

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 30.03.2015

Version: 1. 0

Revision: 30.03.2015

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

- **1.1 Product identifier**
- **Trade name:** **ENTEC base**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against:** No further relevant information available.
- **Application of the substance / the preparation:** Fertiliser
- **Uses advised against -**
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier/Manufacturer:**
Eurochem Agro Hellas SA
Mesogion Str. 249
154 51 Neo Psychiko
Tel.: +30 211 17 69 170
Fax. : +30 211 17 69 152
E-mail: info@eurochemagro.gr
- **Email competent person:** sds@kft.de
- **Information department:** See supplier/manufacturer
- **1.4 Emergency telephone number:**
Notruf: National Poisoning Center: +30 210 7793777
Τηλ. Κέντρου Δηλητηριάσεων: +30 210 7793777

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008** The product is not classified according to the CLP regulation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** not applicable
- **Information concerning particular hazards for human and environment:**
No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.
- **Classification system:**
Classification is not based on Dangerous Preparations Directive 1999/45/EC, because the ammonium nitrate precursor was not classified as eye irritant by the manufacturer, based on his own test results.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Additional information:**
Safety data sheet available on request.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable
- **vPvB:** Not applicable

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Straight Nitrogen fertilizer contains: Ammonium Nitrate

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· Dangerous components:

CAS: 6484-52-2 ammonium nitrate

EINECS: 229-347-8 Xi R36; O R8

10-70%

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

· Additional information: For the wording of the listed risk phrases refer to section 16.**SECTION 4: First aid measures****· 4.1 Description of first aid measures****· General information:**

First aid personnel should pay attention to their own safety.

If symptoms persist or in case of doubt, seek medical advice.

· After inhalation:

Supply fresh air; consult a doctor in case of pain.

As soon as possible glucocorticoid dose aerosol can breathe repeated deep inhalation.

In case of unconsciousness, place patients on their side in a stable position for transportation.

· After skin contact: Wash with water and soap.**· After eye contact:**

Rinse the eyes with open eyelids for 10 - 15 minutes with water.

If symptoms persist, consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Call a doctor immediately.

· 4.2 Most important symptoms and effects, both acute and delayed Irritation of eyes and mucous membrane**· 4.3 Indication of any immediate medical attention and special treatment needed** Symptomatic treatment**SECTION 5: Firefighting measures****· 5.1 Extinguishing media****· Suitable extinguishing agents:**

Water

Use fire fighting measures that suit the environment.

· For safety reasons unsuitable extinguishing agents:

Sand

Foam

Carbon dioxide

Extinguishing powder

· 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

Ammonia

Chlorine

Hydrogen chloride (HCl)

Nitrous gases. Persons who may have inhaled nitrous gases are to be laid down and kept rested. Call a doctor immediately.

Sulphur oxides (SOx)

Phosphorus compounds

Persons who have inhaled fire effluents require medical observation for at least 48 hours. Symptoms of poisoning may even occur several hours after the accident.

· 5.3 Advice for firefighters**· Protective equipment:** Wear self-contained respiratory protective device.

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Additional information:

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation.
Avoid formation of dust.

6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.
Keep contaminated washing water and dispose of appropriately.

6.3 Methods and material for containment and cleaning up:

Make sure to recycle or dispose of in suitable receptacles.
Avoid any dust formation. Pick up with a tested and approved industrial vacuum cleaner if necessary.
Pick up mechanically.

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 disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.
Avoid contact with eyes and skin.
Prevent formation of dust.
Any deposit of dust which cannot be avoided must be regularly removed.

Information about protection against explosions and fires:

Protect from heat.
Keep away from combustible substances.
The product is not flammable.
Substance/product can reduce the ignition temperature of flammable substances.
Observe the general rules of industrial fire protection.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Store cool and dry.
Protect from atmospheric humidity.
Not required

Information about storage in one common storage facility:

Follow local requirements for the storage in one common storage facility of ammonium nitrate.
Store away from foodstuffs.
Store away from feed.
In case of bulk storage, do not mix with other fertilizers.
Refer to national regulations for storing hazardous chemicals.

Further information about storage conditions:

Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
(Product is hygroscopic, clumping together or decomposition possible).

Storage class: 5.1C: Ammonium nitrate and preparations containing ammonium nitrate

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- **7.3 Specific end use(s)** Follow the directions!
-

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:**

Mechanical ventilation/exhaustion is strongly recommended.
No further data; see section 7.

- **8.1 Control parameters**

- **Components with limit 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.

- **DNELs**

Abbreviations:

In = Industrial

Prof = Professional

Cons = Consumer

LLE = Long term, local effects

LSE = Long term, systemic effects

SLE = Short term, local effects

SSE = Short term, systemic effects

- **6484-52-2 ammonium nitrate**

Oral DNEL/Cons/LSE 12.8 mg/kg bw/day (human)

Dermal DNEL/Cons/LSE 12.8 mg/kg bw/day (human)

DNEL/In/LSE 21.3 mg/kg bw/day (human)

Inhalative DNEL/Cons/LSE 11.1 mg/m³ (human)

DNEL/In/LSE 37.6 mg/m³ (human)

- **PNECs**

Abbreviations:

aq = aqua

sed = sediment

- **6484-52-2 ammonium nitrate**

PNEC 18 mg/l (sewage treatment plant)

PNEC/Aq 0.45 mg/l (fresh water)

4.5 mg/l (intermittent release)

0.045 mg/l (marine water)

- **Additional information:** The lists that were valid during the creation were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Avoid contact with eyes and skin.

Use skin protection cream for skin protection.

Wash hands before breaks and at the end of work.

Vacuum contaminated clothing. Do not blow or brush off contamination.

- **Breathing equipment:**

Not necessary if room is well-ventilated

At formation of dust:

Dust protection mask

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· Protection of hands:

Chemical resistant gloves (EN 374)

After use of gloves apply skin-cleaning agents and skin cosmetics.

The glove material has to be impermeable and resistant to the product/substance/preparation.

Due to missing tests no recommendation to the glove material can be given for the product / preparation / chemical mixture.

Selection of the glove material in consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves:

For undissolved solid substances following materials may be suitable:

nitrile rubber (NBR), butyl rubber (BR), fluorocarbon rubber (FKM) and polychloroprene rubber (CR)

The selection of suitable gloves depends upon the material, and also upon the quality of the gloves. The degree of protection will vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material:

The exact penetration time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses**· Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties**· General Information:****· Appearance:****Form:** Granulate**Colour:** Green**· Odour:** Nearly odourless**· Odour threshold:** Not determined**· pH-value (100 g/l) at 20 °C:** 5
In aqueous solution**· Change in condition:****Melting point/Melting range:** Not determined**Boiling point/Boiling range:** Not determined**· Flash point:** Not applicable**· Flammability (solid, gaseous):** Contact with combustible material may cause fire.**· Ignition temperature:****Decomposition temperature:** >130 °C**· Self ignition temperature:** Product is not self-igniting.**· Danger of explosion:** Product does not present an explosion hazard.**· Explosion limits:****Lower:** Not determined**Upper:** Not determined**· Vapour pressure:** Not applicable**· Density:** Not determined**· Bulk density:** 1100 kg/m³**· Relative density:** Not determined**· Vapour density:** Not applicable

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· Evaporation rate:	Not applicable
· Solubility in / Miscibility with Water:	Largely soluble
· Partition coefficient (n-octanol/water):	Not determined
· Viscosity:	
dynamic:	Not applicable
kinematic:	Not applicable
· 9.2 Other information	No further relevant information available

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications
To avoid thermal decomposition do not overheat.
Avoid temperatures above 130 °C.
- **10.3 Possibility of hazardous reactions**
Reacts with alkalis releasing ammonia.
The formation of gaseous decomposition products occur in tightly closed containers pressure.
- **10.4 Conditions to avoid** Conditions to be avoided: see chapter 7.
- **10.5 Incompatible materials:**
Acidic reacting substances
Alkaline reacting substances
Flammable, oxidisable substances
- **10.6 Hazardous decomposition products:**
On heating the solution above >130 °C. decomposition with the formation of:
Nitrogen oxides (NOx)
Ammonia
Chlorine
Hydrogen chloride (HCl)
No hazardous decomposition products if instructions for storage and handling are followed

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
The product itself has not been tested. Information is based on products of similar structure and composition.
Oral LD₅₀ >2950 mg/kg (rat)
- **6484-52-2 ammonium nitrate**
Oral LD₅₀ 2950 mg/kg (rat) (OECD 401)
The mortalities indicated a LD50 value in the range of 1205-5000 mg/kg.
Acute inhalation toxicity: > 88,8 mg/l, No information available., Not relevant because of low vapour pressure., Not relevant because of low dust formation.
NOAEL* >1500 mg/kg (rat)
28 days
Rat, Oral, Exposure time: 52 w, NOAEL: = 256 mg/kg, OECD- Method 453

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- Dermal LD₅₀ >5000 mg/kg (rat) (OECD 402)
- **Primary irritant effect:**
- **on the skin:**
 - No irritating effect
 - OECD 404
- **on the eye:**
 - No irritating effect
 - OECD 405
- **Sensitisation:** No sensitising effects known
- **Other information (about experimental toxicology):**
- **Carcinogenic, mutagenic effects and adverse effects on reproduction:**
 - Presently available data show no carcinogenic, mutagenic or teratogenic effects.
- **Subacute to chronic toxicity:**
- **STOT-single exposure** No classification
- **STOT-repeated exposure:** No classification
- **Aspiration hazard** Not relevant
- **Additional toxicological information:**
 - The product itself was not tested. Toxicological results are based on the single components.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
 - EC₂₀ >100 mg/l (activated sludge)
0,5h
 - EC₅₀/48h 555 mg/l (Daphnia sp.)
 - LC₅₀/48h 422 mg/l (Cyprinus carpio)
 - NOEC 83 mg/l (Algae)
168h
- **6484-52-2 ammonium nitrate**
 - EC₅₀ 1700 mg/l (Algae)
490 mg/l (Daphnia magna)
 - LC₅₀ 490 mg/l (Daphnia magna)
 - LC₅₀/48h 447 mg/l (Cyprinus carpio)
 - LC₅₀/96h >100 mg/l (fish)
- **12.2 Persistence and degradability** Not applicable for inorganic substances.
- **12.3 Bioaccumulative potential** Bioaccumulation is unlikely. The product hydrolyses rapidly.
- **12.4 Mobility in soil** No further relevant information available
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous to water
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 - Danger to drinking water is possible if large quantities leak into the ground or into water course.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable
- **vPvB:** Not applicable
- **12.6 Other adverse effects** No further relevant information available

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SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Product is used as a fertilizer. Check the possibility for agricultural use before landfilling.

Disposal according to instructions of local authorities

Must be recycled or disposed of according to the regulations. Waste has to be classified according to the European Waste Catalogue based on the identification of the waste generating source.

- **European waste catalogue:**

02 00 00 WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING

02 01 00 wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing

02 01 08* agrochemical waste containing dangerous substances

- **Uncleaned packagings:**

- **Recommendation:**

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Disposal must be made according to official regulations.

- **Recommended cleansing agent:** Water; if necessary, with cleansing agents

SECTION 14: Transport information

· 14.1 UN-Number	
· ADR, ADN, IMDG, IATA	Void
· 14.2 UN proper shipping name	
· ADR, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· 14.4 Packing group	
· ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 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
· Transport/Additional information:	Not dangerous according to the above regulations
· UN "Model Regulation":	-

SECTION 15: Regulatory information

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

- **National regulations**

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

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

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H272 May intensify fire; oxidiser.

H319 Causes serious eye irritation.

R36 Irritating to eyes.

R8 Contact with combustible material may cause fire.

Department issuing MSDS:

KFT Chemieservice GmbH

Im Leuschnerpark. 3 64347 Griesheim

Postfach 1451 64345 Griesheim

Germany

Phone: +49 6155 86829-0 Fax: +49 6155 86829-25

Safety Data Sheet Service: +49 6155 86829-22

Contact: Barbara Stark**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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised 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 (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Ox. Sol. 3: Oxidising Solids, Hazard Category 3

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Sources:

MSDSs of the suppliers

ASSESSMENT OF AMMONIUM NITRATE BASED FERTILIZERS AS EYE IRRITANT FOR CLASSIFICATION PURPOSES

Report prepared by Fertilizers Europe/July 2011