

Gamma Aminobutyric Acid (GabarelixTM)

Specification

| | |
|----------------------------------|---|
| 1. Characters | White or almost white crystal or powder |
| 2. Identification | |
| Infrared absorption | Complied with the reference spectrum of aminobutyric acid |
| 3. pH | 6.5~8.0 |
| 4. Loss on drying | ≤3.0% |
| 5. Ash | ≤1.0% |
| 6. As | ≤1.0mg/kg |
| 7. Pb | ≤0.5mg/kg |
| 8. Total bacteria count | ≤500cfu/g |
| 9. Mold & Yeast | ≤50cfu/g |
| 10. Coliform | ≤30MPN/100g |
| 11. <i>Staphylococcus aureus</i> | Negative |
| 12. <i>Salmonella</i> | Negative |
| 13. <i>Shigella</i> | Negative |
| 14. Gamma aminobutyric acid | ≥98.0% |

【Storage】 Keep airtight in a cool dry place

【Package】 200 g/bottle, 1 kg/bag and 5 kg/bag

【Validity】 Two years

Material Safety Data Sheet

| 1. PRODUCT NAME AND COMPANY IDENTIFICATION | |
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| Date Issued: | October 31, 2013 |
| Product Name (as on label): | Gamma aminobutyric acid |
| Manufacturer: | Bloomage Freda Biopharm Co., Ltd. |
| Address: | No 678 Tianchen St., High-Tech Development Zone, Jinan, China. |
| Emergency Telephone Number: | +86-531-82685998 |
| 2. CHEMICAL IDENTITY | |
| COMPONENTS | Gamma aminobutyric acid 100% |
| CAS NO. | 56-12-2 |
| EC NO. | 200-258-6 |
| MOLECULAR WEIGHT | C ₄ H ₉ NO ₂ 103.12 g/mol |
| 3. HAZARDS IDENTIFICATION | |
| Emergency Overview: | |
| May cause respiratory, eye and skin irritation. | |
| 4. FIRST AID MEASURES | |
| GENERAL INFORMATION | Consult a physician. Show this safety data sheet to the doctor in attendance. |
| EYE CONTACT | Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. |
| SKIN CONTACT | Wash off with soap and plenty of water. Consult a physician. |
| INHALATION | If breathed in, move person into fresh air. Consult a physician. |
| SWALLOW | Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. |
| 5. FIRE FIGHTING MEASURES | |
| 5.1 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, nitrogen oxides (NO _x) | |
| 5.3 ADVICE FOR FIREFIGHTERS Wear self contained breathing apparatus for firefighting if necessary. | |
| 6. ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS) | |
| 6.1 STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. | |
| 6.2 WASTE DISPOSAL METHOD For disposal see section 13. | |

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

7.2 CONDITIONS FOR SAFE STORAGE

Keep container tightly closed in a dry place and protected from light.

8. PRECAUTION FOR SAFE USE

8.1 ENGINEERING CONTROLS

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

8.2 VENTILATION

Local exhaust: sufficient to remove airborne dust if handling results in dust generation.

8.3 PERSONAL PROTECTION

Splash goggles, full suit, gloves, dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE

White or almost white crystalline or powder

9.2 SOLUBILITY

Soluble in water

9.3 BOILING POINT

248 °C at 760 mmHg

9.4 FLASH POINT

103.8 °C

9.5 MELTING POINT

195-204 °C

9.6 FLAMMABILITY:

None

9.7 EXPLOSIVE CHARACTERISTICS

None

10. STABILITY AND REACTIVITY

10.1 CONDITIONS TO AVOID

Storage conditions: As high temperature and a high level of humidity

10.2 MATERIAL TO AVOID

Strong oxidizing agents

10.3 HAZARDOUS POLYMERIZATION

Will not occur

| 11. TOXICOLOGICAL INFORMATION |
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| <p>ACUTE ORAL TOXICITY LD₅₀ Oral -12680 mg/kg (mouse), no toxicity.</p> <p>CARCINOGENIC EFFECTS Classified none, by NIOSH.</p> <p>RTECS: ES6300000</p> |
| 12. ECOLOGICAL INFORMATION |
| <p>BIOLOGICAL DECOMPOSITION No data available</p> |
| 13. DISPOSAL CONSIDERATIONS |
| <p>Waste must be disposed of in accordance with federal, state and local environmental control regulation.</p> |
| 14. TRANSPORT INFORMATION |
| <p>It is not a hazard product. No special measures have to be observe by transportation.</p> |
| 15. REGULATORY INFORMATION |
| <p>Mandatory labeling of hazardous preparation: Not necessary The regulatory information given in this document only indicates regulations applicable to the product described in the Safety Data Sheet.</p> |
| 16. OTHER INFORMATION |
| <p>The above mentioned information is based on the actual state of knowledge and does not involve any guaranty of attribute. Existing law and regulation have to be observed in own responsibility of the buyer of our product.</p> |