according to Regulation (EC) No. 1907/2006

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

1.1 Product identifier

Trade name : COMPLEX 24/14 +7SO3

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

Use of the : Fertilizers

Substance/Mixture

Recommended restrictions

on use Consumer uses

1.3 Details of the supplier of the safety data sheet

Supplier : Borealis L.A.T GmbH

St.-Peter-Strasse 25, 4021 Linz, Austria

Telephone: +43 732 6915-0

E-mail address : sds@borealisgroup.com

1.4 Emergency telephone number

+44 (0) 1235 239 670 (NCEC Carechem 24)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Supplemental Hazard Safety data sheet available on request. EUH210

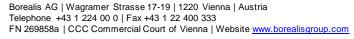
Statements

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.





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Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No.	Classification	Concentration (% w/w)			
	Index-No.		, ,			
	Registration number					
Ammonium nitrate	6484-52-2	Ox. Sol. 3; H272	>= 50 - < 70			
	229-347-8	Eye Irrit. 2; H319				
	01-2119490981-27					
Substances with a workplace exposure limit :						
calcium fluoride	7789-75-5		>= 1 - < 5			
	232-188-7					
	01-2119491248-30					

For explanation of abbreviations see section 16.

Remarks : Substances with a workplace exposure limit

Mixtures are not classified as irritating to eyes (OECD 405 and

OECD 437 studies done on similar mixtures).

REACH Registration Numbers:

www.borealisgroup.com , Company - REACH - Registered

substances

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled : Move to fresh air in case of accidental inhalation of dust.

Keep patient warm and at rest.

Give oxygen or artificial respiration if needed.

Seek medical advice.

In case of skin contact : Wash off with plenty of water.



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Get medical attention if irritation develops and persists.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

for at least 5 minutes.

If easy to do, remove contact lens, if worn.

Get medical attention if irritation develops and persists.

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

Never give anything by mouth to an unconscious person.

Do NOT induce vomiting.

Get medical advice/ attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Ingestion may provoke the following symptoms:

Gastrointestinal disturbance

The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration,

causes cyanosis.

Effects of repeated or prolonged skin contacts may include:

Discomfort

Inhalation of decomposition fumes may provoke the following

symptoms:

Risk of delayed pulmonary oedema.

Eye contact: May irritate eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Keep under medical supervision for at least 48 hours.

Treat symptomatically.

There is no specific antidote available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : High volume water jet

Unsuitable extinguishing

media

: Dry chemical

Carbon dioxide (CO2)

Foam

Do not smother with steam or sand.



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5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

: Potential explosion hazard when heated under strong

confinement (e.g. tubes and drains) especially if contaminated

with incompatible material.

See chapter 10.

Hazardous decomposition products formed under fire

conditions.

Nitrogen oxides (NOx)

Ammonia

5.3 Advice for firefighters

Special protective equipment

for firefighters

: In the event of fire, wear self-contained breathing apparatus.

Complete suit protecting against chemicals

Further information : Prevent fire extinguishing water from contaminating surface

water or the ground water system. Contact the proper local authorities.

Ensure doors and windows are opened. Avoid inhalation of decomposition fumes.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Sweep up to prevent slipping hazard.

Avoid dust formation.

Use personal protective equipment.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system.

Inform the responsible authorities in case of entry into waterways or drains.

6.3 Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.

Do not mix with sawdust, combustible or organic material.

Keep the container open.

After cleaning, flush away traces with water.

6.4 Reference to other sections

For personal protection see section 8.



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For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid dust formation.

Ensure adequate ventilation.

Keep away from incompatible materials.

Use only clean equipment.

Advice on protection against

fire and explosion

: Keep away from heat and sources of ignition. Keep away from

combustible material.

Hygiene measures : Handle in accordance with good industrial hygiene and safety

practice. Regular cleaning of equipment, work area and clothing. When using do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

: Keep in a dry, cool and well-ventilated place. Restrict stack size (according to local regulations) and keep at least 1m distance around the stacks of bagged products. Routine housekeeping should be instituted to ensure that dusts do not

accumulate on surfaces.

Suitable materials for containers: Plastics Stainless steel

Aluminium

Unsuitable materials for containers: Copper Zinc

Store in a place accessible by authorized persons only.

Further information on

storage conditions

: Avoid unprotected outdoor storage. Protect from moisture.

Advice on common storage : Do not store near combustible materials.

Keep away from incompatible materials.

See chapter 10.

Keep away from food, drink and animal feedingstuffs.

On farm, ensure that the fertilizer is not stored near hay, straw,

grain, diesel oil, etc.

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this



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substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

For national exposure limit (OEL) values, check country specific safety data sheets.

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	36 mg/m3
	Workers	Skin contact	Long-term, Systemic	5,12 mg/kg bw/day
	Consumers	Ingestion	Long-term, Systemic	2,56 mg/kg bw/day
	Consumers	Inhalation	Long-term, Systemic	8,9 mg/m3
	Consumers	Skin contact	Long-term, Systemic	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

Engineering measures

Avoid dust formation.

Provide adequate ventilation.

Before working with fire and hot materials on containers and apparatus remains of products must be removed through efficient cleaning with water.

Personal protective equipment

Eye protection : Safety glasses

(EN 166)

Hand protection

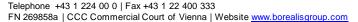
Material : Nitrile rubber
Break through time : >= 480 min
Glove thickness : >= 0,11 mm

Directive : Equipment should conform to EN 374

Remarks : For prolonged or repeated contact use protective gloves.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local

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conditions under which the product is used, such as the

danger of cuts, abrasion, and the contact time.

Respiratory protection : Dust safety masks are recommended when the dust

concentration is more than 10 mg/m3.

Respiratory protection complying with EN 143 / EN 149.

Filter type : P1 filter

Protective measures : Appropriate personal protective equipment (PPE) shall be

worn in accordance with Regulation (EU) 2016/425.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.

Inform the responsible authorities in case of entry into

waterways or drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : solid

granules

Colour : grey, light brown

Odour : odourless

Odour Threshold : Not applicable

Melting point : Decomposes before melting.

Boiling point : Decomposes below the boiling point.

Flammability : The product is not flammable.

Upper explosion limit / Upper

flammability limit

Not applicable

Lower explosion limit / Lower

flammability limit

Not applicable

Flash point : Not applicable, (inorganic)

Decomposition temperature : > 130 °C



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Decomposes before melting.

pH : 4,5 - 5,0

Concentration: 10 %

Solubility(ies)

Water solubility : partly soluble (20 °C)

Partition coefficient: n-

octanol/water

Not applicable (inorganic)

Vapour pressure : Not applicable

(solid)

Density : 1.030 kg/m³

9.2 Other information

Explosives : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Contact with strong bases liberates ammonia.

Contact with strong acids liberates nitrous gases.

Decomposes on heating.

10.4 Conditions to avoid

Conditions to avoid : Temperature > 130 °C

Risk of explosion if heated under confinement.

Keep away from incompatible materials.

Exposure to air or moisture over prolonged periods.

10.5 Incompatible materials

Materials to avoid : Combustible material



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Reducing agents

Strong acids and strong bases

sulphur Chlorates Chromates Nitrites

permanganates Powdered metals

Copper

10.6 Hazardous decomposition products

Nitrogen oxides (NOx) Ammonia

SECTION 11: Toxicological information

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

Acute toxicity

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 : LC50: > 88,8 mg/l

Method: No information available.

Acute dermal toxicity : LD50: > 5.000 mg/kg

Method: OECD Test Guideline 402

Skin corrosion/irritation

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

Components:

Ammonium nitrate:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

Serious eye damage/eye irritation

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

Product:



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Information given is based on tests on mixtures with similar compositions.

Components:

Ammonium nitrate:

Species: Rabbit

Method: OECD Test Guideline 405

Result: Irritating to eyes.

Respiratory or skin sensitisation

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

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

Components:

Ammonium nitrate:

Species: Mouse

Method: OECD Test Guideline 429 Result: Does not cause skin sensitisation. Test substance: Calcium ammonium nitrate

Read-across (Analogy)

Germ cell mutagenicity

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

Components:

Ammonium nitrate:

Genotoxicity in vitro : Test Type: Ames test

Method: OECD Test Guideline 471

Result: negative

Test substance: Ammonium calcium nitrate

: Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Test substance: Ammonium calcium nitrate

: Test Type: In vitro gene mutation study in mammalian cells

Method: OECD Test Guideline 476

Result: negative

Test substance: Potassium nitrate

Carcinogenicity

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

Components:

Ammonium nitrate:



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Remarks: No significant adverse effects were reported

Reproductive toxicity

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

Components:

Ammonium nitrate:

Effects on fertility : Species: Rat

NOAEL: > 1.500 mg/kg,

Method: OECD Test Guideline 422 Test substance: Potassium nitrate

STOT - single exposure

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

Components:

Ammonium nitrate:

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

STOT - repeated exposure

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

Components:

Ammonium nitrate:

Species: Rat

NOAEL: 0,185 mg/l

Application Route: Inhalation

Exposure time: 14 d

Method: OECD Test Guideline 412 Test substance: Ammonium nitrate

Aspiration toxicity

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

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.



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SECTION 12: Ecological information

12.1 Toxicity

Components:

Ammonium nitrate:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 447 mg/l

> Exposure time: 48 h Test Type: Short term

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 490 mg/l

Exposure time: 48 h Test Type: Short term

Test substance: Potassium nitrate

Remarks: Fresh water

Toxicity to algae : EC50 : > 1.700 mg/l

Exposure time: 10 d

Test substance: Potassium nitrate

Remarks: Marine water

Toxicity to bacteria : EC50 : > 1.000 mg/l

Exposure time: 180 min

Test Type: Respiration inhibition of activated sludge

Test substance: Sodium nitrate Method: OECD Test Guideline 209

Toxicity to fish (Chronic

toxicity)

: Remarks: study scientifically unjustified

Toxicity to daphnia and other

aquatic invertebrates

Exposure time: 7 d

(Chronic toxicity) Species: Bullia digitalis (prosobranch gastropod)

: EC50: 555 mg/l

12.2 Persistence and degradability

Components:

Ammonium nitrate:

Biodegradability : Remarks: The methods for determining biodegradability are

not applicable to inorganic substances.

12.3 Bioaccumulative potential

Components:

Ammonium nitrate:



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Bioaccumulation : Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

Components:

Ammonium nitrate:

Mobility : Medium: Water

Remarks: completely soluble

: Medium: Soil

Remarks: (NO3-), Not expected to adsorb on soil.

: Medium: Soil

Remarks: (NH4+), After release, adsorbs onto soil.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher...

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological

information

: Do not allow product to reach ground water, water bodies or

sewage system.

Heavy spillage may cause adverse environmental impact such

as eutrophication in confined surface waters.



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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Can be landfilled or incinerated, when in compliance with local

regulations.

Do not allow product to reach ground water, water bodies or

sewage system.

Do not dispose of together with household waste.

European waste code:

06 10 99: wastes not otherwise specified

Contaminated packaging : Empty remaining contents.

Dispose of in accordance with local regulations.

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

Remarks : Ammonium nitrate-based compound/composite fertilisers

(compound/composite fertilisers contain ammonium nitrate with phosphate and/or potash) which are not capable of self-sustaining decomposition according to the UN Trough Test (see UN Manual of Tests and Criteria, Part III, subsection

38.2).

SDS: No specific instructions needed.

Not dangerous goods in the meaning of ADR/RID, ADN,

IMDG-Code, ICAO/IATA-DGR



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14.7 Maritime transport in bulk according to IMO instruments

Remarks : No data is available on the product itself.

SECTION 15: Regulatory information

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

: Not applicable

: Not applicable

: Not applicable

REACH - Restrictions on the manufacture, placing on

the market and use of certain dangerous substances,

preparations and articles (Annex XVII)

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

REACH - List of substances subject to authorisation

(Annex XIV)

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

Other regulations:

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX I. RESTRICTED EXPLOSIVES PRECURSORS

Acquisition, introduction, possession or use of the explosive precursor by the general public is restricted.

All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see https://ec.europa.eu/home-

affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosivesprecursors/docs/list_of_competent_authorities_and_national_contact_points_en.pdf.

Regulation (EC) No 2003/2003 relating to fertilizers

15.2 Chemical safety assessment

no



according to Regulation (EC) No. 1907/2006

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SECTION 16: Other information

Full text of H-Statements

H272 : May intensify fire; oxidizer. H319 : Causes serious eye irritation.

Full text of other abbreviations

Eye Irrit. : Eye irritation
Ox. Sol. : Oxidizing solids

Further information

Other information : Issued according to Regulation (EC) No 1907/2006, Annex II,

and its amendments.

Changes since the last version are highlighted in the margin.

This version replaces all previous versions.

lssuer : Borealis, Group Product Stewardship / Steffen Pfeiffer

Sources of key data used to

compile the Safety Data

Chemical Safety Report, Ammonium Nitrate. FARM REACH

Consortium, 2019

Sheet EFMA / Fertilizers Europe Guidance documents

Disclaimer

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

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It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

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