Product Technical Data Sheet	
Product name: Alpha Lipoic Acid solvent free granular	AC code: AC01712b

1.Technical Data Sheet			
Chemical Name	1,2-Dithiolane-3-valeric acid		
CAS number	1077-28-7		
Molecular weight	206.33		
Molecular Formula	C8H14O2S2		
Compliance (Food / Pharmacopoeia / FCC / Feed)	Food / Pharmacopoeia / Cosmetic		
Source (animal, plant, mineral, petrochemical)	Bio-Synthetic		

Brief introduction:

Alpha-lipoic acid is an organic compound found in all human cells.

It's made inside the mitochondrion — also known as the powerhouse of cells — where it helps enzymes turn nutrients into energy (1Trusted Source).

What's more, it has powerful antioxidant properties.

Alpha-lipoic acid is both water- and fat-soluble, which allows it to work in every cell or tissue in the body. Meanwhile, most other antioxidants are either water- or fat-soluble (2Trusted Source).

For instance, vitamin C is only water-soluble, while vitamin E is only fat-soluble.

The antioxidant properties of alpha-lipoic acid have been linked to several benefits, including lower blood sugar levels, reduced inflammation, slowed skin aging, and improved nerve function.

Item	Standard		Analysis Method
Appearance & Solubility			
Appearance	Slightly yellow crystal particle		
Solubility	Very slightly soluble in water, very soluble in dimethylformamide, freely soluble in methanol		
Particle Size	25 ~ 60 mesh		Sieve
Typical Analysis			
Identification	Meets the requirements		HPLC
Assay	98.5~ 101.0%		HPLC
Melting Point	60℃ ~ 62℃		USP
Loss on Drying	≤0.5%		USP <921>
Residue on Ignition	≤0.1%		USP <281>
Related Substances	Individual impurities	≤0.1%	HPLC
	Total impurities	≤2.0%	HPLC
Residual Solvent	Ethyl acetate	≤1000ppm	Enterprise Standard
	n-Heptane	≤1000ppm	

Heavy metals		
Total Heavy Metals	≤10.0 ppm	USP <233>
Lead	≤3.0 ppm	USP <233>
Arsenic	≤1.0 ppm	USP <233>
Cadmium	≤1.0 ppm	USP <233>
Mercury	≤0.1 ppm	USP <233>
Microorganism		
Aerobic bacterial count	≤1,000 cfu/g	USP <61>
Total Molds & Yeasts	≤100 cfu/g	USP <61>
E.Coli	Negative/g	USP <62>
Salmonella	Negative/10g	USP <62>
Pseudomonas aeruginos	Negative/g	USP <62>
Storage & Shelf Life		
Package	25kgs/drum	
Shelf life	The shelf life for the product is 24 months from date of production. Use it as soon as possible once it is opened.	
Storage	Sealed storage at a temperature below 20°C in a dry andwell-ventilated area, avoid exposure to heat and direct sunlight.	

2.Origin & ingredient

Country of origin of the product: China Origin statement: available ☒

This product is a pure material ☒		This product is a compound material ☐	
The product' s composition is 100% Citicoline			
Animal origin	☐ bovine	Specific Source: /	
	☐ porcine	Specific Source: /	
	☐ ovine	Specific Source: /	
	☐ Others:	Specific Source: /	
Synthetic	☒	Starting material: Ethyl dichlo roocta noate	origin: China
Biotechnological processing	☐ Catalysis By Enzymes	Name Of Enzyme: / Sources Of Enzymes: /	
	☐ Fermentation	Source Of Medium: / Strain: /	
Botanical Origin	Botanical Name:	/	
	Part:	/	
	Wild Or Cultivated:	/	
	Country Of Origin:	/	
	Solvent Used:	/	

3.Nutrition Data

Nutrition Information per 100 grams (All nutrients need a quantity listed, even if the value is "0")	
Calories	0
Calories from Fat	0
Total Fat	0
-monounsaturated	0

-polyunsaturated	0
-saturated	0
-trans fat	0
Cholesterol	0
Total Carbohydrate	0
-dietary fiber	0
-sugar	0
-sugar alcohols	0
-other carbohydrates	0
Protein	0
Vitamin A (as)	0
Vitamin D (as)	0
Vitamin E (as)	0
Vitamin K	0
Thiamin (vitamin B- 1)(as)	0
Riboflavin (as)	0
Niacin (as)	0
Vitamin B-6 (as)	0
Vitamin B-6 (as)	0
Folate, Folic Acid or Folacin	0
Vitamin B- 12 (as)	0
Biotin (as)	0
Pantothenic Acid (as)	0
Calcium (as)	0
Phosphorus (as)	0
Iodine (as)	0
Magnesium (as)	0
Zinc (as)	0
Selenium (as)	0
Copper (as)	0
Manganese (as)	0
Molybdenum (as)	0
Chromium (as)	0
Molybdenum (as)	0
Chloride (as)	0
Sodium (as)	0
Potassium (as)	0

4.Manufacture Details		
Manufacturer Name:	Yantai Acerbio Technology Ltd	
Address:	Tianmu Road, Laiyang Development District, Yantai, Shandong	
Main Products:	Bio-synthetic and Fermentation Products including Coenzyme Q10, Hyaluronic Acid, L- Ergothioneine, ALA	
Capacity Of Production	200mt per year	
Number Of Employees in Production: 60		Number Of Employees in QA / QC. :12

Quality And Food Safety Management System Certificated By Accredited Authority. E.G.: ISO Series, GFSI Series HACCP GMP 、 CGMP FAMI-QS 、 GMP+	ISO9001 Series: ☐ISO9001 ☐ISO22000 ☐ISO14001 ☐ISO45000 GFSI Series: ☒BRC ☐FSSC22000 ☐ IFS ☐SQF ☐GMP ☐HACCP ☐FAMI-QS ☐GMP+
Product Related Certificates	☒HALAL ☐KOSHER ☐IP ☐ORGANIC
Suitable For Vegan	☒YES ☐NO
We Confirm Above Mentioned Certificates Or Related Statement And Keep Available	☒

5. Process quality and food safety	
Flowchart: This product specification has listed the detailed process flowchart of each step of the actual production process from raw material pretreatment to finished product warehousing, including possible additives, processing aids, steps to remove foreign matters, CCP, water used, compressed air etc.	Integrity flowchart available ☒

CCP in place		
CCP info.	CL	Location in process

Foreign body control
Have implemented control procedures for glass, fragile plastic materials ☒

Pest control
Conducted by manufacturer: ☒ by external contractor☐ Name of contractor:

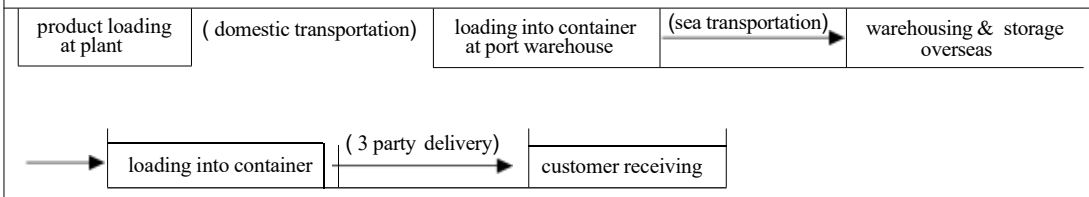
Batch no.& traceability	
Batch size:	2000kgs

Batch definition:	Signification of the batch no. by an example: In 789093. If you subtract 7 , 8 , 9 , 0 , 9 and 3, you get the last two digits of the year, month, and date in the production date, such as 2021/09/06, that is the production date

We confirm that we perform batch and traceability management on the whole process from raw material receiving, production process, storage and transportation, by focusing on raw materials, semi-finished products, production processing and transportation, related records and product labels. Take traceability exercise on a annual basis.

Supply chain custody

list all the stages in the process of supply chain including detail of every link back to farm, field or ocean. Everytime the raw material is moved, paid for, handled, stored or processed, and final to customer



6. GMO declaration	YES	NO
The product does not contain or consist of GMO	☐	☒
The product is not produced from GMO or not contain ingredients produced from GMO (irrespective of whether there is NDA or protein of GM origin in the final production)	☐	☒
This product is not produced by means of GM microorganism including precursor substances, e.g. with GMOs or Genetically Modified microorganisms processing aids(bacteria, yeast,..)	☐	☒
This product is not produced with the help of enzymes, which were obtained from GMOs	☐	☒
Does the product contain any ingredients from animal? If yes, are genetically modified crops contained in the feed for the animal?	☐ ☐	☒ ☒
We confirm that this product complies with regulations EC/ 18292003 and EC1830/2003 and keep NON-GMO statement available		☒

7.Allergen declaration

We have carefully reviewed this product according to According Annex II of Reg. (EU)1169/2011 as amended by Reg.(EU) 78/2014 as regards indication of ingredients present infoodstuffs and confirm the following:

	Direct incorporation as a base raw material or in a derivative form (don't forget the carriers, the additives and the processing aids)		CROSS CONTAMINATION					
			Presence on the production line		Presence on the production workshop		Presence on the production factory	
	Yes (precise nature)	No	Yes (precise the nature)	No	Yes (precise the nature)	No	Yes (precise the nature)	No

Cereals containing gluten(1) and products thereof		N		N		N		N
Crustaceans and products thereof		N		N		N		N
Eggs and products thereof		N		N		N		N
Fish and products thereof (2)		N		N		N		N
Peanuts and products thereof		N		N		N		N
Soybeans and products thereof (3)		N		N		N		N
Milk and products thereof (including lactose)(4)		N		N		N		N
Nuts (5) or products thereof		N		N		N		N
Celery and products thereof		N		N		N		N
Mustard and products thereof		N		N		N		N
Sesame seeds and product thereof		N		N		N		N
Sulphur dioxide and sulphites at concentrations of more than 10mg/kg or 10 mg/l expressed as SO2		N		N		N		N
Lupines and products thereof		N		N		N		N
Mollusc and product thereof		N		N		N		N

(1) Cereals which contain gluten (i.e. wheat, rye, barley, oats, spelt, kamut or their hybridised strains) except: wheat - based glucose syrups including dextrose, wheat-based maltodextrins, glucose syrups based on barley, cereals used for making distillates or ethyl alcohol of agricultural origin for spirit drinks and other alcoholic beverages;

(2) Except: fish gelatine used as carrier for vitamin or carotenoid preparations, fish gelatine or Isinglass used as fining agent in beer and wine;

(3) Except fully refined soybean oil and fat, natural mixed tocopherols (E306), natural D -alpha tocopherol, natural D - alpha tocopherol acetate, natural D-alpha tocopherol succinate from soybean sources; vegetable oils derived phytosterols and phytosterol esters from soybean sources; plant stanol ester produced from vegetable oil sterols from soybean sources;

(4) Except when used for making distillates or ethyl alcohol of agricultural origin for spirit drinks and other alcoholic beverages, lactitol;

(5) almond (Amydalus communis L.) hazelnuts (Corylus avellana), walnut (Juglans regia), cashew (Anacardium occidentale), pecan nuts (Carya illinaiesis), brazil nut (Bertholletia excelsa), pistachio nut (Pistacia vera), macadamia nut and queensland nut (Macadamia terniflora) and products thereof, except nuts used for making distillates or ethyl alcohol of agricultural origin for spirit drinks and other alcoholic beverages;

8 . NON IRRAIDATION (According to EU directive 1999/2/EC & 1999/3/EC)		
This product has not been treated with ionising radiation	☐YES	☒NO
None of the raw materials we used for this product have been treated with ionising radiation.	☐YES	☒NO
We confirm above Non-Irradiation statement is available	☒	

9.NANOMATERIAL (according to EU Regulation (EU) No. 1363/2013)		
This product does not contain any nanomaterials as defined in EU food legislation	☐YES	☒NO
This product has not been made with nanotechnology	☐YES	☒NO
We confirm above Non-Nanomaterial statement is available	☒	

10 . Residual solvents (according to UE Directive 2009/32 modified by(UE)2010/59; EP5.4;USP476;ICH Q3C(R7))

For this product following solvents are used during production process: Solvent A: max residual level:	☒solvent used ☐solvent not used
We confirm solvent residual of this product complies with:	☒EP 7.0 ☒ USP <476> ☒ ICH Q3C(R7) ☐ Directive 2010/59/ EU ☒NA
We confirm Solvent residual statement is available	☒

11 . Pesticide residual (according to EC 396/2005; EP07; USP <561>)	
This product is of vegetable origin	☒YES ☐NO
We confirm pesticide residual of this product complies with:	☒EC 396/2005 ☒EP 07/2008 ☒USP<561> ☐N/A
Pesticide residual statement available	☒

12 . BSE/TSE information (according to EU No. 2019/319; EP general chapter 5 .2 .8)	
Cattle, sheep, goats and animals that are naturally susceptible to infect with transmissible spongiform encephalopathy agents or susceptible to infection through the oral route other than humans and non-human primates are defined as "ESE-relevant animal species Pigs ad birds are not naturally susceptible to infection via the oral route; therefore, they are not TSE-relevant animal species . Dogs, rabbits and fish are not TES-relevant animal species."	
the product contains no ingredients of ruminant origin and no materials derived from, or exposed to ruminants affected by or under quarantine for Transmitting Transmissible Spongiform Encephalopathy (TSE) / Bovine Spongiform Encephalopathy (BSE)	☐YES ☒NO ☐NA
In the manufacturing of this product, there is no any raw or source material and /or reagent used that is of animal origin i.e. bovine, serum-albumin, enzymes, culture broths including those used to prepare working or master cell tanks	☐YES ☒NO
Equipment/systems/tools use for processing or storage of the material do not come into contact at anytime with materials of animal origin (e .g . , components of media filler used to check such system)	☐YES ☒NO
The material is not purified by using solvents, chromatographic media or buffers that contain components of animal origin	☐YES ☒NO
We confirm this product complies with:	☒ EU legislation 999/2001 & ☐ EP general chapter 5 .2 .8
We confirm BSE/TSE statement is available	☒YES

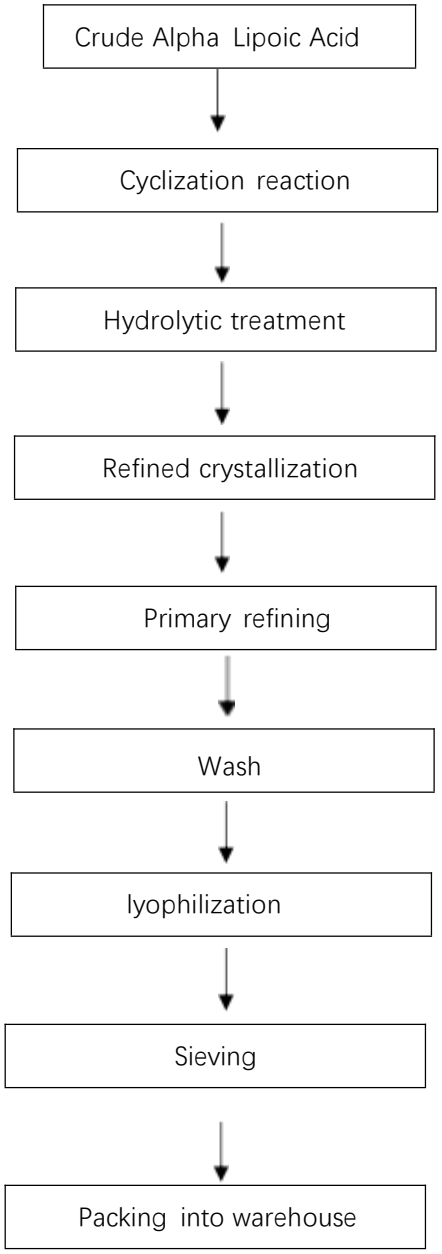
13.Contaminants information (according to UE regulation NO. 1881/2006 and NO.629/2008 as regards maximum levels for certain contaminants in foodstuff)	
● Aflatoxin B1 <5ppb ● Aflatoxins B1 + B2 + G1 + G2 <10ppb ● Ochratoxin A <15ppb	☒YES ☐NO ☐NA
● Melamine Free	☒YES
● Dioxins, Furans, Polychlorinated Biphenyls Free	☒YES
For polycyclic aromatic hydrocarbons, in cocoa fibre, banana chips, food supplements and their preparations, dried herbs *and dried spices*: ● Maximum level of 10 µg/kg of benzo(a)pyrene ●50 µg/kg for the sum of PAH4 (PAH4; benzo[a]pyrene,chrysene, benz[a]anthracene and benzo[b]fluoranthene) in food supplements	☒YES ☐NO ☐NA
We confirm this product complies with NO. 1881/2006 and NO.629/2008 and keep compliance statement available	☒YES

14.WADA STATEMENT
We confirm that no products made or stored within our facility contain any of the prohormones, stimulants, steroids, etc.that are on the current WADA list.

15. ETO FREE STATEMENT
We hereby confirm that we do not use ethylene oxide (ETO), 2-Chloroethanol nor any other chemical sterilizing agent during the manufacturing, storage or transport of our product.

16. Other statements	
We confirm Nitrates of this product complies with EU No 1258/2011	☒YES ☐NO ☐NA
We confirm Mycotoxins / Aflatoxins of this product complies with EU No 165/2010	☒YES ☐NO ☐NA
We confirm 3- MCPD of this product complies with EU No. 2020/1322	☒YES ☐NO ☐NA
We confirm Pyrrolizidine alkaloids of this product complies with Regulation (EU) 2020/2040	☒YES ☐NO ☐NA

Flow Chart


Crude Alpha Lipoic Acid
Cyclization reaction
Hydrolytic treatment
Refined crystallization
Primary refining
Wash
lyophilization
Sieving
Packing into warehouse

Material Safety Data Sheet (MSDS)

Alpha lipoic acid

1. PRODUCT IDENTIFICATION

1.1 Product Identifiers

Product Name: Alpha lipoic acid Other Name: Thioctic acid

Product Number: ALA

CAS No.:1077-28-7

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

Identified uses: pharmaceutical / food raw material

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910(OSHA HCS)
Acute toxicity, Oral (Category 4), H302)
For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 GHS Label elements, including precautionary statements

Pictogram:

Signal word: WARNING
Hazard statement(s)
H302 Harmful if swallowed
Precautionary statement(s)
P264 Wash skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P301 + P312 + P330 If swallowed: Call a poison center or doctor/ physician if you feel unwell. Rinse mouth
P501 Dispose of contents/ container to an approved waste disposal plant

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Synonyms: (±)- 1,2-Dithiolane-3-pentanoic acid

6,8-Dithiooctanoic acid

DL-6,8-Thioctic acid

Lip(S2)

DL-“-Lipoic acid

Formula: C8H14O2S2

Molecular weight: 206.33 g/mol

CAS-No. : 1077-28-7

EC-No. : 214-071-2DE

Hazardous Components

Component	Classification	Concentration
5-(Dithiolan-3-yl)valeric acid	Acute Tox. 4; H302	<= 100 %

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

4. FIRE AID MEASURES

4.1 Description of first aid measures

General Advice:

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

If inhaled:

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician

In case of skin contact

Washoff with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

4.2 Most important symptoms and effects, both 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

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Sulphur oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing

vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

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

For disposal see section 13

7. STORAGE AND HANDLING

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2**.**

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep in a dry and dark place, away from light.

Storage class (TRGS 510): Non Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye prot**ection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).**

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) 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.

Body Protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK- P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: particle

b) Odour No data available

c) Odour Threshold No data available

d) pH No data available

e) Melting point/freezing point Melting point/range: 60 - 62 °C (140 - 144 °F) f) Initial boiling point and boiling range 160 - 165 °C (320 - 329 °F)

g) Flashpoint No data available

h) Evaporation rate No data available

i) Flammability (solid, gas) No data available

j) Upper/lower flammability or explosive limits No data available

k) Vapour pressure No data available

l) Vapour density No data available

m) Relative density No data available

n) Water solubility No data available

o) Partition coefficient: n-octanol/water No data available

p) Auto-ignition temperature No data available

q) Decomposition temperature No data available

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties No data available

9.2 Other safety information

Solubility in other: Ethanol 50 g/l at 20 °C (68 °F) solvents

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

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

Other decomposition products - No data available

11.1 Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

LD50 Intraperitoneal - Mouse - 235 mg/kg

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: 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 IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as acarcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: JP1192000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

12. ECOLOGICAL INFORMATION:

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS:

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product

14. TRANSPORT INFORMATION:

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

5-(Dithiolan-3-yl)valeric acid

CAS-No.:1077-28-7

New Jersey Right To Know Components

5-(Dithiolan-3-yl)valeric acid

CAS-No.:1077-28-7

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm

16. OTHER INFORMATION

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

Acute Tox. Acute toxicity

H302 Harmful if swallowed.

HMIS Rating

Health hazard: 1

Chronic Health Hazard:

Flammability: 0

Physical Hazard 0

NFPA Rating

Health hazard: 1

Fire Hazard: 0

Reactivity Hazard: 0

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Yantai Acerbio Technology Ltd shall not beheld liable for any damage resulting from handling or from contact with the above product.