Not determined
- Flammability (solid, gas)** : Non-flammable.
- Upper/lower flammability or explosive limits** : **Lower:** Not determined
Upper: Not determined
- Vapor pressure** : Not determined
- Vapor density** : Not determined

Relative density	:	Not determined
Bulk density	:	Not determined
Density	:	0,8 g/cm ³
Solubility(ies)	:	cold water
Water solubility	:	> 100 g/l @ 20 °C
Partition coefficient: n-octanol/water	:	< 1
Auto-ignition temperature	:	Not determined
Viscosity	:	Dynamic: Not determined Kinematic: Not determined
Explosive properties	:	None.
Oxidizing properties	:	Oxidizer

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 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
- 10.4 Conditions to avoid** : Avoid contamination by any source including metals, dust and organic materials.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
alkalis
combustible materials
reducing materials
organic materials
acids
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 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.	

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 : No known significant effects or critical hazards.
Eyes : Causes serious eye irritation.
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

Conclusion/Summary

: No known significant effects or critical hazards.

Reproductive toxicity

Product / ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure	References
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.

Information on likely routes of exposure : No known significant effects or critical hazards.

Potential acute health effects

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

Ingestion : Irritating to mouth, throat and stomach.

Skin contact : No known significant effects or critical hazards.

Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.

Ingestion : No specific data.

Skin contact : No specific data.

Eye contact : Adverse symptoms may include the following: pain or irritation watering redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

Product / ingredient name	Result	Species	Dose	Exposure	References
ammonium nitrate	Chronic NOAEL Oral	Rat	256 mg/kg OECD 422	28 days	IUCLID 5
	Sub-acute No-observable-	Rat	> 185 mg/kg	2 weeks 5 hours per	IUCLID 5

	effect-concentration Dusts and mists Inhalation		OECD 412	day	
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- 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.

SECTION 12: Ecological information

12.1 Toxicity

Product / ingredient name	Result	Species	Exposure	References
ammonium nitrate				
	Acute LC50 447 mg/l Fresh water	Fish	48 h	IUCLID 5
	Acute EC50 490 mg/l Fresh water	Daphnia	48 h	IUCLID 5
	Acute EC50 1.700 mg/l Salt water	Algae	10 d	IUCLID 5

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

12.2 Persistence and degradability

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

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

12.3 Bioaccumulative potential

Product / ingredient name	LogPow	BCF	Potential

UltrAN 80	< 1	Not applicable.	low
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Conclusion/Summary : No known significant effects or critical hazards.

12.4 Mobility in soil

Soil/water partition coefficient (KOC) : Not available.
Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.
vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

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.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
06 10 02*	wastes containing hazardous substances


Packaging


Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. Empty the bag by shaking to remove as much as possible of its contents. Empty bags may be disposed of as non-hazardous material or

returned for recycling.


- Special precautions** :
- 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: ADR/RID	
14.1 UN number	1942
14.2 UN proper shipping name	AMMONIUM NITRATE
14.3 Transport hazard class(es)	5.1 
14.4 Packing group	III
14.5 Environmental hazards	No.
Additional information	
<u>Hazard identification number</u>	: 50
<u>Tunnel code</u>	: (E)

Regulation: ADN	
14.1 UN number	1942
14.2 UN proper shipping name	AMMONIUM NITRATE
14.3 Transport hazard class(es)	5.1 
14.4 Packing group	III
14.5 Environmental hazards	No.
Additional information	
<u>Danger code</u>	: Not applicable.

Regulation: IMDG	
14.1 UN number	1942
14.2 UN proper shipping name	AMMONIUM NITRATE
14.3 Transport hazard class(es)	5.1

	
14.4 Packing group	III
14.5 Environmental hazards	No.
Additional information	
<u>Marine pollutant</u>	: Not available.
<u>IMDG Code Segregation group</u>	: SG02
<u>Emergency schedules (EmS)</u>	: F-H, S-Q

Regulation: IATA	
14.1 UN number	1942
14.2 UN proper shipping name	AMMONIUM NITRATE
14.3 Transport hazard class(es)	5.1 
14.4 Packing group	III
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.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
Not applicable.

14.8 IMSBC

Bulk cargo shipping name : AMMONIUM NITRATE UN 1942
Class : Class 5.1: Oxidizing material.
Group : B
Marpol V : Non-HME

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorization
Annex XIV: None of the components are listed.

Substances of very high concern: None of the components are listed.

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Applicable, Table 58, 65.

Other EU regulations
Europe inventory : All components are listed or exempted.

Seveso Directive
This product is controlled under the Seveso Directive.

Danger criteria

Category
Ammonium nitrate

National regulations

Notes : To our knowledge no other country or state specific regulations are applicable.

15.2 Chemical Safety Assessment : Complete.

SECTION 16: Other information

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 DMEL = Derived Minimal Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 PBT = Persistent, Bioaccumulative and Toxic
 vPvB = Very Persistent and Very Bioaccumulative
 bw = Body weight

Key literature references and sources for data : 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.
 Sphera Solutions Inc., 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.

Regulation (EC) No 1272/2008 Annex VI.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Ox. Sol. 3, H272	Expert judgment.
Eye Irrit. 2, H319	Calculation method

Full text of abbreviated H statements : **H272** May intensify fire; oxidizer.
H319 Causes serious eye irritation.
H272 May intensify fire; oxidizer.
H319 Causes serious eye irritation.

Full text of classifications [CLP/GHS] : **Ox. Sol. 3, H272:** OXIDIZING SOLIDS - Category 3
Eye Dam./Irrit. 2, H319: SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Ox. Sol. 3, H272: OXIDIZING SOLIDS - Category 3
Eye Dam./Irrit. 2, H319: SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

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

Notice to reader

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein, since all materials may represent unknown hazards and should be used with caution. Final determination of the suitability of any material is the sole responsibility of the user.

**Annex to the extended Safety Data Sheet (eSDS) -
Exposure Scenario:**

Identification of the substance or mixture

Product definition : Mixture

Product name : UltrAN 80

Exposure Scenario information : For each hazard resulting in classification relevant Exposure Scenarios are attached.

**Annex to the extended Safety Data Sheet (eSDS) -
Exposure Scenario:**

Section 1 – Title

Short title of the exposure scenario : Yara - Ammonium nitrate - Distribution, Formulation

Identified use name : Industrial distribution.
Industrial USE to formulate chemical product mixtures.

Substance supplied to that use in form of : As such, In a mixture

List of use descriptors

- Process Category** : PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC13, PROC15
- Environmental Release Category** : ERC02
- Market sector by type of chemical product** : PC01, PC11, PC12, PC35, PC37
- Subsequent service life relevant for that use** : No.

Number of the ES : 02747-1/2013-12-16
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Section 2 – Exposure controls

Contributing exposure scenario controlling environmental exposure for: All

This product is not classified according to EU legislation., No exposure assessment presented for the environment.

Contributing exposure scenario controlling worker exposure for:

- Product Characteristics** : Inorganic salt.
- Concentration of substance in mixture or article** : <= 100 %
- Physical state** : Solid.
Melt
Liquid.
- Dust** : Solid, low dustiness

Frequency and duration of use	: Unless otherwise stated Use duration (h/d): > 4
Area of use:	: Indoor
Ventilation control measures	: No special ventilation requirements.
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection	: Causes serious eye irritation., Use suitable eye protection., Wash hands and contaminated skin thoroughly after handling., See Section 8 of the safety data sheet (personal protective equipment).

Section 3 — Exposure estimation and reference to its source

Exposure estimation and reference to its source - Workers:	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not determined Very low toxicity to humans or animals. See Section 8 in SDS, DNEL.

Section 4 — Guidance to Downstream User to evaluate if he works inside the boundaries set by the ES

Environment	: Not applicable.
Health	: Not applicable.

Abbreviations and acronyms

Process Category	: PROC02 - Use in closed, continuous process with occasional controlled exposure PROC03 - Use in closed batch process (synthesis or formulation) PROC05 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC08a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC08b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC09 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
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	PROC13 - Treatment of articles by dipping and pouring PROC15 - Use a laboratory reagent
Environmental Release Category	: ERC02 - Formulation of preparations
Market sector by type of chemical product	: PC01 - Adhesives, sealants PC11 - Explosives PC12 - Fertilizers PC35 - Washing and cleaning products (including solvent based products) PC37 - Water treatment chemicals

Annex to the extended Safety Data Sheet (eSDS) - Exposure Scenario:

Section 1 – Title

Short title of the exposure scenario : Yara - Ammonium nitrate - Industrial

Identified use name : Industrial USE as chemical intermediate.
Industrial USE as reactive agent/processing aid and for general chemical applications.
Industrial USE as chemical/process nutrient.
Industrial USE for surface/article treatment.
Industrial formulation and USE in industrial explosives.
Industrial USE as part of specialist chemicals/other products .
Industrial USE to manufacture specialist chemical/other products.

Substance supplied to that use in form of : As such, In a mixture

List of use descriptors

Process Category : PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08b, PROC09, PROC13, PROC19, PROC26
Environmental Release Category : ERC06a, ERC06b
Market sector by type of chemical product : PC01, PC09a, PC11, PC19, PC37
Sector of end use : SU02a, SU04, SU06a, SU08, SU09, SU12, SU15, SU19, SU23, SU 0: Other: NACE C20.5.1, SU 0: Other: NACE E
Subsequent service life relevant for that use : No.

Number of the ES : 02748-1/2013-12-16

Section 2 – Exposure controls

Contributing exposure scenario controlling environmental exposure for: All

This product is not classified according to EU legislation., No exposure assessment presented for the environment.

Contributing exposure scenario controlling worker exposure for:

Product Characteristics : Inorganic salt.

Concentration of substance in mixture or article	: <= 100 %
Physical state	: Solid. Melt Liquid.
Dust	: Solid, low dustiness
Frequency and duration of use	: Unless otherwise stated Use duration (h/d): > 4
Area of use:	: Indoor
Ventilation control measures	: No special ventilation requirements.
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection	: Causes serious eye irritation., Use suitable eye protection., Wash hands and contaminated skin thoroughly after handling., See Section 8 of the safety data sheet (personal protective equipment).

Section 3 — Exposure estimation and reference to its source

Exposure estimation and reference to its source - Workers:	
Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Not determined Very low toxicity to humans or animals. See Section 8 in SDS, DNEL.

Section 4 — Guidance to Downstream User to evaluate if he works inside the boundaries set by the ES

Environment	: Not applicable.
Health	: Not applicable.

Abbreviations and acronyms

Process Category	: PROC01 - Use in closed process, no likelihood of exposure PROC02 - Use in closed, continuous process with occasional controlled exposure PROC03 - Use in closed batch process (synthesis or formulation) PROC04 - Use in batch and other process (synthesis) where
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	<p>opportunity for exposure arises</p> <p>PROC05 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)</p> <p>PROC07 - Spraying in industrial settings and applications</p> <p>PROC08b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC09 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC13 - Treatment of articles by dipping and pouring</p> <p>PROC19 - Hand-mixing with intimate contact and only PPE available</p> <p>PROC26 - Handling of solid inorganic substances at ambient temperature</p>
Environmental Release Category	<p>: ERC06a - Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>ERC06b - Industrial use of reactive processing aids</p>
Market sector by type of chemical product	<p>: PC01 - Adhesives, sealants</p> <p>PC09a - Coatings and paints, thinners, paint removers</p> <p>PC11 - Explosives</p> <p>PC19 - Intermediate</p> <p>PC37 - Water treatment chemicals</p>
Sector of end use	<p>: SU02a - Mining, (without offshore industries)</p> <p>SU04 - Manufacture of food products</p> <p>SU06a - Manufacture of wood and wood products</p> <p>SU08 - Manufacture of bulk, large scale chemicals (including petroleum products)</p> <p>SU09 - Manufacture of fine chemicals</p> <p>SU12 - Manufacture of plastics products, including compounding and conversion</p> <p>SU15 - Manufacture of fabricated metal products, except machinery and equipment</p> <p>SU19 - Building and construction work</p> <p>SU23 - Electricity, steam, gas water supply and sewage treatment</p> <p>SU 0: Other: NACE C20.5.1 - Manufacture of explosives</p> <p>SU 0: Other: NACE E - Water supply; sewage; waste management and remediation activities</p>