

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006

NovaTec® Eco FL



Version: 1.7
Date of last issue: 23.12.2022
Date of first issue: 05.10.2022

Revision Date:
06.04.2023

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

1.1 Product identifier

Trade name : NovaTec® Eco FL
UFI : 6MV5-Q0VS-900W-TATV

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

Use of the Substance/Mixture : Fertilizer

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)

Reproductive toxicity, Category 2 H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms	:		
Signal word	:	Warning	
Hazard statements	:	H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
Precautionary statements	:	P101 P102 Prevention: P201 P280 Response: P308 + P313 Storage: P405	If medical advice is needed, have product container or label at hand. Keep out of reach of children. Obtain special instructions before use. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF exposed or concerned: Get medical advice/ attention. Store locked up.
Further information	:	German "Hazardous Substances" legislation (Gefahrstoffverordnung) appendix I, No. 5 (Ammonium Nitrate group D I)	

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Liquid mixture of organic and inorganic salts of fertilizers.
Chemical reaction medium
1H-Pyrazole, 3,4-dimethyl-,phosphate (1:1)

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)

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1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1)	202842-98-6 424-640-9 01-0000017109-71-0002	Acute Tox. 4; H302 Eye Irrit. 2; H319 Repr. 2; H361fd STOT RE 2; H373	>= 3 - <= 9
ammonium nitrate	6484-52-2 229-347-8 01-2119490981-27-XXXX	Ox. Sol. 3; H272 Eye Irrit. 2; H319	>= 10 - <= 45

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Take off immediately all contaminated clothing.
- If inhaled : Fresh air.
Obtain medical attention.
- In case of skin contact : Wash off with soap and water.
Consult a doctor if skin irritation persists.
- In case of eye contact : Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
- If swallowed : Drink plenty of water.
Fresh air.
Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : The product is not flammable.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

5.3 Advice for firefighters

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

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
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 : Use personal protective equipment.
Keep people away from and upwind of spill/leak.
In case of involuntary exposition of the product contact producer or supplier.

6.2 Environmental precautions

Environmental precautions : Product should not reach open waters.
Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Dispose contaminated material waste according to chapter 13.
Clean thoroughly.
Flush with water.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Handle with care.

Advice on protection against : Avoid letting the product become dry.

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fire and explosion

Hygiene measures : Keep away from food, drink and animal feedingstuffs. 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 container tightly closed. Keep away from heat. Keep away from direct sunlight.

Further information on storage conditions : Requirements for storage areas and containers TRGS 511 'Ammonium nitrate'

Advice on common storage : TRGS 511 'Ammonium nitrate'

Storage class (TRGS 510) : 12, Non Combustible Liquids

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

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Personal protective equipment

Eye protection : Tightly fitting safety goggles

Hand protection

Remarks : Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other. The selection of suitable 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.

Skin and body protection : Protective suit

Respiratory protection : respiratory protection only if aerosol or dust is formed.

Protective measures : Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

General advice : Product should not reach open waters.
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid

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Colour	: green
Odour	: very faint
pH	: ca. 6, (20 °C)
Melting point/range	: No data available
Boiling point/boiling range	: > 100 °C
Flash point	: Not applicable
Density	: ca. 1,15 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility	: completely miscible
Decomposition temperature	: To avoid thermal decomposition, do not overheat.

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Incompatible with strong bases and oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : Do not allow evaporation to dryness.

10.5 Incompatible materials

Materials to avoid : Incompatible with strong acids and bases.

10.6 Hazardous decomposition products

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
ammonia
Nitrogen oxides (NO_x)

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SECTION 11: Toxicological information

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

Acute toxicity

Product:

Acute oral toxicity : Remarks: No data available

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Acute oral toxicity : LD50 (Rat): 200 - 2.000 mg/kg
Method: Tested according to Directive 92/69/EEC.
Remarks: The product was not tested. The statement was derived from products of similar structure and composition.

Acute inhalation toxicity : LC50 (Rat): > 5,5 mg/l
Method: OECD Test Guideline 403
Remarks: calculated

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

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

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

ammonium nitrate:

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

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Serious eye damage/eye irritation

Product:

Remarks: Contact with eyes may cause irritation.

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Species: Rabbit

Method: OECD Test Guideline 405

Result: Irritant

ammonium nitrate:

Species: Rabbit

Method: OECD Test Guideline 405

Result: Irritant

Respiratory or skin sensitisation

Product:

Remarks: None known.

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Test Type: Maximisation Test (GPMT)

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

ammonium nitrate:

Result: Does not cause skin sensitisation.

germ cell mutagenicity

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Germ cell mutagenicity- Assessment : Animal experiments showed mutagenic and teratogenic effects.

ammonium nitrate:

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

Carcinogenicity

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Carcinogenicity - : Did not show carcinogenic effects in animal experiments.

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Assessment

ammonium nitrate:

Species: Rat

Remarks: Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Reproductive toxicity - Assessment : In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance. May damage fertility. Suspected of damaging the unborn child.

ammonium nitrate:

Effects on fertility : Species: Rat

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

Effects on foetal development : Species: Rat
Remarks: Did not show teratogenic effects in animal experiments.

Repeated dose toxicity

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Remarks: The substance may cause damage to the liver after repeated ingestion of high doses, as shown in animal studies.

The substance may cause damage to the kidney after repeated ingestion of high doses, as shown in animal studies.

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

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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

Endocrine disrupting properties

No data available

Further information

No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to bacteria :
Remarks: No data available

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Toxicity to fish : (zebra fish): > 100 mg/l
Exposure time: 96 h
Test Type: LC50
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to bacteria :
Remarks: Disposal via sewage water treatment plants may cause impairment of the nitrification activity of the activated sludge.

Toxicity to fish (Chronic) : NOEC: > 8,7 mg/l

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toxicity)	Species: other
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: > 25 mg/l Species: Daphnia magna (Water flea)
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

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Biodegradability : Remarks: Inherently biodegradable.
According to the results of tests of biodegradability this product is not readily biodegradable.

ammonium nitrate:

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

12.3 Bioaccumulative potential

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Bioaccumulation : Species: Pimephales sp.
Exposure time: 14 d
Bioconcentration factor (BCF): 1,2
Method: Bioaccumulation: Flow-through Fish Test.
Remarks: Does not significantly accumulate in organisms.
The product was not tested. The statement was derived from products of similar structure and composition.

ammonium nitrate:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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

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12.4 Mobility in soil

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Distribution among environmental compartments : Remarks: Because of the water solubility, part of the product will dissolve.

12.5 Results of PBT and vPvB assessment

Components:

1H-Pyrazole, 3,4-dimethyl-, phosphate (1:1):

Assessment : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT)..

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Product:

Additional ecological information : Do not flush into surface water or sanitary sewer system. Disposal via sewage water treatment plants may cause impairment of the nitrification activity of the activated sludge.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Must not be disposed together with household garbage. Do not allow product to reach sewage system. Check if agriculture use is possible. Can be disposed of as a solid waste or burned in a suitable installation subject to local regulations.

Contaminated packaging : Observe national and local legal requirements. Suitable cleaning agents
Water
Cleaning agent

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

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14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing 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

Remarks : Not relevant

SECTION 15: Regulatory information

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

Water contaminating class (Germany) : WGK 1 slightly water endangering

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

Full text of H-Statements

H272 : May intensify fire; oxidizer.
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.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Eye Irrit. : Eye irritation
Ox. Sol. : Oxidizing solids
Repr. : Reproductive toxicity
STOT RE : Specific target organ toxicity - repeated exposure

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(Q)SAR - (Quantitative) Structure Activity Relationship; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardisation; 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; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; 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; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

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 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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