

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: gra-C12.12.17M301EA Issue date: 28.03.2023 Revision date: 11.10.2023 Supersedes version of: 28.03.2023 Version: 2.0

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

1.1. Product identifier

: COMPLEX 12-12-17 +2MgO+12SO3+TE Trade name

UFI : C7HX-H8WT-W00S-KY32 Product code : C12.12.17M301EA

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

1.2.1. Relevant identified uses

Main use category : Professional use : For professional use only Industrial/Professional use spec

: Fertilisers Use of the substance/mixture Function or use category : Fertilisers

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Sap International Corporation by Krekelenberg 83, B-2980 Zoersel Belgium

T +32 (0)3 3090651 info@sico.be - www.sico.be

1.4. Emergency telephone number

Emergency number : NCEC Carechem 24 : involves operator intervention to identify language.

Europe: +44 1235 239670

Middle East/Africa: +44 1235 239671 Americas: +1 215 207 0061

East/South East Asia: +65 3158 1074

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Reproductive toxicity, Category 1B H360FD

Full text of H and EUH statements: see section 16

Adverse physicochemical, human health and environmental effects

May damage fertility or the unborn child.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP) : Danger

Hazard statements (CLP) : H360FD - May damage fertility. May damage the unborn child.

Precautionary statements (CLP) P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing, eye protection, face protection, hearing

protection.

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P308+P313 - IF exposed or concerned: Get medical advice/attention.
P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3. Other hazards

PBT: not relevant – no registration required vPvB: not relevant – no registration required

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component			
Disodium tetraborate pentahydrate (12179-04-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII		
Component			
Disodium tetraborate pentahydrate(12179-04-3)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605		

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Potassium nitrate	CAS-No.: 7757-79-1 EC-No.: 231-818-8 REACH-no: 01-2119488224- 35	11 – 14	Ox. Sol. 3, H272
Ammonium nitrate	CAS-No.: 6484-52-2 EC-No.: 229-347-8 REACH-no: 01-2119490981- 27	9,5 – 10,5	Ox. Sol. 3, H272 Eye Irrit. 2, H319
Ammonium chloride	CAS-No.: 12125-02-9 EC-No.: 235-186-4 EC Index-No.: 017-014-00-8 REACH-no: 01-2119489385- 24	6 – 7	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
Calcium bis(dihydrogen-orthophosphate)	CAS-No.: 7758-23-8 EC-No.: 231-837-1 REACH-no: 01-2119490065- 39	3,5 – 4,5	Eye Dam. 1, H318
Disodium tetraborate pentahydrate substance listed as REACH Candidate (Disodium tetraborate, anhydrous)	CAS-No.: 12179-04-3 EC-No.: 215-540-4 EC Index-No.: 005-011-02-9 REACH-no: 01-2119490790-	0,6 – 0,9	Repr. 1B, H360FD

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Comments

: This ammonium nitrate based mixture is not classified as irritating to eyes (OECD 405 and OECD 437 studies performed on similar mixtures). - Nitrogen (and magnesium if present in the product) neutralizes free acidity of superphosphate (calcium phosphates), the finished product is then not classified Irritating to eyes (Fertilizers Europe study dec. 2014).

Full text of H and EUH statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : None under normal use.

Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in

combination with tight clothing. Contact during a long period may cause light irritation.

Symptoms/effects after eye contact : Dust from this product may cause eye irritation. Symptoms/effects after ingestion : Risk of lung oedema. Harmful if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public

waters.

Other information : Dispose of materials or solid residues at an authorized site.

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6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Obtain special

instructions before use. Do not handle until all safety precautions have been read and

understood. Wear personal protective equipment.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke

when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Do not expose nitrogenous fertilizers to intense sunlight and / or to temperatures above 32 °

C.

Railway wagons and tankers in particular should be unloaded quickly and should not be exposed to the sun for prolonged periods (eg weekends). Protect from moisture. Store

locked up. Store in a well-ventilated place. Keep cool.

Incompatible materials : combustible materials. Heat sources. Direct sunlight. Sources of ignition.

Storage area : Store away from heat. Store in a well-ventilated place.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Potassium nitrate (7757-79-1)			
Belgium - Occupational Exposure Limits			
OEL TWA 10 mg/m³			

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Ammonium nitrate (6484-52-2)		
DNEL/DMEL (Workers)		
Acute - systemic effects, dermal 5,12 mg/kg bodyweight/day		
Acute - systemic effects, inhalation 36 mg/m³		
Long-term - systemic effects, dermal 21,3 mg/kg bw/day		
Long-term - systemic effects, inhalation 37,6 mg/m³		
DNEL/DMEL (General population)		
Acute - systemic effects, dermal 2,56 mg/kg bodyweight		
Acute - systemic effects, inhalation 8,9 mg/m³		
Acute - systemic effects, oral 2,56 mg/kg bodyweight		

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Ammonium nitrate (6484-52-2)			
PNEC (Water)			
PNEC aqua (freshwater)	0,45 mg/l		
PNEC aqua (marine water)	0,045 mg/l		
PNEC aqua (intermittent, freshwater)	4,5 mg/l		
PNEC aqua (intermittent, marine water)	4,5 mg/l		
PNEC (STP)			
PNEC sewage treatment plant 18 mg/l			
Potassium nitrate (7757-79-1)			
DNEL/DMEL (Workers)			
Long-term - systemic effects, dermal	20,8 mg/kg bodyweight/day		
Long-term - systemic effects, inhalation	36,7 mg/m³		
DNEL/DMEL (General population)			
Long-term - systemic effects,oral	12,5 mg/kg bodyweight/day		
Long-term - systemic effects, inhalation	10,9 mg/m³		
Long-term - systemic effects, dermal	12,5 mg/kg bodyweight/day		
PNEC (Water)			
PNEC aqua (freshwater)	0,45 mg/l		
PNEC aqua (marine water)	0,045 mg/l		
PNEC aqua (intermittent, freshwater)	4,5 mg/l		
PNEC (STP)			
PNEC sewage treatment plant	18 mg/l		

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):







8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

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8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Colour : Blue.
Appearance : Granulate.
Odour : Not available
Odour threshold : Not available

Melting point : Decomposes below melting point.

Freezing point : Not applicable
Boiling point : Not available
Flammability : Non flammable.

Oxidising properties : Non oxidizing material according to EC criteria.

Lower explosion limit : Not applicable Upper explosion limit : Not applicable Flash point : Not applicable Auto-ignition temperature : Not applicable Decomposition temperature : > 130 °C pH : > 4,5 pH solution : 10 % Viscosity, kinematic : Not applicable

Partially soluble. Solubility Partition coefficient n-octanol/water (Log Kow) Not available Vapour pressure Not available Not available Vapour pressure at 50 °C Density 1100 - 1200 kg/m³ Relative density Not available Relative vapour density at 20 °C Not applicable Particle size Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Other properties : Non oxidizing material according to EC criteria

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Ammonia solution. Nitrogen oxides.

SECTION 11: Toxicological information

44 4 Information on bowerd	_	Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Ammonium muate (0404-52-2)			
LD50 oral rat 2950 mg/kg Method: OECD Test Guideline 401			
LD50 dermal > 5000 mg/kg Method: OECD Test Guideline 402			
LC50 Inhalation - Rat > 88,8 mg/l			
Potassium nitrate (7757-79-1)			
LD50 oral rat > 2000 mg/kg			
LD50 dermal rat	> 5000 mg/kg		

Skin corrosion/irritation : Not classified.

pH: > 4,5

> 527 mg/m³

Potassium niti	rate (7757-79-1)
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LC50 Inhalation - Rat

Ammonium nitrato (6484-52-2)

pH 5-8

Serious eye damage/irritation : Not classified pH: > 4.5

Potassium nitrate (7757-79-1)

pH 5-8

Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

Reproductive toxicity : May damage fertility. May damage the unborn child.

STOT-single exposure : Not classified STOT-repeated exposure : Not classified Aspiration hazard : Not classified

COMPLEX 12-12-17 +2MgO+12SO3+TE

Viscosity, kinematic Not applicable

Ammonium nitrate (6484-52-2)

Viscosity, kinematic Not applicable

Potassium nitrate (7757-79-1)

Viscosity, kinematic Not applicable

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Disodium tetraborate pentahydrate (12179-04-3)		
Viscosity, kinematic Not applicable		
Ammonium chloride (12125-02-9)		
Viscosity, kinematic Not applicable		

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

(acute)

: Not classified: Not classified.

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

Potassium nitrate (7757-79-1)		
LC50 - Fish [1] 1378 mg/l		
EC50 - Crustacea [1]	490 mg/l	
EC50 - Other aquatic organisms [1]	> 1000 mg/l	
ErC50 algae	> 1700 mg/l	

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

COMPLEX 12-12-17 +2MgO+12SO3+TE	
PBT: not relevant – no registration required	
vPvB: not relevant – no registration required	
Component	
Disodium tetraborate pentahydrate (12179-04-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID		
14.1. UN number or ID n	14.1. UN number or ID number					
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
14.2. UN proper shippin	14.2. UN proper shipping name					
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
14.3. Transport hazard o	14.3. Transport hazard class(es)					
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
14.4. Packing group						
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
14.5. Environmental hazards						
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
No supplementary information available						

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Other information, restriction and prohibition : REGULATION (EU) 2019/1009 relating to fertilising products. regulations

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REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	
30.	Disodium tetraborate pentahydrate	

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains a substance on the REACH candidate list in concentration ≥ 0.1% or with a lower specific limit: Disodium tetraborate, anhydrous (EC 215-540-4, CAS 12179-04-3)

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

ANNEX I RESTRICTED EXPLOSIVES PRECURSORS

List of substances which shall not be made available to, or introduced, possessed or used by, members of the general public, whether on their own or in mixtures or substances that include those substances, unless the concentration is equal to or lower than the limit values set out in column 2, and for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name	CAS-No.	Limit value	Upper limit value for licensing under Article 5(3)	Combined Nomenclature (CN) code for a separate chemically defined compound meeting the requirements of Note 1 to Chapter 28 or 29 of the CN, respectively	code for mixture without
AMMONIUM NITRATE	6484-52-2	45,7 % w/w	no license	3102 30 10 (solution); 3102 30 90 (other)	ex 3824 99 96

ANNEX II REPORTABLE EXPLOSIVES PRECURSORS

List of substances on their own or in mixtures or in substances for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name		Nomenclature	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
POTASSIUM NITRATE	7757-79-1	2834 21 00	ex 3824 99 96

Please see https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis- and-terrorism/explosives/explosives precursors/docs/list of competent authorities and national contact points en. pdf

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Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).

Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must

be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the

shipping route (according to § 10).

Hazardous Incident Ordinance (12. BlmSchV) : Is not subject of the Hazardous Incident Ordinance (12. BlmSchV)

Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:		
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	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC-No.	European Community number	
EC50	Median effective concentration	
EN	European Standard	
IARC	International Agency for Research on Cancer	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
OEL	Occupational Exposure Limit	

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Abbreviations and acronyms:		
PBT	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
ThOD	Theoretical oxygen demand (ThOD)	
TLM	Median Tolerance Limit	
VOC	Volatile Organic Compounds	
CAS-No.	Chemical Abstract Service number	
N.O.S.	Not Otherwise Specified	
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disrupting properties	

Full text of H- and EUH-statements:		
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
H272	May intensify fire; oxidiser.	
H302	Harmful if swallowed.	
H318	Causes serious eye damage.	
H319	Causes serious eye irritation.	
H360FD	May damage fertility. May damage the unborn child.	
Ox. Sol. 3	Oxidising Solids, Category 3	
Repr. 1B	Reproductive toxicity, Category 1B	

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.