SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 14-Aug-2020 **Revision date** 14-Aug-2020 **Revision Number** 1.01

1. Identification

1.1. Product identifier

Product Name ENTEC® 24-8-7

Product Code(s) 5580_PT_01

Synonyms ENTEC® NPK[MOP] 24:8:7(+5SO3)

Substance/mixture Multi-constituent substance

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

Recommended use Fertilizers. Industrial. Professional.

Uses advised against Consumer use

Reason why uses advised against Provisions for explosives precursors

1.3. Details of the supplier of the safety data sheet

Manufacturer
EuroChem Antwerpen NV,
Haven 725,
B-2040 Antwerpen

Supplier
EuroChem Group AG
Baarerstrasse 37
CH-6300 Zug - Switzerland
Phone +41 41 72 77 6 00
Fax +141 41 727 76 06

Distributor
EuroChem Agro Iberia S.L.
Tànger, 98 esc.B
E-08018 Barcelona
www.eurochemagro.es

For further information, please contact
E-mail address ra.sds@eurochemgroup.com

1.4. Emergency telephone number

Emergency Telephone Carechem 24 +44 1235 239670

Europe	**112**
Portugal	Centro de Informação Antivenenos (Portuguese Poison Centre) Rua Almirante Barroso, 36 1000-013 Lisboa Tel: 800-250-250

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2 - (H319)

2.2. Label elements

Signal word
Warning

Hazard statements
H319 - Causes serious eye irritation

Precautionary Statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear eye protection/ face protection
P337 + P313 - If eye irritation persists: Get medical advice/attention

Additional information
None.

2.3. Other hazards
The product does not contain any substance(s) classified as PBT or vPvB.

3. Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Ammonium nitrate	229-347-8	6484-52-2	50-<70	Eye Irrit. 2 (H319), Oxid. Solid 3 (H272)	01-2119490981-27-xxxx
Ammonium dihydrogenortophosphate	231-764-5	7722-76-1	5-<10	Not classified	01-2119488166-29-0008
Ammonium chloride	235-186-4	12125-02-9	0-<10	Acute Tox. 4 (H302) Eye Irrit. 2 (H319)	01-2119487950-27-xxxx
Ammonium sulphate	231-984-1	7783-20-2	1-<5	Not classified	01-2119455044-46-0135
Diammonium hydrogenorthophosphate	231-987-8	7783-28-0	<1	Not classified	01-2119490974-22-0026
1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1) (DMPP)	-	202842-98-6	0.1-<0.3	Acute Tox. 4 (H302) Eye Irrit. 2 (H319) Repr. 2 (H361fd) STOT RE 2 (H373)	01-0000017109-71-0001

Full text of H- and EUH-phrases: see section 16

4. First-aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

Symptoms	Burning sensation.

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

Note to physicians	Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	No information available.

5.3. Advice for firefighters

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.
General hygiene considerations:	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specific use(s)
No information available.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure Limits .

Chemical name	European Union	United Kingdom	France	Spain	Germany	Czech Republic	Croatia	Slovenia
Ammonium nitrate 6484-52-2	-	-	-	-	-	TWA: 10.0 mg/m³		
Ammonium chloride 12125-02-9	-	TWA: 10 mg/m³ STEL: 20 mg/m³	TWA: 10 mg/m³	TWA: 10 mg/m³ STEL: 20 mg/m³	-	TWA: 5 mg/m³ Ceiling: 10 mg/m³	TWA: 10 mg/m³ STEL: 20 mg/m³	
Calcium sulphate 7778-18-9	-	-	TWA: 10 mg/m³	TWA: 10 mg/m³	TWA: 6 mg/m³			TWA: 6 mg/m³
Calcium fluoride 7789-75-5	-	-	-	-	TWA: 1 mg/m³			

Chemical name	Italy	Portugal	Netherlands	Finland	Denmark	Romania	Hungary	Estonia
Ammonium chloride 12125-02-9	-	TWA: 10 mg/m³ STEL: 20 mg/m³	-	-	TWA: 10 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³		
Calcium sulphate 7778-18-9	-	TWA: 10 mg/m³	-	-	-		TWA: 6 mg/m³	
Calcium fluoride 7789-75-5	-	TWA: 2.5 mg/m³	-	-	TWA: 2.5 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³	TWA: 2.5 mg/m³ STEL: 10 mg/m³ b*	TWA: 2.5 mg/m³

Chemical name	Austria	Switzerland	Poland	Norway	Ireland	Lithuania	Bulgaria	Slovakia	Latvia
Potassium nitrate 7757-79-1	-	-	-	-	-	TWA: 5 mg/m³	TWA: 5.0 mg/m³		TWA: 5 mg/m³
Potassium chloride 7447-40-7	-	-	-	-	-	TWA: 5 mg/m³	TWA: 5.0 mg/m³		TWA: 5 mg/m³
Ammonium chloride 12125-02-9	-	TWA: 3 mg/m³	STEL: 20 mg/m³ TWA: 10 mg/m³	TWA: 10 mg/m³ STEL: 15 mg/m³	TWA: 10 mg/m³ STEL: 20 mg/m³	TWA: 10 mg/m³	TWA: 10.0 mg/m³		TWA: 10 mg/m³
Ammonium sulphate 7783-20-2	-	-	-	-	-		TWA: 10.0 mg/m³		TWA: 0.02 mg/m³
Calcium sulphate 7778-18-9	TWA: 5 mg/m³ STEL 10 mg/m³	TWA: 3 mg/m³	TWA: 10 mg/m³	-	TWA: 10 mg/m³ STEL: 30 mg/m³		TWA: 10.0 mg/m³	TWA: 4 mg/m³ TWA: 1.5 mg/m³	TWA: 4 mg/m³
Calcium hydrogenorthophosphate 7757-93-9	-	-	-	-	-				TWA: 10 mg/m³
Calcium fluoride 7789-75-5	-	-	TWA: 2 mg/m³	-	TWA: 2.5 mg/m³	TWA: 2.5 mg/m³		TWA: 2.5 mg/m³	TWA: 0.5 mg/m³

					STEL: 7.5 mg/m³				STEL: 2.5 mg/m³
Diammonium hydrogenorthophosphate 7783-28-0	-	-	-	-	-				TWA: 6 mg/m³

Derived No Effect Level (DNEL) **worker**

Derived No Effect Level (DNEL)
Ammonium nitrate (6484-52-2)

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects	Dermal	5.12 mg/kg bw/day	50
Long term Systemic health effects	Inhalation	36 mg/m³	12.5

Ammonium chloride (12125-02-9)

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects	Dermal	190 mg/kg bw/day	36
Long term Systemic health effects	Inhalation	33.5 mg/m³	36

Derived No Effect Level (DNEL) **Consumer**

Derived No Effect Level (DNEL)
Ammonium nitrate (6484-52-2)

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects	Oral	2.56 mg/kg bw/day	100
Long term Systemic health effects	Dermal	2.56 mg/kg bw/day	100
Long term Systemic health effects	Inhalation	8.9 mg/m³	25

Ammonium chloride (12125-02-9)

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects	Oral	11.4 mg/kg bw/day	60
Long term Systemic health effects	Inhalation	9.9 mg/m³	60
Long term Systemic health effects	Dermal	114 mg/kg bw/day	60

Predicted No Effect Concentration (PNEC)
Ammonium nitrate (6484-52-2)

Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.45 mg/l
Marine water	0.045 mg/l
Freshwater sediment	4.5 mg/l
Impact on Sewage Treatment	18 mg/l

Ammonium chloride (12125-02-9)

Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	1.2 mg/l
Marine water	11.2 mg/l
Freshwater sediment	0.9 mg/kg dry weight
Marine sediment	0.09 mg/kg dry weight
Soil	0.163 mg/kg dry weight
Impact on Sewage Treatment	16.2 mg/l

8.2. Exposure controls

Personal protective equipment

Eye/face protection	Use eye protection according to EN 166.
Hand protection	Nitrile rubber. Butyl rubber. Rubber gloves. Wear suitable gloves tested to EN 374.
Skin and body protection	Wear suitable protective clothing. EN 340.
Respiratory protection	(FFP1).
General hygiene considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.
Environmental exposure controls	No information available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	granules
Color	green
Odor	Organic.
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	4.5 - 5.5	100 g/l @ 100 °C
Melting point / freezing point	No data available	No data available
Boiling point / boiling range	No data available	Not applicable
Flash point	No data available	Not applicable
Evaporation rate	No data available	Not applicable
Flammability (solid, gas)	No data available	No information available
Flammability Limit in Air		Not applicable
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	Not applicable
Vapor density	No data available	Not applicable
Relative density	No data available	No data available
Water solubility	No data available	Soluble in water
Solubility(ies)	No data available	
Partition coefficient	No data available	No data available
Autoignition temperature	No data available	Not applicable
Decomposition temperature	>130°C	UN S.1 - Negative
Kinematic viscosity	No data available	Not applicable
Dynamic viscosity	No data available	Not applicable
Explosive properties	No information available	Not an explosive
Oxidizing properties	Non-oxidizing	based on components

9.2. Other information

Bulk density	1100 kg/m ^{3}
Granulometry	3 - 3.6 mm (90%)
Particle Size	3 - 3.6 mm
Angle of Repose (°)	31-37
Corrosive to metals	Corrosive under humid conditions

10. Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

None known based on information supplied.

10.5. Incompatible materials

None known based on information supplied.

10.6. Hazardous decomposition products

None known based on information supplied.

11. Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. based on components. May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	May cause redness and tearing of the eyes.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	2,330.40 mg/kg

ATEmix (dermal) 9,017.80 mg/kg

Unknown acute toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium nitrate	= 2950 mg/kg (Rat)	> 5000 mg(kg (Rat)	> 88.8 mg/L (Rat) 4 h
Ammonium dihydrogenortophosphate	= 5750 mg/kg (Rat)	> 7940 mg/kg (Rabbit)	
Ammonium chloride	= 1410 mg/kg (Rat)		
Ammonium sulphate	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	
Diammonium hydrogenorthophosphate	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization Based on available data, the classification criteria are not met.

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

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

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

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard No information available.

12. Ecological information

12.1. Toxicity

Ecotoxicity

Unknown aquatic toxicity: Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ammonium nitrate	-	LC50: 447 mg/L (48h, Cyprinus carpio)	-	-
Ammonium chloride	-	LC50: =209mg/L (96h, Cyprinus carpio) LC50: =725mg/L (24h, Lepomis macrochirus)	-	LC50: =202mg/L (24h, Daphnia magna)

Ammonium sulphate	-	LC50: =250mg/L (96h, Brachydanio rerio) LC50: >100mg/L (96h, Pimephales promelas) LC50: =126mg/L (96h, Poecilia reticulata) LC50: =480mg/L (96h, Brachydanio rerio) LC50: =420mg/L (96h, Brachydanio rerio) LC50: 32.2 - 41.9mg/L (96h, Oncorhynchus mykiss) LC50: =18mg/L (96h, Cyprinus carpio) LC50: 123 - 128mg/L (96h, Poecilia reticulata) LC50: 460 - 1000mg/L (96h, Leuciscus idus) LC50: 5.2 - 8.2mg/L (96h, Oncorhynchus mykiss)	-	EC50: =423mg/L (24h, Daphnia magna) LC50: =14mg/L (48h, Daphnia magna)
Diammonium hydrogenorthophosphate	-	LC50: 24.8 - 29.4mg/L (96h, Oncorhynchus mykiss) LC50: =33mg/L (96h, Pimephales promelas) LC50: =26.5mg/L (96h, Oncorhynchus mykiss) LC50: =3.3mg/L (96h, Pimephales promelas)	-	-

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

There is no data for this product.

Component Information

Chemical name	Partition coefficient	Remarks
Ammonium nitrate	-3.1	
Ammonium sulphate	-5.1	
1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1) (DMPP)	1.26	

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Ammonium nitrate	The substance is not PBT / vPvB PBT assessment does not apply Further information relevant for the PBT assessment is necessary
Ammonium dihydrogenortophosphate	The substance is not PBT / vPvB PBT assessment does not apply
Ammonium chloride	The substance is not PBT / vPvB PBT assessment does

	not apply
Ammonium sulphate	The substance is not PBT / vPvB PBT assessment does not apply
Diammonium hydrogenorthophosphate	The substance is not PBT / vPvB PBT assessment does not apply

12.6. Other adverse effects

No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

Waste codes / waste designations according to EWC / AVV Waste codes should be assigned by the user based on the application for which the product was used.

14. Transport information

Note: This material is not subject to regulation as a hazardous material for shipping

ADR

14.1 UN Number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special precautions for user None

RID

14.1 UN Number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special precautions for user None

ADN

14.1 UN/ID no. Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special precautions for user None

IMDG

14.1 UN Number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Marine pollutant Not applicable
14.6 Special precautions for user None
IMSBC Code C

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

IATA	Not regulated
14.1 UN Number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	None

15. Regulatory information

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

European Union

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Commission Regulation (EU) No 2015/830 of 28 May 2015

Authorizations and/or restrictions on use:
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Persistent Organic Pollutants:	Not applicable
Fertiliser regulation:	Fertiliser regulation (EC) 2003/2003
Provisions for explosives precursors:	This product is subject to Regulation (EU) 98/2013. All suspicious transactions, disappearances and thefts should be reported to the relevant authority.
Dangerous substance category per Seveso Directive (2012/18/EU):	Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009: Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

National regulations	Not applicable

15.2. Chemical safety assessment

Chemical Safety Report	Chemical safety assessments for substances in this mixture were not carried out

16. Other information

Revision Note	The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H302 - Harmful if swallowed
H319 - Causes serious eye irritation
H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure

Legend
SVHC: Substances of Very High Concern

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Revision date 14-Aug-2020

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet