Agrium Europe

SAFETY DATA SHEET

Calcium Ammonium Nitrate, Granular, 27%

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

1.1 Product identifier

Product name : Calcium Ammonium Nitrate, Granular, 27%

REACH Registration number

Registration number	Substance
01-2119490981-27-XXXX Exempt from REACH registration according to Article 2 (7) (a) and (b), Annex V: Category: 9	Ammonium nitrate Dolomite

Product code : 1885-27963; 1885-27964; 1885-27965; 3304-27964; 3305-27964; 5046-27964

Product description : EC FERTILISER Calcium Ammonium Nitrate 27%

Product type : Solid.

Other means of identification : Not available.

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

Uses advised against	Reason
Consumer use	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 Restricted to industrial use and to professional uses or as approved in certain EU Member States. Verify what usage is allowed.

1.3 Details of the supplier of the safety data sheet

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1050 Bruxelles
Belgium
Tel : +32 (0)2 646 70 00
Fax : +32 (0)2 646 68 60
agrium@agrium.eu

e-mail address of person responsible for this SDS : productsafety@agrium.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Agrium Safety Data Sheets are available in many languages at http://www.agrium.com/products/ae
Physicians, Poison Centres, or the Public may contact Agrium's Global Emergency Response Number 24/7/365 for service in many languages at +1 303 389 1654

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AZERBAIJAN +994 125 979 924
BELARUS +375 17 287 00 92
BELGIUM +32 70 245 245
BULGARIA +359 2 9154 378; +359 887 435 325
CROATIA +358 1 2348 342
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SECTION 1: Identification of the substance/mixture and of the company/ undertaking

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Bordeaux +33 (0)5 56 96 40 80
Lille 0800 59 59 59 (national callers)
Lyon +33 (0)4 72 11 69 11
Marseille +33 (0)4 91 75 25 25
Nancy +33 (0)3 83 22 50 50
Paris +33 (0)1 40 05 48 48
Rennes +33 (0)2 99 59 22 22
Strasbourg +33 (0)3 88 37 37 37
Toulouse +33 (0)5 61 77 74 47
GEORGIA +995 99 53 33 20
GERMANY
Berlin +49 30 192 40
Bonn +49 228 192 40
Erfurt +49 361 730 730
Freiburg +49 761 192 40
Goettingen +49 551 192 40
Homburg (Saar) +49 6841 192 40
Mainz +49 6131 192 40
Munich +49 89 192 40
GREECE +30 21 07 79 37 77
HUNGARY +36 80 20 11 99
ICELAND +354 543 22 22
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Firenze +39 55 794 7819
Foggia +39 881 732 326
Genoa +39 10 563 62 45
Milan +39 02 6610 1029
Padova +39 49 827 50 78
Pavia +39 38 224 444
Rome +39 06 305 43 43
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NORWAY +47 22 59 13 00
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Lòdz +48 42 63 14 724
Sosnowiec +48 32 266 11 45
Warszawa +48 22 619 66 54
Wroclaw +48 71 343 30 08
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Moscow +7 495 628 1687
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SECTION 1: Identification of the substance/mixture and of the company/ undertaking

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UNITED KINGDOM
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Birmingham 844 892 0111
Edinburgh 844 892 0111
Newcastle Upon Tyne +44 191 2606182; +44 191 2606180
Penarth 844 892 0111

Supplier

Telephone number : Agrium Europe SA
EMERGENCY TELEPHONE NUMBERS:
Transportation: 00-1-303-389-1654
Medical: 00-1-303-389-1654

Hours of operation : 24/7/365

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]

Ox. Sol. 3, H272

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 : May intensify fire; oxidiser.

Precautionary statements

Prevention : P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P220 Keep away from clothing, incompatible materials and combustible materials.
P221 Take any precaution to avoid mixing with combustibles and other incompatible materials.
P280 Wear protective gloves / protective clothing / eye protection / face protection.

Response : P370 + P378 In case of fire: Use water spray to extinguish.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : Ammonium nitrate

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to industrial use and to professional uses or as approved in certain EU Member States. Verify what usage is allowed.
Not allowed on general public market.

Special packaging requirements

SECTION 2: Hazards identification

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Ammonium nitrate	REACH #: 01-2119490981-27-XXXX EC: 229-347-8 CAS: 6484-52-2	75 - 79	Ox. Sol. 3, H272 Eye Irrit. 2, H319	[A]
Dolomite	EC: 240-440-2 CAS: 16389-88-1	21 - 25	Not classified.	[A]
			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.

Type

[A] Constituent
[B] Impurity
[C] Stabilising additive

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Begin eye irrigation immediately. Eye exposures to nitrates may require medical evaluation following decontamination if pain or irritation persists. Immediately rinse eyes with large quantities of water or saline for a minimum of 15 minutes. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. For additional advice call the medical emergency number on this SDS or your poison center or physician.

Inhalation : Remove person to fresh air. No known significant effects. Seek medical attention for any signs of wheezing and/or breathing difficulties. For additional advice call the medical emergency number on this SDS or your poison center or medical provider.

Skin contact : No known significant effects. Rinse the affected areas with water. Remove contaminated clothing, jewelry, and shoes. Wash/clean items before reuse. Seek medical attention for persistent skin pain or irritation. For additional advice call the medical emergency number on this SDS or your poison center or physician.

SECTION 4: First aid measures

Ingestion : Ammonium nitrate based product. May be irritating to mouth, throat and stomach. May cause methemoglobinemia (a condition that interferes with the oxygen-carrying capacity of the blood) if ingested in large quantities or over a prolonged period of time. Oral exposures: if the affected person requires CPR, avoid mouth to mouth contact. Do not induce vomiting. If vomiting occurs, attempt to keep head lower than chest so that vomit does not enter the lungs. Wash (decontaminate) face and mouth with water to remove visible material. If the exposed person is conscious and can swallow, give 1-2 sips of water. Do not give anything else by mouth. Loosen tight clothing such as collar, tie, belt or waistband to prevent any breathing restrictions. Call for emergency transportation to a hospital if the exposed person feels sick or has breathing difficulties, or a large amount is suspected ingested. For additional advice, call the medical emergency number on this SDS or your poison center or physician.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

4.2 Most important symptoms and effects, both acute and delayed

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 : Oxygen depletion, nausea or vomiting, abdominal cramps and pain

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : In case of inhalation of decomposition products (carbon monoxide, carbon dioxide, nitrogen oxides) in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for up to 72 hours. In cases of suspected methemoglobinemia, monitor methemoglobin blood levels. Treatment is supportive; methylene blue may be indicated based on patient severity. 24 Hr Medical Emergency telephone number for professional support: 00-1-303-389-1654.

Specific treatments : Call the medical emergency number on this SDS or your poison center or doctor immediately if large quantities have been ingested. In cases of suspected methemoglobinemia, methylene blue may be indicated based on patient severity.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Non-flammable. Material will not burn. Risk of explosion if heated under confinement. Apply water from a safe distance to cool container and protect surrounding area. Use flooding quantities of water.

Unsuitable extinguishing media : Do not attempt to smother the fire.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : This material increases the risk of fire and may aid combustion.

Hazardous combustion products : Decomposition products may include the following materials:
Ammonia
Nitrogen oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures

Special protective actions for fire-fighters : No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fight fire from protected location or maximum possible distance.

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 : Oxidising material. Fight fire from protected location or maximum possible distance. Contain and collect the water used to fight the fire for later treatment and disposal.

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. Keep unnecessary and unprotected personnel from entering. Put on appropriate personal protective equipment. Avoid creating dusty conditions and prevent wind dispersal.

For emergency responders : Keep unnecessary personnel away. Put on appropriate personal protective equipment (see Section 8).

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Small spill : Move containers from spill area. Use appropriate tools to transfer the spilt solid to a convenient waste disposal container. Place spilt material in an appropriate container for disposal. Dispose of waste according to applicable legislation.
or
Recover the material and use it for its intended purpose.

Large spill : No additional remark.

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.

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

SECTION 7: Handling and storage

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. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Hygroscopic. Keep container tightly closed. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. May form steep piles that can collapse without warning when stored in bulk. Avoid forming steep slopes when removing product. Incompatible with halogens. May react explosively when mixed with chlorinated materials such as hypochlorites. Do not store and transport with halogens, acids etc.

7.3 Specific end use(s)

Recommendations : Fertiliser. Fertiliser Blend Component

Industrial sector specific solutions : See Annex to the Safety data sheet for additional information in the Exposure Scenario(s).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Ammonium nitrate	DNEL	Long term Dermal	5,1 mg/kg bw/day	Workers	Systemic
Ammonium nitrate	DNEL	Long term Inhalation	36 mg/m³	Workers	Systemic

DNEL/DMEL Summary : Very low toxicity to humans or animals.

PNECs

No PNECs available

PNEC Summary : Very low acute toxicity to fish.

8.2 Exposure controls

Appropriate engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Goggles, face shield or other full-face protection should be worn if there is a risk of direct exposure to dust.

Skin protection

Hand protection : The personal protective equipment required varies, depending upon your risk assessment. Wear gloves according to EN374 to protect against skin effects from powders.

SECTION 8: Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose.

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. Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose.

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. Dispose of waste according to applicable legislation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Granular solid.

Colour : Colourless. White. Grey. Brown. Greyish-white.

Odour : Odourless.

Odour threshold : Not available.

pH : 5 to 8 [Conc. (% w/w): 10%]

Melting point/freezing point : 169,6°C

Initial boiling point and boiling range : Decomposition temperature: >210°C

Flash point : Not applicable. Non-flammable.

Evaporation rate : Not applicable. Solid beads.

Flammability (solid, gas) : Not applicable. Non-flammable. Decomposes on heating.

Upper/lower flammability or explosive limits : Not applicable. Inorganic salt.

Vapour pressure : Not available.

Vapour density : Not available.

Relative density : 1,7

Solubility(ies) : Easily soluble in the following materials: hot water.
Soluble in the following materials: cold water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not applicable.

Decomposition temperature : >210°C

Viscosity : Not applicable. Solid.

Explosive properties : Slightly explosive in the presence of the following materials or conditions:
Explosive in the presence of the following materials or conditions:
organic materials
heating under confinement.

Oxidising properties : Oxidising material. May intensify fire.

9.2 Other information

Burning time : Not applicable. Non-combustible. Decomposes.

SECTION 9: Physical and chemical properties

Burning rate : Not applicable. Non-combustible. Decomposes.

Solubility in water :

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : Stable under recommended storage and handling conditions (see Section 7).

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 incompatible substances.
contact with combustible materials
Reactions may include the following:
risk of causing or intensifying fire
If mixed with chlorine or hypochlorites, it may form nitrogen trichloride which may explode spontaneously in air.
Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Decomposes on heating. Avoid confinement.

10.5 Incompatible materials : Moisture-sensitive material. Hygroscopic. Keep container tightly closed. Avoid contamination by any source including metals, dust and organic materials.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced. In a fire, decomposition may produce toxic gases/fumes.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ammonium nitrate	LD50 Dermal	Rat - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	2950 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met. Adverse effects are typically the result of acute overexposure. These effects may be long term or permanent in nature. Repeated or prolonged overexposure by ingestion can reduce the oxygen carrying capacity of the blood, producing anoxia in infants or individuals with preexisting bowel or blood diseases. Ensure that nitrate containing fertilizers are not applied near wells where contamination may occur. Consult your agronomist regarding the advisability and precautions for use of nitrate fertilizers on fruit or vegetable crops.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ammonium nitrate	Skin	Rabbit	0	-	72 hours
	Eyes - Oedema of the conjunctivae	Rabbit	3	-	3 days

Conclusion/Summary

Skin : Non-irritating to the skin.

SECTION 11: Toxicological information

Eyes : At concentrations typically encountered: : Effects are not sufficient for classification as hazardous.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Ammonium nitrate	Skin	Mouse	Not sensitizing

Conclusion/Summary

Skin : Non-sensitiser.

Respiratory : Non-sensitiser.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Ammonium nitrate	OECD 471 Bacterial Reverse Mutation Test OECD 476 *In vitro* Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Bacteria Experiment: In vitro Subject: Mammalian-Animal	Negative Negative

Conclusion/Summary : No mutagenic effect.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards. Potential for nitrosamine formation if ingested. Do not ingest.Potential for nitrosamine formation

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Ammonium nitrate	Negative	Negative	Negative	Rat - Male, Female	Oral: 1500 mg/kg	53 days; 7 days per week

Conclusion/Summary : Not considered to be toxic to the reproductive system.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Ammonium nitrate	Negative - Oral	Rat - Female	1500 mg/kg	53 days

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

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : May cause irritation due to mechanical action.

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.

SECTION 11: Toxicological information

Ingestion : May be rritating to the digestive tract. May cause nausea, vomiting, diarrhea, and abdominal pain. May cause methemoglobinemia (a condition that interferes with the oxygen-carrying capacity of the blood) if ingested in large quantities or over a prolonged period of time. Persons with methemoglobinemia may have blue tinge color to lips, nails, and skin. Also they may have shortness of breath or trouble breathing. Persons more susceptible to methemoglobinemia include: very young (less than 3 months), the elderly, those with chronic obstructive pulmonary disease (COPD), anemia, coronary artery disease, recent surgery or infection, and those with a genetic deficiency of G-6-PD.

Symptoms related to the physical, chemical and toxicological characteristics

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

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : Oxygen depletion, nausea or vomiting, abdominal cramps and pain

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

Short term exposure

Potential immediate effects : Eye irritation
Infant-methaemoglobinaemia

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
Ammonium nitrate	Chronic NOAEL Oral	Rat - Male, Female	256 mg/kg	-

Conclusion/Summary : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards. Potential for nitrosamine formation if ingested. Do not ingest.Potential for nitrosamine formation

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.

Absorption : 50 % by Oral, Dermal, Inhalation

Distribution : Systemic

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Ammonium nitrate	NOEC >1700 mg/l Marine water Acute EC50 490 mg/l Fresh water Acute LC50 447 mg/l Fresh water	Algae Daphnia Fish	10 days 48 hours 48 hours

Conclusion/Summary : Very low acute toxicity to fish. Practically non-toxic to aquatic organisms.

SECTION 12: Ecological information

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ammonium nitrate	-	-	Readily

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not applicable. Inorganic salt. Bioaccumulative potential - low

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable. Inorganic salt.

vPvB : Not applicable. Inorganic salt.

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 minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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.

Hazardous waste : Ensure all waste water is collected and treated via a waste water treatment plant. Dispose of waste product or used containers according to local regulations.

European waste catalogue (EWC)

Waste code	Waste designation
06 10 02*	wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture wastes containing hazardous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

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 spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	Exempt - Special provisions 307(b)	-	-	-

14.6 Special precautions for user :

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

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 authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to industrial use and to professional uses or as approved in certain EU Member States. Verify what usage is allowed.
Not allowed on general public market.

Other EU regulations

Europe inventory : This material is listed or exempted.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

SECTION 15: Regulatory information

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia	:	
Canada	:	
China	:	
Japan	:	
Malaysia	:	
New Zealand	:	
Philippines	:	
Republic of Korea	:	
Taiwan	:	
Turkey	:	
United States	:	This material is listed or exempted.

15.2 Chemical safety assessment : Complete.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

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

Key literature references and sources for data : REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 18 DECEMBER 2006, with successive adaptations, amendments, and corrigenda.
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 16 DECEMBER 2008, with successive adaptations, amendments, and corrigenda.
ECHA, European Chemicals Agency, Classification and Labelling Database
DIRECTIVE 2012/18/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 4 JULY 2012 on the control of major-accident hazards involving dangerous substances
European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), latest revision.
Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods, with successive amendments.
REGULATION (EC) No 2003/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 13 OCTOBER 2003 RELATING TO FERTILISERS, with successive adaptations, amendments, and corrigenda.

SECTION 16: Other information

American Conference of Governmental Industrial Hygienists, Threshold Limit Values for Chemical Substances, latest edition.
Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers
ERG 2016 Emergency Response Guidebook
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans.
The Fertilizer Institute, Toxicity Testing Results, March 2003 Substance Information Exchange Forum Database
Substance Information Exchange Forum Database

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

Classification	Justification
Ox. Sol. 3, H272	On basis of test data

Full text of abbreviated H statements

H272	May intensify fire; oxidiser.

Full text of classifications [CLP/GHS]

Ox. Sol. 3, H272	OXIDISING SOLIDS - Category 3

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Notice to reader

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Product definition : Mixture

Identification of the substance or mixture

Code : 1885-27963; 1885-27964; 1885-27965; 3304-27964; 3305-27964; 5046-27964

Product name : Calcium Ammonium Nitrate, Granular, 27%

Section 1 - Title

Short title of the exposure scenario : Agrium Calcium Nitrate Exposure Scenario for Workers

List of use descriptors : **Identified use name:** Industrial use for the formulation of preparations, intermediate use, and end use in industrial settings.
Process Category: PROC05, PROC08a, PROC08b, PROC09, PROC26
Substance supplied to that use in form of: As such
Sector of end use: SU03, SU10, SU01
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02, ERC07
Market sector by type of chemical product: PC12
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Not applicable.**

Health Contributing scenarios : **Bulk transfers -** PROC05, PROC08a, PROC08b, PROC09, PROC26
Clean-down and maintenance of equipment - PROC05, PROC08a, PROC08b, PROC09, PROC26
Mixing operations (open systems) - PROC05, PROC08b
Product packaging - PROC09
Storage - PROC26

Number of the ES : 1

Processes and activities covered by the exposure scenario : Applicable to all identified Process Categories.
An environmental assessment has not been done as the substance does not meet the criteria for being classified as dangerous for the environment.

Section 2 - Exposure controls

Contributing exposure scenario controlling environmental exposure for 1: Not applicable.

Not applicable. Not classified as dangerous to the environment.

Contributing exposure scenario controlling worker exposure for 1: Bulk transfers

Product Characteristics : Solid, low dustiness.

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid beads.

Dust : Solid, medium dustiness

Amounts used : Variable, from day to day.

Frequency and duration of use : Use duration (h/d): >4

Human factors not influenced by risk management : Not applicable.

Other operational conditions affecting worker exposure : Indoor or outdoor use Amounts used

Area of use: : Indoor and outdoor use.

Technical conditions and measures at process level (source) to prevent release	:	Not applicable.
Process control/change measures	:	Not applicable.
Technical conditions and measures to control dispersion from source towards the worker	:	Use appropriate containment to avoid environmental contamination. Provide enhanced general ventilation by mechanical means.
Engineering controls	:	Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
Ventilation control measures	:	Provide adequate ventilation and, if possible, use or install internal exhaust systems.
Organisational measures to prevent/limit releases, dispersion and exposure	:	Not applicable.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene	:	A washing facility or water for eye and skin cleaning purposes should be present. Brush off contaminated clothing. Ensure good industrial hygiene. Provide eye shower and mark its location conspicuously.
Personal protection	:	If operating conditions cause high dust concentrations to be produced, use dust goggles.
Respiratory protection	:	If ventilation is inadequate, use respirator that will protect against dust/mist.

Contributing exposure scenario controlling worker exposure for 2: Clean-down and maintenance of equipment

Product Characteristics	:	Solid, medium dustiness
Concentration of substance in mixture or article	:	Covers percentage substance in the product up to 100%
Physical state	:	Solid beads.
Dust	:	Solid, medium dustiness
Amounts used	:	Not applicable.
Frequency and duration of use	:	Use duration (h/d): >4
Human factors not influenced by risk management	:	Not applicable.
Other operational conditions affecting worker exposure	:	Indoor or outdoor use
Area of use:	:	Indoor and outdoor use.
Technical conditions and measures at process level (source) to prevent release	:	Restrict access while emptying or maintaining the unit. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Since the emptied containers retain product residue, follow product insert warnings even after container is emptied.
Process control/change measures	:	These controls may include segregation of areas, access only to authorised persons, permit to work systems, confined space working procedures, and hazard awareness training.
Technical conditions and measures to control dispersion from source towards the worker	:	Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
Engineering controls	:	Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.

Ventilation control measures	:	Provide adequate ventilation and, if possible, use or install internal exhaust systems.
Organisational measures to prevent/limit releases, dispersion and exposure	:	Not applicable.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene	:	A washing facility or water for eye and skin cleaning purposes should be present. Brush off contaminated clothing. Pay attention to good general hygiene and housekeeping. Provide eye shower and mark its location conspicuously. When using do not eat or drink.
Personal protection	:	If operating conditions cause high dust concentrations to be produced, use dust goggles.
Respiratory protection	:	If ventilation is inadequate, use respirator that will protect against dust/mist.

Contributing exposure scenario controlling worker exposure for 3: Mixing operations (open systems)

Product Characteristics	:	Solid, medium dustiness
Concentration of substance in mixture or article	:	Covers percentage substance in the product up to 100%
Physical state	:	Solid beads.
Dust	:	Solid, medium dustiness
Amounts used	:	Not applicable.
Frequency and duration of use	:	Use duration (h/d): >4
Human factors not influenced by risk management	:	Not applicable.
Other operational conditions affecting worker exposure	:	Indoor use
Area of use:	:	Indoor
Technical conditions and measures at process level (source) to prevent release	:	Not applicable.
Process control/change measures	:	Not applicable.
Technical conditions and measures to control dispersion from source towards the worker	:	Use appropriate containment to avoid environmental contamination. Provide enhanced general ventilation by mechanical means.
Engineering controls	:	Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
Ventilation control measures	:	Provide adequate ventilation and, if possible, use or install internal exhaust systems.
Organisational measures to prevent/limit releases, dispersion and exposure	:	Not applicable.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection	:	Goggles, face shield or other full-face protection should be worn if there is a risk of direct exposure to dust.

Contributing exposure scenario controlling worker exposure for 4: Product packaging

Product Characteristics	:	Solid, medium dustiness
Concentration of substance in mixture or article	:	Covers percentage substance in the product up to 100%
Physical state	:	Solid beads.
Dust	:	Solid, medium dustiness
Amounts used	:	Not applicable.
Frequency and duration of use	:	Use duration (h/d): >4
Human factors not influenced by risk management	:	Not applicable.
Other operational conditions affecting worker exposure	:	Indoor use
Area of use:	:	Indoor
Technical conditions and measures at process level (source) to prevent release	:	Not applicable.
Process control/change measures	:	Not applicable.
Technical conditions and measures to control dispersion from source towards the worker	:	Ensure the area is organised, well lit and ventilated with enough space to deal with spills easily.
Engineering controls	:	Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
Ventilation control measures	:	Ensure sufficient ventilation when re-packing damaged packages. Only use product in a well-ventilated area.
Organisational measures to prevent/limit releases, dispersion and exposure	:	Not applicable.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene	:	A washing facility or water for eye and skin cleaning purposes should be present. Brush off contaminated clothing. When using do not eat or drink.
Personal protection	:	If operating conditions cause high dust concentrations to be produced, use dust goggles.

Contributing exposure scenario controlling worker exposure for 5: Storage

Product Characteristics	:	Solid, medium dustiness
Concentration of substance in mixture or article	:	Covers percentage substance in the product up to 100%
Physical state	:	Solid beads.
Dust	:	Solid, medium dustiness
Amounts used	:	Not applicable.
Frequency and duration of use	:	Use duration (h/d): >4
Human factors not influenced by risk management	:	Not applicable.

Other operational conditions affecting worker exposure	:	Indoor use
Area of use:	:	Indoor
Technical conditions and measures at process level (source) to prevent release	:	Not applicable.
Process control/change measures	:	Not applicable.
Technical conditions and measures to control dispersion from source towards the worker	:	Use appropriate containment to avoid environmental contamination. Provide enhanced general ventilation by mechanical means.
Engineering controls	:	Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
Ventilation control measures	:	Provide adequate ventilation and, if possible, use or install internal exhaust systems.
Organisational measures to prevent/limit releases, dispersion and exposure	:	Not applicable.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection	:	If operating conditions cause high dust concentrations to be produced, use dust goggles.

Section 3 - Exposure estimation and reference to its source

Website:	:	Qualitative approach used to conclude safe use.

Exposure estimation and reference to its source - Environment: 5: Not applicable.

Exposure assessment (environment):	:	Qualitative approach used to conclude safe use.
Exposure estimation	:	Not available.

Exposure estimation and reference to its source - Workers:1: Bulk transfers

Exposure assessment (human):	:	Qualitative approach used to conclude safe use.
Exposure estimation	:	Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Exposure estimation and reference to its source - Workers:2: Clean-down and maintenance of equipment

Exposure assessment (human):	:	Qualitative approach used to conclude safe use.
Exposure estimation	:	Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Exposure estimation and reference to its source - Workers:3: Mixing operations (open systems)

Exposure assessment (human):	:	Qualitative approach used to conclude safe use.
Exposure estimation	:	Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Exposure estimation and reference to its source - Workers:4: Product packaging

Exposure assessment (human):	:	Qualitative approach used to conclude safe use.
Exposure estimation	:	Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Exposure estimation and reference to its source - Workers:6: Storage

Exposure assessment (human):	:	Qualitative approach used to conclude safe use.
Exposure estimation	:	Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

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

Environment	:	No additional risk management measures required.
Health	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Additional good practice advice beyond the REACH CSA

Environment	:	Use containment as appropriate. Good hygiene practices and housekeeping measures
Health	:	Not available.

Product definition : Mixture

Identification of the substance or mixture

Code : 1885-27963; 1885-27964; 1885-27965; 3304-27964; 3305-27964; 5046-27964

Product name : Calcium Ammonium Nitrate, Granular, 27%

Section 1 - Title

Short title of the exposure scenario : Agrium CAN ES for Professionals

List of use descriptors : **Identified use name:** Professional use in formulation of preparations and end-use.
Process Category: PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC19, PROC26
Substance supplied to that use in form of: As such
Sector of end use: SU01, SU10, SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02, ERC08e, ERC08c
Market sector by type of chemical product: PC12

Environmental contributing scenarios : **An environmental assessment has not been done as the substance does not meet the criteria for being classified as dangerous for the environment.**

Health Contributing scenarios : **All process categories are addressed by this contributing scenario as all Operational Conditions and Risk Management Measures are identical.**

Number of the ES : 2

Processes and activities covered by the exposure scenario : Applicable to all identified Process Categories.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: An environmental assessment has not been done as the substance does not meet the criteria for being classified as dangerous for the environment.

Not applicable.

Contributing scenario controlling worker exposure for 1: All process categories are addressed by this contributing scenario as all Operational Conditions and Risk Management Measures are identical.

Product characteristics : Solid, low dustiness.

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid beads.

Dust : Solid, low dustiness.

Amounts used : Variable.

Frequency and duration of use : >4 Hours per shift

Human factors not influenced by risk management : Not applicable.

Other conditions affecting workers exposure : Indoor or outdoor use

Area of use: : Indoor and outdoor use.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical conditions and measures to control dispersion from source towards the worker	: Use containment as appropriate. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
Engineering controls	: Provide adequate ventilation.
Ventilation control measures	: Provide adequate ventilation and, if possible, use or install internal exhaust systems.
Product substance-related measures	: Avoid contact with eyes.
Organisational measures to prevent/limit releases, dispersion and exposure	: Not applicable.

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene	: Avoid contact with eyes. Ensure good industrial hygiene. If operating conditions cause high dust concentrations to be produced, use dust goggles.
Personal protection	: Use suitable eye protection. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Section 3 - Exposure estimation and reference to its source

Website:	: Qualitative approach used to conclude safe use.

Exposure estimation and reference to its source - Environment: 2: An environmental assessment has not been done as the substance does not meet the criteria for being classified as dangerous for the environment.

Exposure assessment (environment):	: Not applicable.
EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE	: Not available.

Exposure estimation and reference to its source - Workers:1: All process categories are addressed by this contributing scenario as all Operational Conditions and Risk Management Measures are identical.

Exposure assessment (human):	: Qualitative approach used to conclude safe use.
EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE	: Not available.

Section 4 - GUIDANCE TO DU TO EVALUATE WHETHER HE WORKS INSIDE THE BOUNDARIES SET BY THE ES

Environment	: Not applicable.
Health	: No additional risk management measures required.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Use containment as appropriate. Ensure control measures are regularly inspected and maintained. Pay attention to good general hygiene and housekeeping.