

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

1.1 Product identifier

Trade name

Ammonium calcium nitrate

Identification numbers

CAS no. 15245-12-2
EC no. 239-289-5

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

Relevant identified uses of the substance or mixture

Manufacturing of the substance, including handling, storage and q control.

Distribution, storage and q control. Industrial setting.

Formulation of solid and aqueous solutions of substance for industrial explosives or propellants, cooling packs, cosmetics and epoxy paints.

Industrial use to manufacture cement and concrete curing agent for refractory bricks and as a hardener in asphalt coatings for buildings.

Industrial use: coating process of dipping seeds in fertilizer solution.

Industrial use: continuous addition of the chemical to sewer.

Industrial use: use in waste water treatment for septicity control, odour removal, corrosion inhibition, health and safety nutrient.

Industrial use: manufacturing of latex based printer inks.

Industrial use: handling of solid substance to make explosive mixtures.

Use as intermediate or chemical agent to synthesise other substances or articles.

Industrial use in the production of antibiotics, cultivation of bacteria and used as main source for synthesis of high purity calcium products.

Industrial use for recycling plastic materials.

Industrial use to rinse coated metals as part of curing process to improve coating performance.

Industrial use of substance as a heat transfer fluid.

Professional use of fertilizers containing CN-Nitcal.

Professional use: mixing of substance on site to manufacture cement and concrete curing agent for refractory bricks and as a hardener in asphalt coatings for buildings.

Professional use: continuous addition of the chemical to sewer.

Professional handling and use of chemical substance in waste water stream.

Professional use of substance as a heat transfer fluid.

Professional use in soil remediation.

Professional use of epoxy paint for painting and roller applications/non-industrial spraying.

Uses advised against

None known

1.3 Details of the supplier of the safety data sheet

Address

Ameropa AG
Rebgasse 108
CH-4102 Binningen

Telephone no. +41 61 301 2711

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Advice on Safety Data Sheet

info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

EC safety data sheet

Ammonium calcium nitrate
AM-AG003

Status: 14.03.2012

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Acute Tox. 4; H302

Eye Dam. 1; H318

Classification in accordance with Directive 67/548/EEC or 1999/45/EC

Xi; R41

Xn; R22

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

Product identifier

15245-12-2 (ammonium-calcium-nitrate)

Hazard pictograms



GHS05



GHS07

Signal word

Danger

Hazard statements

H302

Harmful if swallowed.

H318

Causes serious eye damage.

Precautionary statements

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTER or doctor/physician.

P330

Rinse mouth.

P264

Wash hands thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

2.3 Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterization

Substance name ammonium-calcium-nitrate

Identification numbers

CAS no. 15245-12-2

EC no. 239-289-5

3.2 Mixtures

Not applicable. The product is not a mixture.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In case of persisting adverse effects, consult a physician. Change contaminated, saturated clothing.

After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air.

After skin contact

Wash off immediately with soap and water.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.).

After ingestion

Seek medical advice immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam; Carbon dioxide; extinguishing powder; Water spray jet

Unsuitable extinguishing media

No data available.

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon dioxide (CO₂); Carbon monoxide (CO)

5.3 Advice for firefighters

Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid dust formation. Keep away sources of ignition.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically. When picked up, treat material as prescribed under heading "Disposal considerations".

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

No special measures necessary if stored and handled as prescribed. Avoid the formation and deposition of dust. Provide good ventilation of working area (local exhaust ventilation, if necessary).

General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Provide eye wash fountain in work area. Do not inhale dust.

Advice on protection against fire and explosion

Dust can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of heat and ignition.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed and dry in a cool, well-ventilated place.

EC safety data sheet

Ammonium calcium nitrate

Status: 14.03.2012

AM-AG003

1.3.0, issued: 14.03.2012

Requirements for storage rooms and vessels

Store product in closed containers.

Advice on storage assembly

None known

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

DNEL und PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no
	Route of exposure	Exposure time	Effect	Value
1	ammonium-calcium-nitrate			15245-12-2 239-289-5
	dermal	Long term (chronic)	systemic	13,9 mg/kg/day
	inhalational	Long term (chronic)	systemic	24,5 mg/m ³

DNEL value (consumer)

No	Substance name			CAS / EC no
	Route of exposure	Exposure time	Effect	Value
1	ammonium-calcium-nitrate			15245-12-2 239-289-5
	oral	Long term (chronic)	systemic	8,33 mg/kg/day
	dermal	Long term (chronic)	systemic	8,33 mg/kg/day
	inhalational	Long term (chronic)	systemic	6,3 mg/m ³

PNEC values

No	Substance name		CAS / EC no
	ecological compartment	Type	Value
1	ammonium-calcium-nitrate		15245-12-2 239-289-5
	water	fresh water	0,45 mg/l
	water	marine water	0,045 mg/l
	water	Aqua intermittent	4,5 mg/l
	sewage treatment plant	-	18 mg/l

8.2 Exposure controls

Appropriate engineering controls

No data available.

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn.

Eye / face protection

Safety glasses (EN 166)

Hand protection

In case of intensive contact, wear protective gloves (EN 374). Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other

Normal chemical work clothing.

Environmental exposure controls

No data available.

EC safety data sheet

Ammonium calcium nitrate

Status: 14.03.2012

AM-AG003

1.3.0, issued: 14.03.2012

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form/Colour	
granules	
white	
Odour	
No data available	
Odour threshold	
No data available	
pH value	
No data available	
Boiling point / boiling range	
No data available	
Melting point / melting range	
Value	400 °C
Source	CSR
Decomposition point / decomposition range	
No data available	
Flash point	
No data available	
Auto-ignition temperature	
No data available	
Oxidising properties	
No data available	
Explosive properties	
No data available	
Flammability (solid, gas)	
No data available	
Lower flammability or explosive limits	
No data available	
Upper flammability or explosive limits	
No data available	
Vapour pressure	
No data available	
Vapour density	
No data available	
Evaporation rate	
No data available	
Relative density	
No data available	
Density	
Value	2,05
Reference temperature	20 °C
Source	CSR
Remarks	Relative density
Solubility in water	
Value	100 g/l
Source	CSR

EC safety data sheet

Ammonium calcium nitrate

Status: 14.03.2012

AM-AG003

1.3.0, issued: 14.03.2012

Solubility(ies)

No data available

Partition coefficient: n-octanol/water

No data available

Viscosity

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

None known

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50	300 - 2000	mg/kg
Species	rat (female)	
Source	CSR	

Acute dermal toxicity

LD50	> 2000	mg/kg
Species	rat	
Method	OECD 402	
Source	CSR	

Acute inhalational toxicity

No data available

Skin corrosion/irritation

Species	rabbit
Method	OECD 404
Source	CSR
Evaluation	non-irritant

Serious eye damage/irritation

Method	OECD 437
Source	CSR
Evaluation	non-irritant

Respiratory or skin sensitisation

Route of exposure	Skin
Species	mouse
Method	OECD 429
Source	CSR
Evaluation	non-sensitizing

EC safety data sheet

Ammonium calcium nitrate

Status: 14.03.2012

AM-AG003

1.3.0, issued: 14.03.2012

Germ cell mutagenicity	
Method	OECD 471
Source	CSR
Evaluation	negative

Reproduction toxicity	
Route of exposure	900
	>= 1500 mg/kg
Type of examination	NOAEL
Species	rat
Method	OECD 422
Source	CSR

Carcinogenicity	
No data available	

STOT-single exposure	
No data available	

STOT-repeated exposure	
Route of exposure	oral
NOAEL	>= 1000 mg/kg bw/d
Duration of exposure	28 d
Species	rat
Method	OECD 407
Source	CSR

Aspiration hazard	
No data available	

Symptoms related to the physical, chemical and toxicological characteristics	
Eye contact may cause mechanical irritation through dust particles.	

Delayed and immediate effects as well as chronic effects from short and long-term exposure	
Inhalation of dusts may irritate the respiratory tract.	

SECTION 12: Ecological information

12.1 Toxicity

Fish toxicity	
LC50	447 mg/l
Duration of exposure	48 h
Species	Cyprinus carpio
Reference substance	ammonium nitrate
Source	CSR

Daphnia toxicity	
EC50	> 100 mg/l
Duration of exposure	48 h
Species	Daphnia magna
Method	OECD 202
Source	CSR

Algae toxicity	
EC50	> 100 mg/l
Duration of exposure	72 h
Species	Pseudokirchneriella subcapitata
Method	OECD 201
Source	CSR

EC safety data sheet

Ammonium calcium nitrate

Status: 14.03.2012

AM-AG003

1.3.0, issued: 14.03.2012

Bacteria toxicity

No data available

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

12.7 Other information

Other information

Do not discharge into the drains or waters and do not store on public depositories.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG

The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information

No data available.

14.6 Special precautions for user

No data available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15: Regulatory information

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

EU regulations

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks

Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

EC safety data sheet

Ammonium calcium nitrate

Status: 14.03.2012

AM-AG003

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15.2 Chemical safety assessment

No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:

EC Directive 67/548/EC resp. 99/45/EC as amended in each case.

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EC

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Full text of the R-, H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

R22 Harmful if swallowed.

R41 Risk of serious damage to eyes.

Department issuing safety data sheet

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This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.