Material Safety Data Sheet
according to Regulation (EC) No. 1907/2006

Nutrimix

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

1.1 Product identifier

Trade name	:	Nutrimix
UFI	:	SMK5-K0E3-400X-CGN3

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.
Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.

Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements :

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
Prevention:	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:	
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
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.

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture of inorganic salts

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-)	14025-15-1 237-864-5 01-2119963944-23-0002	Acute Tox. 4; H302 Eye Irrit. 2; H319	>= 15 - < 30
manganese sulphate (1:1)	7785-87-7 232-089-9 01-2119456624-35-XXXX	STOT RE 2; H373 Aquatic Chronic 2; H411 Eye Dam. 1; H318	>= 10 - < 20
zinc sulphate	7733-02-0 231-793-3 01-2119474684-27-XXXX	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 10 - < 20

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.
Wash contaminated clothing before re-use.

If inhaled : Move to fresh air.
Keep patient warm and at rest.

If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Flush with plenty of 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 : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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

Specific hazards during firefighting : Heating or fire can release toxic gas.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
In the event of fire and/or explosion do not breathe fumes.

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 : Avoid dust formation.
Ensure adequate ventilation.
Use personal protective equipment.
Keep people away from and upwind of spill/leak.

Keep away from sources of ignition - No smoking.
In case of involuntary exposition of the product contact producer or supplier.

6.2 Environmental precautions

Environmental precautions	:	Do not empty into drains. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Use mechanical handling equipment. Sweep up or vacuum up spillage and collect in suitable container for disposal.

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	:	Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Avoid dust formation. Keep away from sources of ignition - No smoking. Avoid dust accumulation in enclosed space.
Advice on protection against fire and explosion	:	Keep away from sources of ignition - No smoking.
Hygiene measures	:	Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and at the end of workday. Do not breathe dust. Use protective skin cream before 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.
Further information on storage conditions	:	humid air and water
Storage class (TRGS 510)	:	13, Non Combustible Solids

7.3 Specific end use(s)

Specific use(s)	:	Always read the label and product information before use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
manganese sulphate (1:1)	manganese sulphate	(Inhalable fraction)	0,5 mg/m3	DE TRGS 900
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., The threshold value is based on the element content of the corresponding metal., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		AGW (Inhalable fraction)	0,5 mg/m3 (Manganese)	DE TRGS 900
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., The threshold value is based on the element content of the corresponding metal., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
			0,5 mg/m3	

No data available

Mangansulfat	7785-87-7, 7785-87-7	manganese: 20 µg/l (Blood)	Immediately after exposition or after working hours, In case of long-term exposition: after more than one shift	TRGS 903

8.2 Exposure controls

Engineering measures

Provide adequate ventilation.

Personal protective equipment

Eye protection : Wear suitable gloves and eye/face protection.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.
Preventive skin protection

Skin and body protection	:	Protective suit
Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment. Half mask with a particle filter P2 (EN 143)
Protective measures	:	Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

General advice	:	Do not empty into drains. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	crystalline
Colour	:	light blue
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
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
Density	:	1,347 g/m³ (20 °C)
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No decomposition if stored and applied as directed.
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	Not considered an oxidizing substance

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 : None known.
GLP: No information available.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Materials to avoid : Amines
Strong oxidizing agents
Strong acids

10.6 Hazardous decomposition products

Hazardous decomposition products : Nitrogen oxides (NOx)

SECTION 11: Toxicological information

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

Acute toxicity

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):

Acute oral toxicity : LD50 (Rat): 890 mg/kg

Acute inhalation toxicity : LC50 (Rat): 5,32 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 436

manganese sulphate (1:1):

Acute oral toxicity : LD50 (Rat): 2.150 mg/kg

zinc sulphate:

Acute oral toxicity : LD50 (Rat): 862 - 4.429 mg/kg

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

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation and/or dermatitis.

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):

Remarks: slight irritation
According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

zinc sulphate:

Species: Rabbit
Assessment: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: May irritate eyes.

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):
Method: OECD Test Guideline 405
Result: Eye irritation

zinc sulphate:
Species: Rabbit
Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Remarks: None known.

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):
Method: OECD Test Guideline 429
Result: non-sensitizing

germ cell mutagenicity

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):
Genotoxicity in vitro : Test Type: Ames test
Method: OECD Test Guideline 471
Result: Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):
Remarks: Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):
Effects on fertility :
Remarks: No toxicity to reproduction

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

STOT - single exposure

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

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

Product:

Remarks: Irritant
Harmful

SECTION 12: Ecological information

12.1 Toxicity

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):

Toxicity to fish	:	LC50 (Fish): 555 mg/l Exposure time: 96 h

manganese sulphate (1:1):

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 30 mg/l

zinc sulphate:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0,43 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1,86 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Scenedesmus quadricauda (Green algae)): 0,52 mg/l Exposure time: 120 h
Toxicity to bacteria	:	EC50 (Bacteria): 22,75 mg/l Exposure time: 0,5 h

12.2 Persistence and degradability

Product:

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

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):

Biodegradability	:	Remarks: Not readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

Product:

Mobility	:	Remarks: After release, adsorbs onto soil.
Distribution among environmental compartments	:	Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	Remarks: Not applicable

Components:

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):

Assessment	:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not

considered to be very persistent and very bioaccumulating (vPvB)..

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.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Fertilizer Do not flush into surface water or sanitary sewer system. Do not dispose of with domestic refuse. In accordance with local and national regulations.
Contaminated packaging	:	If recycling is not practicable, dispose of in compliance with local regulations. Suitable cleaning agents Water

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	UN 3077
ADR	:	UN 3077
RID	:	UN 3077
IMDG	:	UN 3077
IATA	:	UN 3077

14.2 UN proper shipping name

ADN	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper sulphate, manganese sulphate)
ADR	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper sulphate, manganese sulphate)
RID	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(copper sulphate, manganese sulphate)

IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper sulphate, manganese sulphate)
IATA	:	Environmentally hazardous substance, solid, n.o.s. (copper sulphate, manganese sulphate)

14.3 Transport hazard class(es)

ADN	:	9
ADR	:	9
RID	:	9
IMDG	:	9
IATA	:	9

14.4 Packing group

ADN

Packing group	:	III
Classification Code	:	M7
Hazard Identification Number	:	90
Labels	:	9

ADR

Packing group	:	III
Classification Code	:	M7
Hazard Identification Number	:	90
Labels	:	9
Tunnel restriction code	:	(E)

RID

Packing group	:	III
Classification Code	:	M7
Hazard Identification Number	:	90
Labels	:	9

IMDG

Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Segregation group	:	

IATA

Packing instruction (cargo aircraft)	:	956
Packing instruction (passenger aircraft)	:	956
Packing instruction (LQ)	:	Y956
Packing group	:	III

Labels : 9

14.5 Environmental hazards

ADN
Environmentally hazardous : yes

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

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

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

		Quantity 1	Quantity 2
E1	ENVIRONMENTAL HAZARDS	100 t	200 t

Water contaminating class (Germany) : WGK 3 highly water endangering

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of H-Statements

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

H319	:	Causes serious eye irritation.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Acute aquatic toxicity
Aquatic Chronic	:	Chronic aquatic toxicity
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
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 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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