MBL A JSR Life Sciences Company

Afamin/Wnt3a CM

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Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:
Product name: Afamin/Wnt3a CM
SDS NO：J2_001_E-2
Product code:J2-001

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the product: Research and Development

1.3 Details of the supplier of the safety data sheet
Supplier: Medical & Biological Laboratories Co., Ltd.
Address: 1018-1 Terasawaoka, Ina-shi, Nagano-ken 396-0002, Japan
Division: SDS Support
Telephone number: +81-265-76-1777
e-mail address: sds-support@mbl.co.jp

1.4 Emergency telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)

Section 2. Hazards identification

GHS classification and label elements of the product

2.1 Classification of the substance or mixture
Classification according to Hazard Communication Standard - 2012 (29 CFR 1910.1200)
ENVIRONMENT HAZARDS
Hazardous to the aquatic environment, long-term (chronic): Category 3

2.2 Label elements
Labelling according to Hazard Communication Standard - 2012 (29 CFR 1910.1200)
No GHS label element
No Signal word
HAZARD STATEMENT
H412-Harmful to aquatic life with long lasting effects
PRECAUTIONARY STATEMENT
Prevention
P273-Avoid release to the environment.
Disposal
P501-Dispose of contents/container in accordance with local/national regulation.

Section 3. Composition/information on ingredients

Mixture/Substance selection:
3.2 Mixture

Ingredient name	Content (%)	CAS No.	ECNO	Classification according to REGULATION (EC) No.1272/2008 [CLP]
Water	90-98	7732-18-5	231-791-2	-
Copper sulfate pentahydrate	<0.01	7758-99-8	231-847-6	Acute Tox. 4, H302; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 [SCL's, M-Factors, ATE, Component notes]

				Oral: ATE = 481 mg/kg bw;M=10;M=1
Zinc sulfate heptahydrate	<0.01	7446-20-0	231-793-3	Acute Tox. 4 *, H302; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410
Ammonium metavanadate	<0.01	7803-55-6	232-261-3	-
Manganese(II) chloride tetrahydrate	<0.01	13446-34-9	-	-
Sodium selenite	<0.0001	10102-18-8	233-267-9	Acute Tox. 2 *, H300; Acute Tox. 3 *, H331; Skin Sens. 1, H317; Aquatic Chronic 2, H411;EUH031
Copper monochloride	<0.01	7758-89-6	231-842-9	Acute Tox. 4 *, H302; Aquatic Acute 1, H400; Aquatic Chronic 1, H410
Zinc chloride	<0.01	7646-85-7	231-592-0	Acute Tox. 4 *, H302; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 [SCL's, M-Factors, ATE, Component notes] STOT SE 3; H335: C >= 5 %

Section 4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

P314-Get medical advice/attention if you feel unwell.

IF INHALED

P304 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

P302 + P352-Wash with plenty of soap and water.

IF IN EYES

P305 + P351 + P338-Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED

P301 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

5.2 Specific hazards arising from the substance or mixture

Specific hazards arising from the substance or mixture is not available.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Section 6. Accidental release measures

6.1 Personnel precautions, protective equipment and emergency procedures

Stop leak if safe to do so.

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

P376-Stop leak if safe to do so.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

6.4 Reference to other sections

Refer to section 13

Section 7. Handling and storage

7.1 Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

Safety Measures

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Advice on general occupational hygiene

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

7.2 Storage

Conditions for safe storage

P233-Keep container tightly closed.

P235 + P410-Keep cool. Protect from sunlight.

Container and packaging materials for safe handling data is not available.

7.3 Specific end use(s)

For the relevant identified use(s)listed in Section 1 the advice mentioned in this section 7 is to be observed.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Adopted value

(Manganese(II) chloride tetrahydrate)

ACGIH(2013) TWA: 0.02mg-Mn/m3(R);

TWA: 0.1mg-Mn/m3(I) (CNS impair)

(Sodium selenite)

ACGIH(1992) TWA: 0.2mg-Se/m3 (Eye & URT irr)

(Zinc chloride)

ACGIH(1992) TWA: 1mg/m3

STEL: 2mg/m3 (LRT & URT irr)

EU Occupational exposure limit values (Workplace Exposure limits) compliant to relevant EU Directive through 91/332/EEC to 2019/1831/EU

(Manganese(II) chloride tetrahydrate)

LTEL: 0.2mg-Mn/m3 (Inhalable fraction); 0.05mg-Mn/m3 (Respirable fraction)

OSHA-PEL

(Manganese(II) chloride tetrahydrate)

STEL: C 5mg-Mn/m3
(Sodium selenite)
TWA: 0.2mg-Se/m3
(Zinc chloride)
TWA: 1mg/m3

NIOSH-REL
(Manganese(II) chloride tetrahydrate)
TWA: 1mg-Mn/m3; STEL: 3mg-Mn/m3
(Sodium selenite)
TWA: 0.2mg-Se/m3
(Zinc chloride)
TWA: 1mg/m3; STEL: 2mg/m3

8.2 Exposure controls

Appropriate engineering controls
Do not use in areas without adequate ventilation.
Washing facilities should be available.

Individual protection measures

Hand protection
Wear protective gloves.

Eye protection
Wear eye/face protection.

Skin and body protection
Wear protective clothing.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid
Color: Pink
Odor data is not available.
Melting point/Freezing point data is not available.
Boiling point or initial boiling point data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Flash point data is not available.
Auto-ignition temperature data is not available.
Decomposition temperature data is not available.
Self-Accelerating Decomposition Temperature/SADT data is not available.
pH: 6-9
Kinematic viscosity data is not available.
Solubility:
Solubility in water data is not available.
n-Octanol/water partition coefficient data is not available.
Vapor pressure data is not available.
Density and/or relative density data is not available.
Relative vapor density (Air=1) data is not available.
Particle characteristics data is not available.

9.2 Other information

Other information is not available.

Section 10. Stability and Reactivity

10.1 Reactivity

Reactivity data is not available.

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

10.4 Conditions to avoid

Conditions to avoid data is not available.

10.5 Incompatible materials

Incompatible materials data is not available.

10.6 Hazardous decomposition products

Hazardous decomposition products data is not available.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Table 3 of Annex VI to the CLP Regulations]
(Copper sulfate pentahydrate)
Category 4
(Zinc sulfate heptahydrate)
Category 4
(Sodium selenite)
Category 2
(Copper monochloride)
Category 4
(Zinc chloride)
Category 4

Acute toxicity (Inhalation)

[Table 3 of Annex VI to the CLP Regulations]
(Sodium selenite)
Category 3

Irritant properties

Skin corrosion/irritation

[Table 3 of Annex VI to the CLP Regulations]
(Zinc chloride)
Category 1B

Serious eye damage/irritation

[Table 3 of Annex VI to the CLP Regulations]
(Copper sulfate pentahydrate)
Category 1
(Zinc sulfate heptahydrate)
Category 1

Sensitization

Skin sensitization

[Table 3 of Annex VI to the CLP Regulations]
(Sodium selenite)
Category 1

Mutagenic effects data is not available.

Carcinogenicity

[ACGIH]
(Manganese(II) chloride tetrahydrate)
A4(as Mn)(2013) : Not Classifiable as a Human Carcinogen

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure
[cat.3 (respiratory tract irritation)]
[Table 3 of Annex VI to the CLP Regulations]
(Zinc chloride)
Category 3, Respiratory tract irritation
STOT-repeated exposure data is not available.
Aspiration hazard data is not available.
11.2 Information on other hazards
Endocrine disrupting properties is not available.

Section 12. Ecological Information
12.1 Toxicity
Aquatic toxicity
Hazardous to the aquatic environment, short-term (acute)
[Table 3 of Annex VI to the CLP Regulations]
(Copper sulfate pentahydrate)
Category 1
(Zinc sulfate heptahydrate)
Category 1
(Copper monochloride)
Category 1
(Zinc chloride)
Category 1
Hazardous to the aquatic environment, long-term (chronic)
[Table 3 of Annex VI to the CLP Regulations]
(Copper sulfate pentahydrate)
Category 1
(Zinc sulfate heptahydrate)
Category 1
(Sodium selenite)
Category 2
(Copper monochloride)
Category 1
(Zinc chloride)
Category 1
Water solubility
(Copper sulfate pentahydrate)
31.7 g/100 ml (0℃) (ICSC, 2001)
(Zinc sulfate heptahydrate)
54 g/100 ml (20℃) (ICSC, 2001)
(Sodium selenite)
898,000 mg/L(MOE Japan, 2016)
(Zinc chloride)
432 g/100 ml (25℃) (ICSC, 2002)
12.2 Persistence and degradability
Persistence and degradability data is not available.
12.3 Bioaccumulative potential
(Sodium selenite)
BCF=12 (Check & Review, Japan)
(Zinc chloride)
BCF=178 (Check & Review, Japan)
12.4 Mobility in soil
Mobility in soil data is not available.

12.5 Results of PBT and vPvB assessment

PBT and/or vPvB assessment data is not available.

12.6 Endocrine disrupting properties

Endocrine disrupting properties is not available.

12.7 Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

13.1 Waste treatment methods

P273-Avoid release to the environment.

P501-Dispose of contents/container in accordance with local/national regulation.

Contaminated packing

Dispose of container after using the contents completely.

Section 14. Transport Information

UN No., UN CLASS

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IATA (Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

14.5 Environmental hazards

Marine pollutants (yes/no) : no

14.6 Special precautions for user

Special precautions for user is not applicable.

14.7 Maritime transport in bulk according to IMO instruments
MARPOL Annex II - Noxious Liquid Substances
Non Noxious Liquid Substances ; Cat. OS
Water
MARPOL Annex V - HME (Harmful to the Marine Environment)
Not applicable to Maritime transport in bulk according to IMO instruments.

Section 15. Regulatory Information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
U.S. Toxic Substances Control Act (TSCA) Inventory
Chemicals listed in TSCA Inventory
Ethanol, 2-amino-, hydrochloride; Streptomycin Sulfate; Water; Zinc chloride; Copper monochloride; Ammonium metavanadate; Albumin, Bovine; Sodium selenite
Superfund Amendments and Reauthorizations Act (SARA), Title III
This product contains no chemicals subjected to reporting levels established by SARA Title III, Section 313.
California proposition 65
WARNING: This product can expose you to chemical(s), which is(are) known to the State of California to cause cancer, and/or chemical(s), which is (are) known to the State of California to cause birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov.
Reproductive Toxicity
Streptomycin Sulfate (Developmental Toxicity)
15.2 Chemical safety assessment
No chemical safety assessment has been carried out for this product.

Section 16. Other information
GHS classification and labelling
H412-Hazardous to the aquatic environment, long-term (chronic), Category 3: H412 Harmful to aquatic life with long lasting effects
Full text of Hazard categories and Hazard statements referred to only section 3
Acute Tox. 2, H300 - Acute toxicity, Category 2: H300 Fatal if swallowed
Acute Tox. 4, H302 - Acute toxicity, Category 4: H302 Harmful if swallowed
Skin Corr. 1B, H314 - Skin corrosion/irritation, Category 1B: H314 Causes severe skin burns and eye damage
Skin Sens. 1, H317 - Skin sensitization, Category 1: H317 May cause an allergic skin reaction
Eye Dam. 1, H318 - Serious eye damage/eye irritation, Category 1: H318 Causes serious eye damage
Acute Tox. 3, H331 - Acute toxicity, Category 3: H331 Toxic if inhaled
STOT SE 3, H335 - STOT - single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation.
Aquatic Acute 1, H400 - Hazardous to the aquatic environment, short-term (acute), Category 1: H400 Very toxic to aquatic life
Aquatic Chronic 1, H410 - Hazardous to the aquatic environment, long-term (chronic), Category 1: H410 Very toxic to aquatic life with long lasting effects
Aquatic Chronic 2, H411 - Hazardous to the aquatic environment, long-term (chronic), Category 2: H411 Toxic to aquatic life with long lasting effects
EUH031 - Contact with acids liberates toxic gas.
References and sources for data
Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN
IMDG Code, 2020 Edition (Incorporating Amendment 40-20)
IATA Dangerous Goods Regulations (64th Edition) 2023
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2023 TLVs and BEIs. (ACGIH)
Supplier's data/information
Hazard Communication Standard – 2012 (29 CFR 1910.1200)
Chemicals safety data management system "GHS Assistant" Version 4.26
(https://www.asahi-ghs.com/)

Abbreviations and acronyms

(I) – Inhalable Particulate matter; (R) – Respirable particulate matter; see Appendix C, paragraph C.; CNS – central nervous system; impair – impairment; irr – irritation; LRT – lower respiratory tract; URT – upper respiratory tract

Revision information

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General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.