

Scheme No. : BN-4Q-R001

Version No. : VH-01

Product Name : SunCat MTA

Revision Date : 2017-08-02

SECTION 1. IDENTIFICATION OF PRODUCT / MIXTURE AND OF COMPANY/UNDERTAKING**1.1. Product Identifier Product Name :****SunCat MTA****1.2. Relevant identified uses of mixture and uses advised against :**Broad Spectrum, High Efficiency, Enwrapped Organic Sunscreen
Premix Dispersion**1.3. Details of the supplier of the safety data sheet****Manufacturing : Bio-Nest Biochemical Technology Co., Ltd.**

No.18, Jhen-Bei N. Lane, Jhen-Bei Village, Feng-Shan Dist.,

Kaohsiung City 83041, Taiwan

www.bio-nest.com

TEL : 886-7-733 5368

FAX : 886-7-733 5370

1.4. Emergency Phone No. : +886-7-733 5368 (B-N)**SECTION 2. HAZARDS IDENTIFICATION****2.1. Classification of the Substance or Mixture :**

Classification according to Regulations (EC) no.1272/2008 (CLP)

Aquatic Chronic : 4 H413 May cause long-lasting harmful effects to aquatic life**2.2. Label Elements :** Labeling according to Regulations (EC) no.1272/2008 (CLP)**Hazard Statement :** H413 May cause long lasting harmful effects to aquatic life**Hazard Pictogram :** None**Signal Word :** None**Precautionary Statements :**

P273 Avoid release to the environment

P501 Dispose of contents/container in accordance with local regulations

2.3. Other hazards : No other known hazards**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1. Chemical Characterization :**

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3.2 Components :

(INCI) Name	CAS No.	EINECS/ELINCS	wt. %	Function
REACH Registration / Pre-Registration No.				[Classification Cat Haz]
2-Ethylhexyl trans-4-Methoxycinnamate	83834-59-7	629-661-9	20.0 %	UV Filter
	01-2119471476-31-0003			[None]
Butyl Methoxydibenzoylmethane	70356-09-1	274-581-6	20.0 %	UV Filter
	01-2119967408-25-xxxx			[Aquatic chronic 4 H413]
Octocrylene	6197-30-4	228-250-8	10.0 %	UV Filter
	01-2119457637-27-xxxx			[Aquatic chronic 4 H413]
Water	7732-18-5	231-791-2	38.9 %	Suspension fluid
	Not required			[None]
Butylene Glycol	107-88-0	203-529-7	10.0 %	Solvent
	01-2119455875-25-xxxx			[None]
Lecithin (natural product)	8002-43-5	232-307-2	1.0 %	Emulsifying
	Not required			[None]
Phenoxyethanol	122-99-6	204-589-7	0.1 %	Preservative
	01-2119488943-21-xxxx			[Eye irritation 2 H319]
	Below 1 MT/year			[Oral toxicity 4 H302]

NOTES

- Aquatic Chronic Category 4 is "precautionary fall-back"
- Phenoxyethanol usage at <0.1% w/w is not taken as relevant ingredient for skin/eye irritation (per ECHA "Guidance on Information Requirements and Chemical Safety Assessment" page 314, Version 4.1 - June 2015)
- Oral toxicity of Phenoxyethanol from prior studies was LD50 - rat : 1,260 mg/kg. With a content of 0.1% in SunCat MTA, this is not relevant as a contributor to toxicity.
- Environmental Impact : A precautionary "Category 4" is assigned, arising from Category 4 assigned to **Butyl Methoxydibenzoylmethane (Avobenzone)** & Octocrylene.
- 2-Ethylhexyl trans-4-Methoxycinnamate : Data revised from Ethylhexyl Methoxycinnamate (CAS No. 5466-77-3; EC No. [226-775-7](#)) According to ECHA ["Annex to the opinion of the msc on the draft community rolling action plan \(CoRAP\) annual update for years 2016-2018, \(09-Aug-2016 \)"](#)

Section 4. FIRST AID MEASURES

4.1. Description of First Aid Measures

General : If in doubt, consult physician – and show this SDS.

- After Inhalation Of Dust : Not applicable

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- After Skin Contact : Wash off immediately with soap and water.
- After Eye Contact : Flush eye immediately and thoroughly; protect the unaffected eye.
If any irritation continues, consult a physician.
- After Swallowing : In the event of any symptoms, seek medical advice (show the label or this SDS where possible).

4.2. Most Important Symptoms and Effects (Both Acute and Delayed) :

No known specific adverse effects and none reported.

4.3. Any Expected Symptoms for Immediate Medical Attention or Special treatment :

No data found or reported of any acute adverse effects.

If any unexplained/unexpected symptoms or reactions do occur, always act on the safe side and consult medical help.

Also, report any such occurrence to supplier.

SECTION 5. FIRE FIGHTING MEASURES**(THIS MIXTURE IS NOT CLASSIFIED AS FLAMMABLE)**

If involved in a surrounding fire -

5.1. Extinguishing Media : Foam, carbon dioxide, dry powder, water spray.**5.2. Special Hazards if mixture surrounded by fire :**

Carbon dioxide, carbon monoxide may be released

5.3. Special Protective Equipment for Firefighters : Normal fire-fighting equipment**SECTION 6. ACCIDENTAL RELEASE MEASURES****6.1. Personal Precautions, Protective Equipment and Emergency Procedures :**

Use personal protective equipment to protect skin, eyes, hands.

Wear chemical resistant overall

6.2. Environmental Precautions :

Do not allow to enter drains or waterways.

Do not discharge onto open ground.

6.3. Methods and Material for Containment and Cleaning

Pick up spillage mechanically with plastic scoop and place in clean plastic container for safe disposal. Label clearly and

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include note "FOR DISPOSAL".

Dispose of collected material in accordance with local regulations.

Do not attempt to re-use spilt product.

6.4. Reference To Other Sections : See also

- 7 for information on safe handling;
- 8 for information on personal protective equipment;
- 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

7.1. Advice on Safe Handling : No special measures necessary.

Immediately clean up spillages on floor as these may become slippery

7.2. Advice on Protection against Fire and Explosion :

No special measures required.

7.3. Storage :

Keep container tightly closed when not in use.

Keep out of direct sunlight in a well ventilated warehouse.

Keep temperature between 20 - 30°C and above freezing point at all times.

Label clearly and ensure no cross-contamination and no overheating.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters - Ingredients with Limit values require workplace monitoring : Not applicable.

8.2. Exposure Controls : Not applicable.

Personal Protective Equipment :

- **General Protection Measures :** Avoid contact with eyes and skin.
- **Hygiene Measures :** Remove contaminated clothing immediately.
Wash hands before breaks and after work.
- **Hand Protection :** Protective rubber gloves.
- **Eye Protection :** Safety spectacles with side shields.
- **Respiratory Protection :** None required.

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- **Body Protection :** Light protective clothing. Launder if contaminated.
- **Eating/Drinking on Plant :** Not allowed – this is general rule for chemical plants.
- **Occupational Exposure Limits :** None

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information On Basic Physical And Chemical Properties :

- (a) **Appearance :** Off-white to beige cream
- (b) **Odour :** Characteristic, slight, very mild.
- (c) **Odour threshold :** Not determined
- (d) **pH Value :** 6.5 to 8.5 at 25°C (5 % w/w in DI water)
6.5 to 7.5 at 25°C (5 % to 95% w/w in DI water)
- (e) **Melting/ freezing point :** The mixture freezes at 0°C, “enwrapping” might be damaged.
- (f) **Initial boiling point and range :**
100°C (destroys the enwrapping)
- (g) **Flash point :** N/A
- (h) **Evaporation rate :** Not measured
- (i) **Flammability :** Combustible in external fire - not classified as flammable
- (j) **Upper/lower flammability or explosive limits :**
N/A
- (k) **Vapour pressure :** Not measured
- (l) **Vapour density :** Not measured
- (m) **Relative density :** approximately 1 g/mL
- (n) **Solubility :** Readily dispersible suspension in water
- (o) **Partition coefficient :** [N-octanol/water] Not measured
- (p) **Auto-ignition temperature :** > 150°C
- (q) **Decomposition temperature :** > 150°C
- (r) **Viscosity :** Not measured
- (s) **Explosive properties :** No
- (t) **Nano particles :** Does not contain

- 9.2. **Other Information :** Ensure good containment inside equipment at all times.
Avoid all cross-contamination

SECTION 10. STABILITY AND REACTIVITY

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- 10.1. Reactivity : Low reactivity
- 10.2. Chemical stability : High stability of the product mixture shelf life >3 years under recommended storage conditions (20 to 30°C)
- 10.3. Possibility of Hazardous Reactions : No known hazardous reactions
- 10.4. Conditions to avoid : Avoid freezing to avoid enwrapping damage
- 10.5. Incompatible materials : Avoid mixing with strong acids or alkalis or with strong oxidizing agents
- 10.6. Hazardous Decomposition Products : None, with proper storage & handling (see Section 5 if involved in fire)

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

(a) Acute toxicity : Toxicity of all components is low. Prior to cosmetics animal testing ban, the following data had been collected by industry (not by Bio-Nest)

- Ingredient Name	LD50
- 2-Ethylhexyl trans-4-Methoxycinnamate	
(rat, oral)	> 20,000 mg/kg.
Usage in SunCat MTA	20 %
- Butyl Methoxydibenzoylmethane	
(rat, oral)	> 16,000 mg/kg.
Usage in SunCat MTA	20 %
- Octocrylene	
(rat, oral)	> 5,000 mg/kg.
Usage in SunCat MTA	10 %
- Butylene Glycol	
(rat, oral)	> 20,000 mg/kg.
Usage in SunCat MTA	10 %
- Lecithin	Low toxicity - and exempt.
Usage in SunCat MTA	1 %
- Phenoxyethanol	
(rat, oral)	1,260 mg/kg;
(rabbit, dermal)	> 5,000 mg/kg.
Usage in SunCat MTA	0.1 %

(b) Skin corrosion/irritation : Non-Primary Irritant and Non-Primary Sensitizer

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- **Method :** 50 Human Subject Repeat Insult Patch Test Skin Irritation / Sensitization Evaluation (Occlusive Patch) using SunCat MTA (as is)
- **Report by :** The IRB of AMA Laboratories, Inc.
Ref. No.: MS 16.RIPT.O4881O.50.BNB, Pure SunCat MTA raw material (mixture), Lot no.: M-1512069, February 25, 2016.
- **Method Reference :** Appraisal of Safety of Chemicals in Food, Drugs and Cosmetics, published by The Association of Food and Drug Officials of The United States, 1965 (modified).
CRF Title 21 Part 56, Subpart A,B,C and D.

(c) **Serious eye damage/irritation :**

No specific ocular tests completed. Some 10 years Bio-Nest lab & commercial handling in Asia of closely related members of the SunCat product series, plus the last 3 years handling SunCat MTA (as is) in lab and commercial scale trials has given no evidence of eye irritation or damage. Also, no eye abnormalities were observed in the above RIPT tests at AMA. Plus many tests by AMA on end-product formulations have shown no adverse effects of any sort on the eyes (or the skin)

(d) **Respiratory or skin sensitization :**

No adverse effects found in any of the tests or from actual practical experience

(e) **Germ cell mutagenicity :** Not reported for any of components

(f) **Carcinogenicity :** No component at or >0.1% is identified as probable, possible or confirmed human carcinogen by IARC

(g) **Reproductive toxicity :** No components suspected

(h) **STOT-single exposure :** No adverse findings

(i) **STOT-repeated exposure :** No adverse findings

(j) **Aspiration hazard :** No adverse effects seen or reported

SECTION 12. ECOLOGICAL INFORMATION

12.1. **Toxicity :** All components low toxicity

12.2. **Persistence and degradability :**

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- Butyl Methoxydibenzoylmethane :

* Not inherently biodegradable. No biodegradation under test conditions.

- Ethylhexyl Methoxycinnamate :

* Readily biodegradable. 78% after 28 days (OECD Guideline 301F)

- Octocrylene :

* No biodegradation observed

- 1,3-Butyleneglycol :

* Biodegradable - 81% in 29 days (OECD Guideline 301B)

- Lecithin :

* Readily Biodegradable

- Phenoxyethanol :

* Readily biodegradable

Adsorption/Desorption :

- Butyl Methoxydibenzoylmethane : log Koc 4.24-5.04 (20°C)

- Octocrylene : log Koc 5.61

12.3. Bio-accumulative potential : * Potential for bio-accumulation of 30% w/w Components

Butyl Methoxydibenzoylmethane and Octocrylene (both low toxicities)

12.4. Mobility in soil : * Mixed - but low toxicity

12.5 Results of PBT and vPvB assessment : Based on current information, no components are PBT/vPvB

12.6 Other adverse effects :

- Further Ecological Information :

The SunCat MTA mixture has a precautionary classification of "Aquatic Chronic, Category 4" (H413 - "May cause long-lasting harmful effects to aquatic life"); this is on account of its content of Butyl Methoxydibenzoylmethane (20%) and Octocrylene (10%), both of which substances have the same Precautionary Classification of Aquatic Chronic, Category 4 (H413) from following data

- Eco-toxicity Information for		<u>Butyl Methoxydibenzoylmethane</u>	<u>Octocrylene</u>
Short Term Fish	NOEC (4 days)	30 µg/L	500 µg/L (average)
Long Term Fish		No data	23 µg/L (average)
Short Term Daphnia	NOEC (48 hr)	30 µg/L	23 µg/L
Long Term Daphnia		No data	No data
Aquatic Plants	NOEC (4 days)	55 µg/L	No data
Aquatic Plants	NOEC (72 hr)	No data	100 mg/L

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- **General :** Do not allow industrial waste containing this substance to enter drains and sewers, water courses or ponds/lakes or open ground/soil.
- **NOTE :** There are no known adverse to environment synergistic effects known between the contents of the SunCat MTA mixture.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

- **Product :** Avoid release to the environment.
Dispose in a safe manner in accordance with local/national regulations (High Temperature incineration above 1,100°C is normally best).
- **Contaminated Packaging :** If empty contaminated containers are to be recycled, they must first be thoroughly cleaned, dried and certified clean.
They must NOT be re-used for any cosmetic or sunscreen products or similar.

SECTION 14. TRANSPORT INFORMATION

- 14.1 **General Information :** The product is not classified as hazardous goods for land, sea, or air transport according to the respective regulations (ADR, IMDG, IATA-DGR).

SECTION 15. REGULATORY INFORMATION

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

- **Dosage Regulations :** SunCat MTA Maximum Usages (w/w) in Sunscreen Formulations to comply local regulations.
EU 25 % ; AUS 25 % ; TWN 25 % ;
USA 15 % ; CAN 15% ; JPN 50%

- 15.2. **Chemical Safety Assessment :**

Done for each of the components registered according to REACH Regulation

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SECTION 16. OTHER INFORMATION

16.1 References : Based on supplier data via SIEF Groups and on usages of each component.

Create Date/Version : 2013-11-09 V 1.0

Previous Date/Version : 2016-09-08 VG-05

Revision Reasons : 2-Ethylhexyl trans-4- Methoxycinnamate (Name, CAS No. and EC No.), accroding to "Annex To The Opinion Of The Msc On The Draft Coomunity Rolling Action Plan (Corap) Annual Update For Years 2016-2018"
pH Value Range reduced accroding regular batches of COA observations

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NOTE : References in this SDS for animal test results were carried out before such tests were banned for cosmetics. Bio-Nest policy is to avoid all animal testing.

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