

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006



NovaTec® Solub BS Calcium 21-0-0

Version: 1.9
Date of last issue: 23.12.2022
Date of first issue: 29.01.2019

Revision Date:
07.04.2023

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

1.1 Product identifier

Trade name : NovaTec® Solub BS Calcium 21-0-0
UFI : 00R5-D0MA-S005-3WCD

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)

Acute toxicity, Category 4 H302: Harmful if swallowed.

Serious eye damage, Category 1 H318: Causes serious eye damage.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms



Signal word

: Danger

Hazard statements

: H302 Harmful if swallowed.
H318 Causes serious eye damage.

Precautionary statements

: **Prevention:**
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 In case of inadequate ventilation wear respiratory protection.
Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P330 Rinse mouth.

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture of nutrient salts based on various inorganic salts with living microorganisms
Contains
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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Nitric acid, ammonium calcium salt	15245-12-2 239-289-5 01-2119493947-16-XXXX	Acute Tox. 4; H302 Eye Dam. 1; H318	$\geq 50 - \leq 80$
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	$\geq 0,1 - \leq 1$
Bacillus subtilis	Not Assigned		$\geq 0,02 - \leq 0,2$

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : If breathed in, move person into fresh air.
If symptoms persist, call a physician.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Pain
Lachrymation
- Risks : corrosive effects

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Symptoms of poisoning may not appear for several hours.
Keep under medical supervision for at least 48 hours.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water
Foam
Carbon dioxide (CO₂)

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Fire may cause evolution of:
Nitrogen oxides (NO_x)

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 : Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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

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Hygiene measures : At the end of the shift the skin should be cleaned and skin-care agents applied. 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 against humidity (product is hygroscopic and tends to cake or disintegrate)

Advice on common storage : Keep away from combustible materials.

Storage class (TRGS 510) : 13, Non Combustible Solids

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
Nitric acid, ammonium calcium salt	Workers	Inhalation	Specific effects	24,5 mg/m ³
Remarks:	Exposure time: 1 DAY			
	Workers	Skin contact	Specific effects	13,9 mg/kg
Remarks:	Exposure time: 1 DAY			
	Consumers	Inhalation	systemic effects	6,3 mg/m ³
	Consumers	Skin contact	systemic effects	8,33 mg/kg
	Consumers	Ingestion	systemic effects	8,33 mg/kg
Remarks:	Exposure time: 1 DAY			
Bacillus subtilis				
Remarks:	No data available			

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

Substance name	Environmental Compartment	Value
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Nitric acid, ammonium calcium salt	Fresh water	0,45 mg/l
	Marine water	0,045 mg/l
	Ceiling Limit Value	4,5 mg/l
Bacillus subtilis		
Remarks:	No data available	

8.2 Exposure controls

Engineering measures

Provide adequate ventilation.

Personal protective equipment

Eye protection : Avoid contact with eyes.

Safety glasses

Hand protection

Remarks : Protective gloves The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.

Respiratory protection : Particle filtering disposable mask DIN EN 149 with filter FFP2.

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 : crystalline

Colour : white, grey

Odour : odourless

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Odour Threshold	: No data available
pH	: 6,8, Concentration: 100 g/l (20 °C)
Melting point/range	: ca. 400 °C
Boiling point/boiling range	: Not applicable
Flash point	: not determined
Evaporation rate	: Not applicable
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
Bulk density	: ca. 0,95 kg/m ³
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Stable at normal ambient temperature and pressure.
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: Not considered an oxidizing substance
Particle characteristics	
Particle Size Distribution	: D50 = 1.650 µm D50 Tolerance range = 1.320 µm - 1.980 µm Measurement technique: Sieve analysis

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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 : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Materials to avoid : Acids
Bases
Organic materials
Reducing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

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

Acute toxicity

Components:

Nitric acid, ammonium calcium salt:

Acute oral toxicity : LD50: > 300 mg/kg

Acute inhalation toxicity : Remarks: Not relevant because of low vapour pressure.

Remarks: Not relevant because of low dust formation.

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Guideline 402

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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

Bacillus subtilis:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

Skin corrosion/irritation

Components:

Nitric acid, ammonium calcium salt:

Species: Rabbit
Result: No skin irritation

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

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

Bacillus subtilis:

Result: non-irritant

Serious eye damage/eye irritation

Product:

Remarks: Contact with eyes may cause irritation.

Components:

Nitric acid, ammonium calcium salt:

Species: Rabbit
Result: Irritating to eyes.

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

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

Bacillus subtilis:

Result: Mild eye irritation

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Respiratory or skin sensitisation

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.

Bacillus subtilis:

Remarks: No data available

germ cell mutagenicity

Components:

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

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

Bacillus subtilis:

Germ cell mutagenicity-
Assessment : Contains no ingredient listed as a mutagen

Carcinogenicity

Components:

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

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

Bacillus subtilis:

Carcinogenicity -
Assessment : According to experience not expected

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.

Bacillus subtilis:

Reproductive toxicity -
Assessment : Contains no ingredient listed as toxic to reproduction
No toxicity to reproduction

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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.

Aspiration hazard

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

11.2 Information on other hazards

Endocrine disrupting properties

No data available

Experience with human exposure

Product:

General Information : Danger of methaemoglobin formation.

Further information

Product:

Remarks: The product was not tested. The statement was derived from products of similar structure and composition.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Nitric acid, ammonium calcium salt:

Toxicity to fish : LC50 (Guppy): 1.378 mg/l
Method: OECD Test Guideline 203

Toxicity to daphnia and other : LC50 (Daphnia magna (Water flea)): 490 mg/l
aquatic invertebrates

Toxicity to algae : LC50 (other aquatic plant): > 1.700 mg/l

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

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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 toxicity)	:	NOEC: > 8,7 mg/l Species: other
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 25 mg/l Species: Daphnia magna (Water flea)
Bacillus subtilis:		
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

12.2 Persistence and degradability

Components:

Nitric acid, ammonium calcium salt:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

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.

Bacillus subtilis:

Biodegradability : Remarks: No data available

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

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Components:

Nitric acid, ammonium calcium salt:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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.

Bacillus subtilis:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-octanol/water : Remarks: No data available

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.

Bacillus subtilis:

Mobility : Remarks: No data available

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)..

Bacillus subtilis:

Assessment : Remarks: No data available

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Product:

Additional ecological information : Fertilizer
May contribute to eutrophication in static waters, therefore should not be released into surface waters.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : Check if agriculture use is possible.
Contact manufacturer.
- Contaminated packaging : Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

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

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.

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15.2 Chemical Safety Assessment

SECTION 16: Other information

Full text of H-Statements

H302	: Harmful if swallowed.
H318	: Causes serious eye damage.
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 Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Repr.	: Reproductive toxicity
STOT RE	: Specific target organ toxicity - repeated exposure

(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

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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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