

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ammonium nitrate pure

Revision date: 27.05.2022

Product code: 15198

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

1.1. Product identifier

Ammonium nitrate pure

REACH Registration Number: 01-2119490981-27-XXXX
CAS No: 6484-52-2
EC No: 229-347-8

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

Use of the substance/mixture

Laboratory chemicals
Industrial uses: Uses of substances as such or in preparations at industrial sites
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: Fa. Bernd Kraft GmbH
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
e-mail: info@berndkraft.de
Contact person: Abteilung Produktsicherheit
e-mail: produktsicherheit@berndkraft.de
Internet: www.berndkraft.de
Responsible Department: Abteilung Produktsicherheit
Telefax: 0203/5194-290
Telephone: 0203/5194-107/117

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

No data available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Ox. Sol. 3; H272
Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



Hazard statements

H272 May intensify fire; oxidiser.

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H319 Causes serious eye irritation.

Precautionary statements

P220 Keep away from clothing and other combustible materials.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
 P337+P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: NH₄NO₃
 Molecular weight: 80,04 g/mol

Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
6484-52-2	ammonium nitrate	100 %
	229-347-8	01-2119490981-27-XXXX
	Ox. Sol. 3, Eye Irrit. 2; H272 H319	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
6484-52-2	229-347-8	ammonium nitrate	100 %
	oral: LD50 = 2950 mg/kg		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.
 Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water
 Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

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After ingestion

Rinse mouth immediately and drink plenty of water.
Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Irritant
Vomiting
Gastrointestinal complaints
Circulatory collapse
Blood pressure drop
Spasms
Narcotic effects
Respiratory complaints

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

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Water
Foam

5.2. Special hazards arising from the substance or mixture

Non-combustible solids
Oxidising solids
oxidising
Hazardous combustion products
In case of fire may be liberated:
Ammonia (NH₃)
Nitrogen oxides (NO_x)
Heating may cause an explosion.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.
In case of fire and/or explosion do not breathe fumes.
Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Move undamaged containers from immediate hazard area if it can be done safely.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

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For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

- Read label before use.
- Handle and open container with care.
- When using do not eat, drink, smoke, sniff.
- Keep container tightly closed.
- Use personal protection equipment.
- Do not breathe dust.
- Provide adequate ventilation.

Advice on protection against fire and explosion

- Keep away from sources of ignition - No smoking.
- Keep away from combustible material.

Advice on general occupational hygiene

- Take off contaminated clothing.
- Wash hands before breaks and after work.
- When using do not eat or drink.

Further information on handling

- Take off immediately all contaminated clothing and wash it before reuse.
- Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Keep container tightly closed. Keep in a cool place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- storage temperature +5°C - +30°C

Hints on joint storage

- Keep away from combustible material.

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Further information on storage conditions

Keep cool. Protect from sunlight.
Protect against:
Light
Heat
Humidity

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
6484-52-2	ammonium nitrate		
Worker DNEL, long-term	inhalation	systemic	36 mg/m ³
Worker DNEL, long-term	dermal	systemic	5,12 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	8,9 mg/m ³
Consumer DNEL, long-term	dermal	systemic	2,56 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	2,56 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment	Value	
6484-52-2	ammonium nitrate	
Micro-organisms in sewage treatment plants (STP)	18 mg/l	

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

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Trade name/designation: KCL 741 Dermatril® L
Suitable material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Trade name/designation: KCL 741 Dermatril® L
Suitable material: NBR (Nitrile rubber) 0,11 mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>, <)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Take off immediately all contaminated clothing and wash it before reuse.
Protective clothing
Wash hands and face before breaks and after work and take a shower if necessary.
Draw up and observe skin protection programme.

Respiratory protection

Respiratory protection necessary at: dust formation
Filtering device with filter or ventilator filtering device of type: P2

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: solid
Colour: colourless
Odour: odourless
Odour threshold: No data available

Changes in the physical state

Melting point/freezing point: 169 °C
Boiling point or initial boiling point and boiling range: 210 °C
Sublimation point: No data available
Softening point: No data available
Pour point: No data available
:
Flash point: X

Flammability

Solid/liquid: not determined
Gas: not applicable
Lower explosion limits: not determined
Upper explosion limits: not determined
Auto-ignition temperature: No data available
Self-ignition temperature
Solid: not determined

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Gas:	not applicable
Decomposition temperature:	>180 °C
pH-Value (at 20 °C):	4,5-7 (100 g/l)
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Water solubility: (at 20 °C)	1920 g/L
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	1,72000 g/cm ³
Bulk density:	600-700 kg/m ³
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion:	No data available
Oxidizing properties	
The product is: oxidising, Oxidising.	

Other safety characteristics

Solvent separation test:	No data available
Solvent content:	0
Solid content:	100,00 %
Evaporation rate:	not determined

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

oxidising, Oxidising.

10.2. Chemical stability

Protect against:
Light
Heat

sensitive to impact
sensitive to friction
Moisture-sensitive.
Keep away from heat.
Protect from moisture.
Handle and store contents under inert gas. Protect from moisture.

10.3. Possibility of hazardous reactions

Ammonia

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Hydrocarbons
Metal
Water
Nitric acid
Alkali metals
Alkaline earth metal
Heavy metals
Metal powder
Acid
Base
Combustible substance
Thermal decomposition
Exothermic reaction with: Combustible substance

10.4. Conditions to avoid

Risk of explosion by shock, friction, fire or other sources of ignition.
Remove all sources of ignition.
Keep away from heat.

10.5. Incompatible materials

Keep away from combustible material.
Metal
Steel

10.6. Hazardous decomposition products

Formation of: Oxygen.
SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
6484-52-2	ammonium nitrate				
	oral	LD50 2950 mg/kg	Rat	Study report (1981)	OECD Guideline 401

Irritation and corrosivity

Causes serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

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STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

Irritating to respiratory system.

Further information

Irritant

Vomiting

Gastrointestinal complaints

Circulatory collapse

Blood pressure drop

Spasms

Narcotic effects

Respiratory complaints

SECTION 12: Ecological information

12.1. 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

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

No data available

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

No data available

12.7. Other adverse effects

Do not empty into drains.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Handle contaminated packages in the same way as the substance itself.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1942
14.2. UN proper shipping name:	Ammonium nitrate
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	III
Hazard label:	5.1
Classification code:	O2
Special Provisions:	306 611
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	50
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1942
14.2. UN proper shipping name:	Ammonium nitrate
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	III
Hazard label:	5.1
Classification code:	O2
Special Provisions:	306 611
Limited quantity:	5 kg
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1942
14.2. UN proper shipping name:	Ammonium nitrate
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	III
Hazard label:	5.1
Special Provisions:	900, 952, 967
Limited quantity:	5 kg
Excepted quantity:	E1
EmS:	F-H, S-Q

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1942
14.2. UN proper shipping name:	Ammonium nitrate
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	III
Hazard label:	5.1
Special Provisions:	A64 A803
Limited quantity Passenger:	10 kg
Passenger LQ:	Y546

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Excepted quantity:	E1	
IATA-packing instructions - Passenger:		559
IATA-max. quantity - Passenger:		25 kg
IATA-packing instructions - Cargo:		563
IATA-max. quantity - Cargo:		100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Oxidising substances.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):
Entry 58

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D): 1 - slightly hazardous to water

SECTION 16: Other information

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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H272 May intensify fire; oxidiser.
H319 Causes serious eye irritation.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.