PLANT BIOTECHNOLOGIES
INNOVATING FOR A SUSTAINABLE FUTURE

CHU (N6) MEDIUM INCLUDING VITAMINS
SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006
GENERIC EU SDS - NO COUNTRY SPECIFIC OEL DATA
Date of Issue: 17-04-2026
Revision Number: A/0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Identifier	:	CHU (N6) Medium including Vitamins
Product Number	:	C506
CAS Number	:	Not available
REACH Registration Number	:	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

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

Identified Uses	:	For research use only - restricted to professional users.
Uses Advised Against	:	Not for human or animal use

1.3 Details of the supplier of the safety data sheet

Company	:	Plant Biotechnologies Seinhuiswachter 17-19 3034 KH Rotterdam The Netherlands
Phone Number	:	+31 10323 2002
E-mail Address	:	info.eu@toku-e.com
Safety Data Sheet Issued by	:	Plant Biotechnologies

1.4 Emergency telephone number

Emergency Phone Number (Internat.)	:	+1 (352) 353-3500 (INFOTRAC, 24-Hour Number)
Emergency Phone Number (US Only)	:	1 (800) 535-5053 (INFOTRAC, 24-Hour Number)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008
Not classified as a hazardous substance or mixture.

For the full text of the H-Statements mentioned in this section, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008
Hazard Pictogram(s): None

Signal Word: None

Hazard Statement(s)
None

Precautionary Statement(s)
None

Supplemental Hazard Information
No data available

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.

Component	CAS no	
Boric acid	10043-35-3	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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Synonym(s) : Not available
Formula : Not available
Molecular weight : Not available

Hazardous ingredients according to Regulation (EC) No. 1272/2008

Component	Classification	Concentration
Potassium nitrate		
CAS Number [7778-80-5] EC Number [231-915-5] REACH Number [01-2119489441-34]	Ox. Sol. 2, H272	71,52 %
Ammonium sulphate		
CAS Number [7783-20-2] EC Number [231-984-1] REACH Number [01-2119455044-46]	/	11,70 %
Potassium dihydrogenphosphate		
CAS Number [7778-77-0] EC Number [231-913-4] REACH Number [01-2119490224-41]	/	10,12 %

Calcium chloride		
CAS Number [10043-52-4] EC Number [233-140-8] REACH Number [01-2119494219-28]	Eye Irrit. 2, H319	3,17 %
Magnesium sulphate		
CAS Number [7487-88-9] EC Number [231-298-2] REACH Number [01-2119486789-11]	/	2,28 %
Sodium feredetate		
CAS Number [15708-41-5] EC Number [239-802-2] REACH Number [01-2119496228-27]	/	0,93 %
Manganese sulphate monohydrate		
CAS Number [10034-96-5] EC Number [600-072-9] REACH Number [01-2119456624-35]	STOT RE 2, H373 Aquatic Chronic 2, H411	0,08 %
Glycine		
CAS Number [56-40-6] EC Number [200-272-2] REACH Number [01-2119451452-45]	/	0,05 %
Boric acid (substance listed on REACH Candidate List)		
CAS Number [10043-35-3] EC Number [233-139-2] REACH Number [01-2119486683-25]	Repr. 1B, H360fd	0,04 %
Zinc sulphate heptahydrate		
CAS Number [7446-20-0] EC Number [616-097-3] REACH Number [01-2119474684-27]	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	0,04 %

Thiamine hydrochloride		
CAS Number [67-03-8] EC Number [200-641-8] REACH Number [01-2120773699-31]	Eye Irrit. 2, H319	0,03 %
Potassium iodide		
CAS Number [7681-11-0] EC Number [231-659-4] REACH Number [01-2119906339-35]	/	0,02 %
Nicotinic Acid		
CAS Number [59-67-6] EC Number [200-441-0] REACH Number [01-2119968267-24]	Eye Irrit. 2, H319	0,01 %
Pyridoxine hydrochloride		
CAS Number [58-56-0] EC Number [200-386-2] REACH Number [01-2120113157-67]	Eye Dam. 1, H318	0,01 %

For the full text of the H-Statements mentioned in this section, see Section 16.

SECTION 4: FIRST-AID MEASURES

4.1 Description of first-aid measures

General information

Consult a doctor/physician if exposed - additional medical care may be required. Show this safety data sheet to the medical provider.

If inhaled

If inhaled, move to fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash skin thoroughly with soap and water. Remove any contaminated clothing. Consult a physician.

In case of eye contact

Flush eye with water. After initial flush, remove any contact lenses and continue flushing for at least 15 minutes.

If swallowed

Rinse mouth with water. Immediately call a doctor, physician, or poison control center. Never give anything by mouth to an unconscious person.

Self-protection of the first aider
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent the spread of contamination.

4.2 Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media
No data available

5.2 Special hazards arising from the substance or mixture
Hazardous Combustion Products
Carbon and nitrogen oxides, sulfur oxides, phosphorus oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Consult the safety measures listed in Section 7 and 8. Use personal protective equipment. Avoid breathing dust, vapors, mist or gas. Avoid direct contact with spilled substances. Ensure adequate ventilation.
Avoid dust formation.

For personal protection see Section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
Refer to section 8 for exposure control and personal protection. Refer to section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Keep away from sources of ignition - no smoking. Take measures to prevent the build up of electrostatic charge.
For precautionary statements see section 2.2

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Protect from humidity.
Recommended storage temperature: Room temperature
Hygroscopic.

Incompatibilities:
Strong oxidizing agents

7.3 Specific end use(s)

Refer to section 1.2

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters:
No OEL data available

8.2 Exposure controls

Appropriate engineering controls:
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling this product.

Personal Protective Equipment (PPE):

Respiratory protection
Wear respiratory protection. Use type N95 (US) or type P1 (EN 143) dust masks as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal techniques to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the selected EN 374 derived from it.

Eye/Face protection
Wear eye protection. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Body protection
Wear protective clothing. The type of protective equipment must be selected according to the concentration of the dangerous substance at the specific work place.

Environmental exposure controls
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	White to slightly yellow powder
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	No data available
Melting Point/Freezing Point	:	No data available
Initial Boiling Point and Range	:	No data available
Flash Point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper/Lower Flammability or Explosive Limits	:	No data available
Vapor Pressure	:	No data available
Vapor Density	:	No data available
Relative Density	:	No data available
Solubility(ies)	:	Soluble in water
Partition Coefficient: n-octanol/water	:	No data available
Auto-Ignition Temperature	:	No data available
Decomposition Temperature	:	No data available
Viscosity	:	No data available
Explosive Properties	:	No data available
Oxidizing Properties	:	No data available

9.2 Other information
No additional information relevant to safe use of the substance.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Exposure moisture

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
No data available

See Section 5 for hazardous combustion products.

SECTION 11. TOXICOLOGICAL INFORMATION

The toxicological properties of this mixture have not been fully investigated. The information provided is based on data available for the active compounds.

11.1 Information on toxicological effects

Acute Toxicity

Potassium nitrate	:	Oral LD_{50}	:	Rat	:	> 2000 mg/kg
		Dermal LD_{50}	:	Rat	:	> 5000 mg/kg
		Inhalation LC_{50}	:	Rat	:	> 0,527 mg/l/4h
Ammonium sulphate	:	Oral LD_{50}	:	Rat	:	2840 mg/kg
		Oral LD_{50}	:	Mouse	:	640 mg/kg
		Dermal LD_{50}	:	Rat	:	> 2000 mg/kg
Potassium dihydrogenphosphate	:	Oral LD_{50}	:	Rat	:	> 2000 mg/kg
		Dermal LD_{50}	:	Rat	:	> 2000 mg/kg
		Inhalation LC_{50}	:	Rat	:	> 0,83 mg/l
Calcium chloride	:	Oral LD_{50}	:	Rat	:	2120 mg/kg
		Dermal LD_{50}	:	Rabbit	:	> 5000 mg/kg
Magnesium sulphate	:	Oral LD_{50}	:	Rat	:	> 2000 mg/kg
		Dermal LD_{50}	:	Rat	:	> 2000 mg/kg
Sodium feredetate	:	Oral LD_{50}	:	Rat	:	> 2000 mg/kg
		Dermal LD_{50}	:	Rat	:	> 2000 mg/kg
		Inhalation LC_{50}	:	Rat	:	> 2,75 mg/l/4h
Manganese sulphate monohydrate	:	Oral LD_{50}	:	Rat	:	2150 mg/kg
		Oral LD_{50}	:	Mouse	:	2330 mg/kg
		Inhalation LC_{50}	:	Rat	:	> 4,45 mg/l
Glycine	:	Oral LD_{50}	:	Rat	:	7930 mg/kg
Boric acid	:	Oral LD_{50}	:	Rat	:	> 2600 mg/kg
		Oral LD_{50}	:	Mouse	:	3450 mg/kg
		Dermal LD_{50}	:	Rabbit		> 2000 mg/kg
		Inhalation LC_{50}	:	Rat	:	2,12 mg/l
Zinc sulphate heptahydrate	:	Oral LD_{50}	:	Rat	:	1260 mg/kg
Thiamine hydrochloride	:	Oral LD_{50}	:	Rat	:	12340 mg/kg
		Oral LD_{50}	:	Mouse	:	13347 mg/kg
Potassium iodide	:	Dermal LD_{50}	:	Rat	:	> 2000 mg/kg
Nicotinic acid	:	Oral LD_{50}	:	Rat	:	7000 mg/kg
		Dermal LD_{50}	:	Rat	:	> 2000 mg/kg
		Inhalation LC_{50}	:	Rat	:	> 3,8 mg/l
Pyridoxine hydrochloride	:	Oral LD_{50}	:	Rat	:	> 6600 mg/kg
		Oral LD_{50}	:	Mouse	:	> 6000 mg/kg

Skin Corrosion/Irritation
Not classified

Serious Eye Damage/ Eye Irritation
Not classified

Respiratory or Skin Sensitization
Not classified

Germ Cell Mutagenicity
Not classified

Carcinogenicity
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by the International Agency for Research on Cancer Monograph.

Reproductive Toxicity
Not classified

Specific Target Organ Toxicity: Single Exposure
Not classified

Specific Target Organ Toxicity: Repeated Exposure
Not classified

Aspiration Hazard
No data available

Additional Information
RTECS: Not available
Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Potassium nitrate	:	LC50	:	Fish	:	> 98,9 mg/l - Oncorhynchus mykiss
		EC50	:	Crustacea	:	490 mg/l 48 h - Daphnia magna
Ammonium sulphate	:	LC50	:	Fish	:	53 mg/l 96 h
		EC50	:	Crustacea	:	121,7 mg/l 48 h
		EC50	:	Algae	:	2700 mg/l Duration: 18 d
		ErC50	:	Algae	:	1605 mg/l Duration: 5 d
Potassium dihydrogenphosphate	:	LC50	:	Fish	:	> 100 mg/l - Oncorhynchus mykiss
		EC50	:	Crustacea	:	> 100 mg/l 48h - Daphnia magna
		EC50	:	Algae	:	> 100 mg/l 72 h - Desmodesmus subspicatus
Calcium chloride	:	LC 50	:	Fish	:	4630 mg/l - Pimephales promelas
		LOEC Chronic			:	240 mg/l - Daphnia magna Duration: 21 d

		NOEC Chronic	:		481 mg/l - Daphnia magna Duration: 21 d
		NOEC Chronic	:	Fish :	230 mg/l - Oncorhynchus mykiss Duration: 25 d
Magnesium sulphate	:	LC 50	:	Fish :	680 mg/l - Pimephales promelas
Sodium feredetate	:	LC50	:	Fish :	> 100 mg/l Oncorhynchus mykiss
		EC50	:	Crustacea :	100,9 mg/l - Daphnia Magna
		EC50	:	Algae :	69,9 mg/l 72 h Pseudokirchneriella subcapitata
		LOEC Chronic	:		50 mg/l - Daphnia magna Duration: 21 d
		NOEC Chronic	:		25 mg/l - Daphnia magna Duration: 21 d
		NOEC Chronic	:	Fish :	≥ 25,7 mg/l - Danio rerio Duration: 35 d
Manganese sulphate monohydrate	:	LC50	:	Fish :	30,6 mg/l - Pimephales promelas
		EC50	:	Crustacea :	8,3 mg/l
		EC50	:	Algae :	61 mg/l 72 h - Desmodesmus subspicatus
Glycine	:	LC50	:	Fish :	> 5 mg/l
		EC50	:	Crustacea :	> 220 mg/l 72 h - Daphnia magna
		EC50	:	Algae :	> 1000 mg/l - Raphidocelis subcapitata
Boric acid	:	LC50	:	Fish :	79,7 mg/l - Pimephales promelas
		LC50	:	Fish :	74 mg/l - Limanda limanda
		EC50	:	Crustacea :	133 mg/l
		EC50	:	Algae :	66 mg/l 72 h - Phaeodactylum tricornutum
		EC50	:	Algae :	54 mg/l 72 h - Phaeodactylum tricornutum
		NOEC Chronic	:	Fish :	6,4 mg/l - Danio rerio - Duration: 34 d
Zinc sulphate heptahydrate	:	EC50	:	Crustacea :	12 mg/l
		EC50	:	Algae :	0,05 – 65 mg/l 72 h Source: GESTIS
Thiamine hydrochloride	:	LC50	:	Fish :	> 100 mg/l Oncorhynchus mykiss
		EC50	:	Crustacea :	> 100 mg/l - Daphnia magna
		EC50	:	Algae :	> 100 mg/l 72 h - Desmodesmus subspicatus

Potassium iodide	:	LC50	:	Fish	: > 100 mg/l - Danio rerio
		EC50	:	Crustacea	: > 100 mg/l - Daphnia magna
		EC50	:	Algae	: 2900 mg/l 72 h
		NOEC Chronic			: 29,87 mg/l - Daphnia magna Duration: 21 d
		NOEC Chronic	:	Fish	: 66,356 mg/l Duration: 28 d
Nicotinic acid	:	LC50	:	Fish	: 520 mg/l - Salmo trutta
		EC50	:	Crustacea	: 77 mg/l - Daphnia magna
		EC50	:	Algae	: 89,93 mg/l 72 h - Desmodesmus subspicatus
		EC50	:	Algae	: 67,96 mg/l 96 h - Desmodesmus subspicatus
Pyridoxine hydrochloride	:	LC50	:	Fish	: > 100 mg/l - Oncorhynchus mykiss
		EC50	:	Crustacea	: > 100 mg/l 48 h - Daphnia magna
		EC50	:	Algae	: 72 mg/l 72 h - Desmodesmus subspicatus

12.2 Persistence and degradability

Glycine	:	Persistence and degradability	:	Product is biodegradable
		BOD (% of ThOD)	:	57 % ThOD (5 days)
Thiamine hydrochloride	:	Persistence and degradability	:	Product is biodegradable
		Biodegradation	:	74 % (7 d)
Pyridoxine hydrochloride	:	Biodegradation	:	94 % (28 d, OECD 301E)
Nicotinic Acid	:	Persistence and degradability	:	Product is biodegradable
		BOD (% of ThOD)	:	100 % ThOD
		Biodegradation	:	100 %

12.3 Bioaccumulative potential

Boric acid

Partition coefficient n-octanol/water (Log Pow) : 0,18

Calcium chloride

Partition coefficient n-octanol/water (Log Pow) : 0,0500006

Glycine

Partition coefficient n-octanol/water (Log Pow) : -2,3 at 20 °C

Bioaccumulative potential : No bioaccumulation

Thiamine hydrochloride

Partition coefficient n-octanol/water (Log Pow) : < -3,04 at 22,5 °C

Pyridoxine hydrochloride

Partition coefficient n-octanol/water (Log Pow) : -0,7 at 20 °C, pH 7

Nicotinic Acid

Partition coefficient n-octanol/water (Log Pow) : -2,43 at 25 °C (OECD Test 107)

Bioaccumulative potential : No bioaccumulation

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB 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.

Component	CAS no	
Boric acid	10043-35-3	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 Other adverse effects

No data available

In the absence of complete ecological information, treat product as environmentally
Use proper storage, handling, and disposal to prevent unintentional release into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable products to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Avoid disposal of material in drains or sewers.
Waste material must be disposed of in accordance with the Directive on Waste 2008/98/EC as well as other national and local regulations.

Contaminated Packaging

Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

		ADR/RID	IMDG	IATA
14.1	**UN Number**	-	-	-
14.2	**UN Proper Shipping Name**	Not Dangerous Goods	Not Dangerous Goods	Not Dangerous Goods
14.3	**Transport Hazard Class(es)**	-	-	-
14.4	**Packing Group**	-	-	-
14.5	**Environmental Hazards**	No	Marine Pollutant: No	No

14.6 Special precautions for user

Further Information

No data available

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Annex II No. 2020/878

Authorizations and/or restrictions on use
Restricted to professional users.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out.

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H318	Causes serious eye damage
H319	Causes serious eye irritation
H360FD	May damage fertility. May damage the unborn child
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

Abbreviations and acronyms

ADR/RID: European Agreements Concerning the International Carriage of Dangerous Goods by Road (ADR) and Rail (RID)
CAS No: Chemical Abstracts Service number
EC: European Commission
EC No: European Commission number
EHS: Environmentally Hazardous Substance
EU: European Union
H-Statement: Hazard Statement
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC: International Bulk Chemical
IMDG: International Maritime Dangerous Goods Code
LC50: Lethal concentration, 50%
LD50: Median Lethal dose
MARPOL 73/78: International Convention for the Prevention of Pollution from Ships
NIOSH: National Institute for Occupation Safety and Health
OEL: Occupational Exposure Limit
PBT: Persistent, Bioaccumulative and Toxic
REACH: Registration, Evaluation, Authorisation and restrictions of Chemicals
RTECS: Registry of Toxic Effects of Chemical Substances
SDS: Safety Data Sheet
UN: United Nations
vPvB: Very Persistent and Very Bioaccumulative

Further information
Revision Date: 17-04-2026

The above information is based upon the present state of our knowledge and is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information is believed to be correct but does not purport to be all inclusive. It does not represent any guarantees of the properties of the product. TOKU-E Company shall not be held liable for damage or injury resulting from contact, handling, or storage of the above product.