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

1.1. Product identifier

Name of the substance: Calcium ammonium nitrate
Identification number: 15245-12-2
Registration number: 01-2119493947-16-0004
Synonyms: CAN, calcium ammonium salt, Nitric acid; 27(4)
SDS Number: JHB_CAN_EU_EN
Issue date: 08-February-2013
Version number: 01
Revision date: -
Supersedes date: -

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

Identified uses: Fertiliser.
Uses advised against: Use in accordance with supplier's recommendations.

1.3. Details of the supplier of the safety data sheet

Supplier:
Company name: Bunn Fertiliser Limited
Address: Lakeside 500, 1st Floor
Old Chapel Way, Broadland Business Park
Norwich, NR7 0WG
UK
Telephone: (0845) 1662222
e-mail: info@bunnfertiliser.com
Contact person: Not available.

1.4. Emergency telephone number

For Chemical Emergency:
Call CHEMTREC day or night
USA/Canada - 1-800-424-9300
Outside USA/Canada
+1 703-527-3887
(collect calls accepted)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended:
This substance does not meet the criteria for classification according to Directive 67/548/EEC as amended.

Classification according to Regulation (EC) No 1272/2008 as amended:
This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary
- Physical hazards: Not classified for physical hazards.
- Health hazards: Not classified for health hazards.
- Environmental hazards: Not classified for hazards to the environment.
- Specific hazards: Dusts or powder may irritate the respiratory tract, skin and eyes.
- Main symptoms: Symptoms can include irritation, redness, scratching of the cornea, and tearing.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended
- Identification number: 15245-12-2
- Hazard pictograms: None.
- Signal word: None.
- Hazard statements: The substance does not meet the criteria for classification.

Precautionary statements
- Prevention: Observe good industrial hygiene practices.
- Response: Wash hands after handling.
Storage
Store away from incompatible materials.

Disposal
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information
Not applicable.

2.3. Other hazards
Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
<th>REACH Registration No.</th>
<th>INDEX No.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Ammonium Nitrate</td>
<td>100</td>
<td>15245-12-2</td>
<td>01-2119493947-16-0004</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Classification:
- DSD: -
- CLP: -

Composition comments
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Contains ammonium nitrate and dolomite.

SECTION 4: First aid measures

General information
If you feel unwell, seek medical advice (show the label where possible).

4.1. Description of first aid measures

Inhalation
Move to fresh air. Get medical attention if any discomfort continues.

Skin contact
Flush skin thoroughly with water. Remove clothing or shoes to prevent further skin contact. Get medical attention if irritation develops and persists.

Eye contact
Dust in the eyes: Do not rub eyes. Flush eyes immediately with large amounts of water. Get medical attention if irritation develops and persists.

Ingestion
If ingestion of a large amount does occur, call a poison control centre immediately.

4.2. Most important symptoms and effects, both acute and delayed
Dust and fumes may irritate eyes, skin and upper respiratory tract. Symptoms can include irritation, redness, scratching of the cornea, and tearing.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards
Dust may form explosive mixture with air.

5.1. Extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media
None known.

5.2. Special hazards arising from the substance or mixture
Closed containers can burst violently when heated, due to excess pressure build-up.

5.3. Advice for firefighters

Special protective equipment for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Special fire fighting procedures
In the event of fire, cool tanks with water spray. Move containers from fire area if you can do it without risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Avoid inhalation of dust and contact with skin and eyes. Ensure adequate ventilation. Use personal protection recommended in section 8 of the SDS.

For emergency responders
Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protection as recommended in section 8 of the SDS.

6.2. Environmental precautions
Prevent further leakage or spillage if safe to do so.
6.3. Methods and material for containment and cleaning up

Stop the flow of material, if this is without risk. Collect dust using a vacuum cleaner. If not possible, gently moisten dust with water fog before it is collected with shovel, broom or the like. Avoid dust formation. After removal flush contaminated area thoroughly with water.

Never return spills to original containers for re-use.

6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Avoid inhalation of dust and contact with skin and eyes. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Dust clouds may be explosive under certain conditions. Take precautionary measures against static discharges when there is a risk of dust explosion. Use explosion-proof electrical equipment if airborne dust levels are high. To prevent and minimise fire or explosion risk from static accumulation and discharge, effectively bond and/or ground product transfer system. Use work methods which minimise dust production. Keep the workplace clean.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool and well-ventilated place. Keep container tightly closed. Store away from incompatible materials. Avoid contact with combustible materials (hay, grain, diesel, etc.).

7.3. Specific end use(s)

Fertiliser

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

<table>
<thead>
<tr>
<th>Additional components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust (CAS -)</td>
<td>TWA</td>
<td>4 mg/m^3</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m^3</td>
<td>Inhalable dust.</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no-effect level (DNEL)

Not available.

Predicted no effect concentrations (PNECs)

Not available.

8.2. Exposure controls

Appropriate engineering controls

Ventilate as needed to control airborne dust. Use explosion-proof ventilation equipment if airborne dust levels are high.

Individual protection measures, such as personal protective equipment

- General information
  Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

- Eye/face protection
  Wear dust-resistant safety goggles with side shields where there is danger of eye contact.

- Skin protection
  Wear protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

- Other
  Risk of contact: Wear appropriate chemical resistant clothing to prevent any possibility of skin contact.

- Respiratory protection
  In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter (type P2).

- Thermal hazards
  Wear appropriate thermal protective clothing, when necessary.

- Hygiene measures
  Do not breathe dust. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practices. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls

Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Appearance
  White or off-white granules or prills. Powder.

- Physical state
  Solid.
Form
Powder. Granules or prills.

Colour
White to off-white.

Odour
Odourless.

Odour threshold
Not available.

pH
> 4.5 (Concentration 10%)

Melting point/freezing point
170 °C (338 °F)

Initial boiling point and boiling range
> 200 °C (> 392 °F) (Decomposes)

Flash point
Not applicable.

Evaporation rate
Not applicable.

Flammability (solid, gas)
Non flammable.

Upper/lower flammability or explosive limits
Flammability limit - lower (%)
Not available.

Flammability limit - upper (%)
Not available.

Vapour pressure
800 - 1000 Pa @20°C (68°F)

Vapour density
Not applicable.

Relative density
Not available.

Solubility(ies)
144 % @ 20 °C

Partition coefficient (n-octanol/water)
Not available.

Decomposition temperature
> 210 °C (> 410 °F)

Viscosity
Not applicable.

Explosive properties
Not available.

Oxidizing properties
Does not meet the criteria as an oxidizer.

9.2. Other information

Bulk density
1.1 g/cm³ @ 20 °C

Molecular formula
Ca.xH3N.xHNO3

SECTION 10: Stability and reactivity

10.1. Reactivity
Stable at normal conditions. Decomposes on heating.

10.2. Chemical stability
Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions
Hazardous polymerisation does not occur.

10.4. Conditions to avoid
Heat, sparks, flames. Contact with incompatible materials. Static discharge and dust generation. Confinement must be avoided.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Nitrogen oxides.

SECTION 11: Toxicological information

General information
Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion
May cause discomfort if swallowed.

Inhalation
May cause irritation to the respiratory system.

Skin contact
Dust may irritate skin.

Eye contact
Dust in the eyes will cause irritation.

Symptoms
Symptoms can include irritation, redness, scratching of the cornea, and tearing.

11.1. Information on toxicological effects

Acute toxicity
May cause discomfort if swallowed.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium ammonium nitrate (CAS 15245-12-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
</tbody>
</table>
Skin corrosion/irritation
Dust may irritate skin.
Serious eye damage/irritation
Dust in the eyes will cause irritation.
Respiratory sensitisation
Not classified.
Skin sensitisation
Not classified.
Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity
IARC not listed.
Reproductive toxicity
Contains no ingredient listed as toxic to reproduction.
Specific target organ toxicity - single exposure
Not classified.
Specific target organ toxicity - repeated exposure
Not classified.
Aspiration hazard
Not classified.
Mixture versus substance information
Not available.
Other information
Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

SECTION 12: Ecological information

12.1. Toxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2. Persistence and degradability
The nitrate ion is the predominant form of plant nutrition. It follows the natural nitrification/denitrification cycle.

12.3. Bioaccumulative potential
No data available on bioaccumulation.

Partition coefficient
n-octanol/water (log Kow)
Not available.

Bioconcentration factor (BCF)
Not available.

12.4. Mobility in soil
The product is soluble in water. Ammonium ion is absorbed by soil.

12.5. Results of PBT and vPvB assessment
Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Residual waste
Dispose of in accordance with local regulations.

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

EU waste code
02 01 09

Disposal methods/information
Dispose of this material and its container to hazardous or special waste collection point. Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR
The product is not covered by international regulation on the transport of dangerous goods.

RID
The product is not covered by international regulation on the transport of dangerous goods.

ADN
The product is not covered by international regulation on the transport of dangerous goods.

IATA
The product is not covered by international regulation on the transport of dangerous goods.

IMDG
The product is not covered by international regulation on the transport of dangerous goods.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Calcium ammonium nitrate
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EU regulations

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I
  Not listed.
- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II
  Not listed.
  Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended
  Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended
  Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended
  Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended
  Not listed.
- Regulation (EC) No. 166/2011 Annex XIV Substances Subject to Authorisation
  Not listed.
- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
  Not listed.
- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work
  Not regulated.
- Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding
  Not regulated.

Restrictions on use

- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
  Not listed.
- Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances
  Not regulated.
- Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
  Not listed.
- Directive 94/33/EC on the protection of young people at work
  Not listed.

Other EU regulations

- Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances
  Not regulated.
- Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
  Not listed.
- Directive 94/33/EC on the protection of young people at work
  Not listed.

Other regulations

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 (CLP Regulation) and Directive 67/548/EEC and their amendments respectively. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

The product has been classified according to the legislation in force.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

- DNEL: Derived No-Effect Level.
- PNEC: Predicted No-Effect Concentration.
- DSD: Directive 67/548/EEC.

References

ECHA registered substances database

Information on evaluation method leading to the classification of mixture

The substance is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

None.

Training information

Follow training instructions when handling this material.
NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.