

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006

Enforce® Basic 15-5-8



Version: 1.0
Date of last issue: -
Date of first issue: 17.01.2024

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

1.1 Product identifier

Trade name : Enforce® Basic 15-5-8

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

Use of the Substance/Mixture : Fertiliser

1.3 Details of the supplier of the safety data sheet

Company : COMPO EXPERT GmbH
Krögerweg 10
D-48155 Münster

Telephone : +49 (0) 251 29 79 81 – 000

Telefax : +49 (0) 251 29 79 81 - 111

E-mail address of person responsible for the SDS : info@compo-expert.com

1.4 Emergency telephone number

GBK GmbH - Global Regulatory Compliance - 24h
Telephone: +49 (0) 6132 - 84463

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Supplemental Hazard Statements : EUH210 Safety data sheet available on request.

Further information : German "Hazardous Substances" legislation (Gefahrstoffverordnung) appendix I, No. 5 (Ammonium Nitrate group C III)

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2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Fertiliser

: NPK - fertilizer contains: N,N'-(2-Methylpropylidene)-bis-urea, ammonium nitrate, potassium salt, ammonium salt, phosphate, magnesium salt, calcium salt, trace element combination.

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
ammonium nitrate	6484-52-2 229-347-8 01-2119490981-27-XXXX	Ox. Sol. 3; H272 Eye Irrit. 2; H319	> 5 - < 45
Sulfuric acid, iron(2+) salt (1:1), monohydrate	17375-41-6	Acute Tox. 4; H302 Eye Irrit. 2; H319 Skin Irrit. 2; H315	>= 1 - < 3

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled : Move to fresh air.
Obtain medical attention.
If unconscious, place in recovery position and seek medical advice.
In case of lung irritation, first treatment with dexametason aerosol (spray).

In case of skin contact : Wash off with soap and water.

In case of eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed : Clean mouth with water and drink afterwards plenty of water.

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4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Ingestion may provoke the following symptoms:
Methaemoglobinemia

Risks : Later control for pneumonia and lung oedema.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.
There is no specific antidote available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water

Unsuitable extinguishing media : Foam
Dry chemical
Carbon dioxide (CO₂)
Sand

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Thermal decomposition can lead to release of irritating gases and vapours.
Nitrogen oxides (NO_x)
ammonia

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Keep away from children.

6.2 Environmental precautions

Environmental precautions : Do not empty into drains.
Retain and dispose of contaminated wash water.

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6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Keep away from direct sunlight.
Keep away from heat.
Protect from contamination.
Protect from moisture.

Advice on protection against fire and explosion : The product is not flammable. Keep away from heat and sources of ignition. Keep away from combustible materials.

Hygiene measures : Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep away from heat. Keep away from sources of ignition - No smoking. Keep away from combustible material. Protect from contamination. When stored loose do not mix with other fertilizers. Protect from moisture.

Advice on common storage : Keep away from strong acids.
Keep away from strong bases.
Keep away from combustible materials.

Storage class (TRGS 510) : 5.1C, Ammonium nitrate and ammonium nitrate containing preparations

Dampness : Keep in a dry place.

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sulfuric acid, iron(2+) salt (1:1),	17375-41-6	TWA	1 mg/m ³	GB EH40

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monohydrate				
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Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
ammonium nitrate	Workers	Inhalation	Long-term systemic effects	36 mg/m ³
	Workers	Skin contact	Long-term systemic effects	5,12 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	2,56 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	8,9 mg/m ³
	Consumers	Skin contact, Ingestion	Long-term systemic effects	2,56 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
ammonium nitrate	Sewage treatment plant	18 mg/l

8.2 Exposure controls

Personal protective equipment

Eye protection : In case of dust formation:

Safety glasses

Hand protection

Material : Gloves

Skin and body protection : No special protective equipment required.

Respiratory protection : Breathing apparatus only if aerosol or dust is formed.

Respirator with a particle filter (EN 143)

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P1 filter

Environmental exposure controls

General advice : Do not empty into drains.
Retain and dispose of contaminated wash water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : solid, granular

Colour : red brown

Odour : No information available.

Odour Threshold : No data available

pH : 5, Concentration: 100 g/l (20 °C)

Melting point/range : No data available

Boiling point/boiling range : Not applicable

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : The product is not flammable.

Upper explosion limit : Not applicable

Lower explosion limit : Not applicable

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : Not applicable

Solubility(ies)
Water solubility : soluble

Partition coefficient: n-octanol/water : Not applicable

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Decomposition temperature	: > 130 °C	To avoid thermal decomposition, do not overheat.
Viscosity		
Viscosity, dynamic	: Not applicable	
Viscosity, kinematic	: Not applicable	
Explosive properties	: No data available	
Oxidizing properties	: No data available	

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.
Decomposes on heating.

10.3 Possibility of hazardous reactions

Hazardous reactions : Evolution of ammonia under influence of alkalis.

10.4 Conditions to avoid

Conditions to avoid : Keep away from heat and sources of ignition.

10.5 Incompatible materials

Materials to avoid : Sulphur, chlorites, chloride, chlorates, Hypochlorites, acid or alkaline reacting substances, flammable oxidizable substances, nitrites, metallic salts, metallic powder, herbicide, chlorinated hydrocarbons, organic compounds.

10.6 Hazardous decomposition products

Hazardous decomposition products : Nitrogen oxides (NOx)
ammonia

SECTION 11: Toxicological information

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

Acute toxicity

Product:

- Acute oral toxicity : Remarks: Based on available data, the classification criteria are not met.
- Acute inhalation toxicity : Remarks: Based on available data, the classification criteria are not met.
- Acute dermal toxicity : Remarks: Based on available data, the classification criteria are not met.

Components:

ammonium nitrate:

- Acute oral toxicity : LD50 (Rat): > 2.950 mg/kg
Method: OECD Test Guideline 401
- Acute inhalation toxicity : > 88,8 mg/l
Method: No information available.
- Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 402

Sulfuric acid, iron(2+) salt (1:1), monohydrate:

- Acute oral toxicity : LD50 Oral (Rat): 319 mg/kg

Skin corrosion/irritation

Product:

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

Components:

ammonium nitrate:

Species: Rabbit
Method: OECD Test Guideline 404
Result: non-irritant

Serious eye damage/eye irritation

Product:

Remarks: No eye irritation
Based on data from similar materials

Components:

ammonium nitrate:

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Species: Rabbit
Method: OECD Test Guideline 405
Result: Irritant

Respiratory or skin sensitisation

Product:

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

Components:

ammonium nitrate:

Result: Does not cause skin sensitisation.

germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: Based on available data, the classification criteria are not met.

Components:

ammonium nitrate:

Genotoxicity in vitro : Method: OECD Test Guideline 471
Result: negative

Carcinogenicity

Product:

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

Components:

ammonium nitrate:

Species: Rat

Remarks: Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Product:

Effects on fertility :
Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development : Remarks: Based on available data, the classification criteria are not met.

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Components:

ammonium nitrate:

Effects on fertility : Species: Rat

Remarks: Animal testing did not show any effects on fertility.

Effects on foetal : Species: Rat

development : Remarks: Did not show teratogenic effects in animal experiments.

STOT - single exposure

Product:

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

STOT - repeated exposure

Product:

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

Repeated dose toxicity

Components:

ammonium nitrate:

Species: Rat
NOAEL: > 1.500 mg/kg
Application Route: Oral
Exposure time: 28 d

Species: Rat
NOAEL: = 256 mg/kg
Application Route: Oral
Exposure time: 52 w
Method: OECD Test Guideline 453

Species: Rat
NOAEL: >= 185 mg/kg
Application Route: by inhalation
Exposure time: 2 w
Method: Repeated Dose Inhalation Toxicity: 28-day or 14-day Study.

Aspiration hazard

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

11.2 Information on other hazards

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Endocrine disrupting properties

No data available

Experience with human exposure

Product:

General Information : Danger of methaemoglobin formation.

Further information

Product:

Remarks: The product has not been tested. The information is derived from the properties of the individual components.

SECTION 12: Ecological information

12.1 Toxicity

Components:

ammonium nitrate:

Toxicity to fish : LC50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 490 mg/l
Exposure time: 48 h

LC50 : 490 mg/l

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 1.700 mg/l
Exposure time: 10 d

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

ammonium nitrate:

Biodegradability : Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Components:

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ammonium nitrate:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-
octanol/water : log Pow: -3,1

12.4 Mobility in soil

Product:

Mobility : Remarks: Groundwater contamination is unlikely.

Distribution among
environmental compartments : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : Remarks: No data available

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Product:

Additional ecological
information : Information refers to the main component.
Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local and national regulations.
Do not flush into surface water, groundwater or sanitary sewer
system.

Contaminated packaging : Contaminated packaging should be emptied as far as
possible; then it can be passed on for recycling after being
thoroughly cleaned.
Packs that cannot be cleaned should be disposed of in the
same manner as the contents.
Observe national and local legal requirements.

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

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14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Segregation group : : (-)

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not listed

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Water hazard class (Germany) : WGK 1 slightly hazardous to water

Other regulations : This product is subject to Regulation (EU) 2019/1148; suspicious transactions, disappearance or theft of the product must be reported to the relevant authority.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

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Full text of H-Statements

H272 : May intensify fire; oxidizer.
H302 : Harmful if swallowed.
H315 : Causes skin irritation.
H319 : Causes serious eye irritation.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Eye Irrit. : Eye irritation
Ox. Sol. : Oxidizing solids
Skin Irrit. : Skin irritation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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

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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.

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