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

1.1 Product identifier
Trade name Ammonium carbonate

1.2 Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24  Scientific research and development

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Thermo Fisher (Kandel) GmbH
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com

Informing department: Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:
Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz:
www.giftinfo.uni-mainz.de  Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

Other hazards that do not result in classification
No information known.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07

Signal word Warning
Hazard statements
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P362 Take off contaminated clothing and wash before reuse.
P321 Specific treatment (see on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P405 Store locked up.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances
CAS# Designation:
506-87-6 Ammonium carbonate

SECTION 4: First aid measures

4.1 Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.

After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing
Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed
Causes skin irritation.
Harmful if swallowed.
Causes serious eye irritation.
May cause respiratory irritation.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.
SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
- Carbon monoxide and carbon dioxide
- Nitrogen oxides (NOx)
- Ammonia

5.3 Advice for firefighters

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

6.2 Environmental precautions: Do not allow product to reach sewage system or water bodies.

6.3 Methods and material for containment and cleaning up:
Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle under dry protective gas. Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: No information known.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and containers: No special requirements.
Information about storage in one common storage facility:
Store away from water.
Store away from oxidising agents.
Further information about storage conditions:
- Store under dry inert gas.
- This product is hygroscopic.
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed containers.
- Protect from humidity and keep away from water.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters
Components with critical values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: No data

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment.

Breathing equipment: Use breathing protection with high concentrations.
Protection of hands:
Check protective gloves prior to each use for their proper condition. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Material of gloves: Impervious gloves
Eye protection:
- Safety glasses
Face protection:
Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:
- Form: Powder
- Smell: Ammonia-like
- Odour threshold: Not determined.

pH-value:
- Not applicable.

Change in condition
- Melting point/Melting range: 60 °C (subl)
- Boiling point/Boiling range: Not determined
- Sublimation temperature / start: Not determined
- Inflammability (solid, gaseous): Not determined
- Ignition temperature: Not determined
- Decomposition temperature: Not determined
- Self-inflammability: Not determined.

Danger of explosion: Not determined.

(Contd. on page 3)
**SECTION 10: Stability and reactivity**

10.1 Reactivity  No information known.
10.2 Chemical stability  Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions  Reacts with strong oxidising agents
10.4 Conditions to avoid  No further relevant information available.
10.5 Incompatible materials:  Water/moisture, Oxidising agents
10.6 Hazardous decomposition products:  Carbon monoxide and carbon dioxide, Nitrogen oxides (NOx), Ammonia

**SECTION 11: Toxicological information**

11.1 Information on toxicological effects

Acute toxicity:  Harmful if swallowed.
Skin irritation or corrosion:  Causes skin irritation.
Eye irritation or corrosion:  Causes serious eye irritation.
Sensitization:  No sensitizing effect known.
Germ cell mutagenicity:  No effects known.
Carcinogenicity:  No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity:  No effects known.
Specific target organ system toxicity - repeated exposure:  No effects known.
Specific target organ system toxicity - single exposure:  May cause respiratory irritation.
Aspiration hazard:  No effects known.
Subacute to chronic toxicity:  No effects known.
Additional toxicological information:  To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

**SECTION 12: Ecological information**

12.1 Toxicity
Aquatic toxicity:  No further relevant information available.
12.2 Persistence and degradability  No further relevant information available.
12.3 Bioaccumulative potential  No further relevant information available.
12.4 Mobility in soil  No further relevant information available.
Additional ecological information:
General notes:  Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment
PBT:  Not applicable.
vPvB:  Not applicable.
12.6 Other adverse effects  No further relevant information available.

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods
Recommendation
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.
Uncleaned packagings:  Recommendation: Disposal must be made according to official regulations.
Recommended cleaning agent:  Water, if necessary with cleaning agent.

**SECTION 14: Transport information**

UN-Number  Not applicable
ADR, ADN, IMDG, IATA  Not applicable
14.2 UN proper shipping name  ADR, ADN, IMDG, IATA  Not applicable
14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA  Class  Not applicable
14.5 Environmental hazards:  Not applicable.
14.6 Special precautions for user  Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  Not applicable.
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Australian Inventory of Chemical Substances Substance is listed.
Standard for the Uniform Scheduling of Medicines and Poisons Substance is not listed.

National regulations
Information about limitation of use:
Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Other regulations, limitations and prohibitive regulations
ELINCS (European List of Notified Chemical Substances) Substance is not listed.
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
DGHT: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)

Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3