

Appendix 5.

1st Issuing Date: 2017.10.23, Revision Date: ----,--, Rev.No.: --

< Material Safety Data Sheet >

Product Name: Barium Sulfate B-MM

1. IDENTIFICATION

A. Product name

- Barium Sulfate B-MM

B. Recommended use and restriction on use

- General use : Cosmetics

C. Manufacturer / Supplier / Distributor information

- Company name : EastHill Corporation

- Address : Hyundai Coretel 1003, 341, Sanbon-ro, Gunpo-si, Gyeonggi-do 15865, Korea.

- Emergency telephone number : Tel) 031-396-5182 - Fax number : Fax) 031-396-5183

2. HAZARD IDENTIFICATION

A. GHS Classification

- Not applicable

B. GHS label elements

- Hazard symbols
 - Not applicable
- $\circ \ \text{Signal words}$
 - Not applicable
- Hazard statements
 - Not applicable
- Precautionary statements
 - 1) Prevention
 - Not applicable
 - 2) Response
 - Not applicable
 - 3) Storage
 - Not applicable
 - 4) Disposal
 - Not applicable

C. Other hazards which do not result in classification: (NFPA Classification)

- NFPA grade (0 ~ 4 level)
 - Health: 0, Flammability: 0, Reactivity: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

INCI NAME	CONTENT(%)	CAS.No
Barium Sulfate	Confidential	7727-43-7
Magnesium Myristate		4086-70-8

4. FIRST AID MEASURES

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

B. Specific hazards arising from the chemical

- Not available

C. Special protective actions for firefighters

- Using a unattended and water devices in case of large fire and leave alone to burn if you do not imperative.
- Avoid inhalation of materials or combustion by-products.
- Do not access if the tank on fire.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.
- Fine powder may cause ignition.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Remove all sources of ignition.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Avoid dust formation.
- Moist with water to prevent dust scattering.

B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Dust spills: Cover dust spills with plastic sheet or waterproof cloth to minimize spreading and avoid contact with water.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- For disposal of spilled material in appropriate containers collected and clear surface.

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Avoid direct physical contact.
- Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Comply with all applicable laws and regulations for handling
- Dealing only with a well-ventilated place.
- Minimize occurrence of dust and accumulation.`

B. Conditions for safe storage, including any incompatibilities

- Save applicable laws and regulations.
- Do not apply any physical shock to container.
- Please pay attention to incompatibilities materials and conditions to avoid.
- Keep sealed when not in use.
- Prevent static electricity and keep away from combustible materials or heat sources.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- o ACGIH TLV
 - [Barium Sulfate] : TWA, 50 mg/m3, Inhalable particulate matter (containing no asbestos and <1% crystalline silica)
- OSHA PEL
 - [Barium Sulfate]: 15 mg/m3 (Total dust), 5 mg/m3 (Respirable fraction)

B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

C. Individual protection measures, such as personal protective equipment

o Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Dust, mist, fume-purifying respiratory protection
- Any air-purifying respirator with a corpuscle filter of high efficiency
- Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)
- Self-contained breathing apparatus with a corpuscle filter of high efficiency
- For Unknown Concentration or Immediately Dangerous to Life or Health: Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

o Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

Hand protection

- Wear appropriate glove.

Skin protection

- Wear appropriate clothing.

- o Others
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance

- Appearance- Color- White

B. Odor Slightly Characteristic Odor

C. Odor threshold Not available D. pH Not available E. Melting point/Freezing point Not available F. Initial Boiling Point/Boiling Ranges Not available G. Flash point Not available H. Evaporation rate Not available I. Flammability(solid, gas) Not available J. Upper/Lower Flammability or explosive limits Not available Not available K. Vapour pressure L. Solubility Not available Not available M. Vapour density N. Specific gravity(Relative density) Not available O. Partition coefficient of n-octanol/water Not available P. Autoignition temperature Not available Q. Decomposition temperature Not available Not available R. Viscosity S. Molecular weight Not available

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

- o (Respiratory tracts)
 - Not available
- o (Oral)
 - Not available
- ∘ (Eye-Skin)
 - Not available

B. Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

- * Oral ATE MIX : Not available
 - [Barium Sulfate]: LD50 > 3000 mg/kg Rat (IUCLID)
- * Dermal ATE MIX : Not available
 - Not available
- * Inhalation ATE MIX : Not available
 - Not available
- Skin corrosion/irritation
 - Not available
- o Serious eye damage/irritation
 - Not available
- o Respiratory sensitization
 - Not available
- Skin sensitization
 - Not available
- Carcinogenicity
 - * IARC
 - Not available
 - * OSHA
 - Not available
 - * ACGIH
 - Not available
 - * NTP
 - Not available
 - * EU CLP
 - Not available
- o Germ cell mutagenicity
 - Not available
- o Reproductive toxicity
 - Not available
- o STOT-single exposure
 - Not available
- o STOT-repeated exposure
 - Not available
- o Aspiration hazard
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- ∘ Fish
 - Not available
- o Crustaceans
 - [Barium Sulfate] : EC50 32 mg/ ℓ 48 hr Daphnia magna (ECOTOX)
- o Algae
 - [Barium Sulfate] : EC50 1890.263 $\ensuremath{\mathtt{mg/\ell}}$ 96 hr (Estimate)

B. Persistence and degradability

- o Persistence
 - [Barium Sulfate] : log Kow = 0.63
 - [Magnesium Myristate] : log Kow 10.41 (Estimate)
- Degradability
 - Not available

C. Bioaccumulative potential

- o Bioaccumulative potential
 - [Barium Sulfate] : BCF = 3.162
 - [Magnesium Myristate] : BCF 71.96 (Estimate)
- o Biodegration
 - [Magnesium Myristate] : BIOWIN 6 (Estimate)

D. Mobility in soil

- [Magnesium Myristate] : Koc 6.225

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

B. Special precautions for disposal

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG CODE/IATA DGR)

- Not applicable

B. Proper shipping name

- Not applicable

C. Hazard Class

- Not applicable

D. IMDG CODE/IATA DGR Packing group

- Not applicable

E. Marine pollutant

- Not applicable

F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE: Not available
- Air transport(IATA): Not subject to IATA regulations.

15. REGULATORY INFORMATION

A. National and/or international regulatory information

- o POPs Management Law
 - Not applicable
- o Information of EU Classification
 - * Classification
 - Not applicable
 - * Risk Phrases
 - Not applicable
 - * Safety Phrase
 - Not applicable
- ∪.S. Federal regulations
 - * OSHA PROCESS SAFETY (29CFR1910.119)
 - Not applicable

- * CERCLA Section 103 (40CFR302.4)
 - Not applicable
- * EPCRA Section 302 (40CFR355.30)
 - Not applicable
- * EPCRA Section 304 (40CFR355.40)
 - Not applicable
- * EPCRA Section 313 (40CFR372.65)
 - Not applicable
- o Rotterdam Convention listed ingredients
 - Not applicable
- o Stockholm Convention listed ingredients
 - Not applicable
- o Montreal Protocol listed ingredients
 - Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2017-10-23

C. Revision number and Last date revised

- Not applicable

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).