



济南久安酯类化工有限公司

JINAN JIUAN ESTER CHEMICAL CO., LTD
CHEMICAL INDUSTRIAL PARK, ZHANGQIU CITY, SHANDONG, CHINA

SDS-B5E-2017


SAFETY DATA SHEET

Betaine Nitrate

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier	Betaine Nitrate
Chemical name	carboxymethyl(trimethyl)azanium,nitrate
Company name	Jinan Jiuan Ester Chemical Co., Ltd.
Address	Chemical Industrial Park, Zhangqiu City, Shandong Province, China
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SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture	Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 Specific target organ toxicity - single exposure (Category 3), H335
GHS label elements, including precautionary statements	
Signal word	Warning
Hazard statement(s)	H315 Causes skin irritation. H319 Causes serious eye irritation
Precautionary statement	P264 Wash ... thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. Response P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.
Hazard(s) not otherwise	Not classified.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical name	Molecular formula	M.W.	EINECS No.	CAS No.	Weight percent
Betaine Nitrate	C ₅ H ₁₂ N ₂ O ₅	180.16	298-179-5	93778-42-8	98-100

SECTION 4. FIRST AID MEASURES

Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
Call a physician if symptoms develop or persist.

Skin contact

Rinse skin with water/shower. Get medical attention if irritation develops and persists

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms /effects, acute and delayed

Gastrointestinal disturbances.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

General information

Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposures. In the United States, the national poison control center phone number is 1-800-222-1222. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen if available. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials. Water. Foam. Dry chemical or CO₂.

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

No unusual fire or explosion hazards noted

Special protective equipment and precautions for firefighters

Wear suitable protective equipment.

Fire-fighting equipment/instructions

Use water spray to cool unopened containers. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Avoid inhalation of dust from the spilled material. Wear appropriate personal protective equipment.

Methods and materials for containment and cleaning up Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid the generation of dusts during clean-up. For waste disposal, see section 13 of the SDS. Clean surface thoroughly to remove residual contamination.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Clean equipment and work surfaces with suitable detergent or solvent after use. Remove contaminated clothing, gloves and wash before reuse. Wash hands and other exposed skin thoroughly. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place. Storage at room temperature. Maximum temperature: 40 °C.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines No exposure standards allocated.

Appropriate engineering controls Airborne exposure should be controlled primarily by engineering controls such as general dilution ventilation, local exhaust ventilation, or process enclosure.

Respiratory protection In case of insufficient ventilation: Effective dust mask.

Eye/face protection Safety glasses with side-shields.

Hand protection Protective gloves.

Skin and body protection Wear suitable protective clothing, gloves and eye/face protection

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance White crystalline powder.

Physical state Solid.

Odour Odorless.

pH 0.8-1.3 (10% solution in water)

Melting point/freezing point >200 °C

Boiling Point/Range Not available.

Evaporation rate Not available.

Flash point Not available.

Flammability (solid, gas) Not applicable.

Vapor pressure Not applicable.

Viscosity Not applicable.

Solubility in water Freely soluble.

Solubility (other) Soluble in alcohol

Decomposition temperature Not applicable.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	No reactivity hazards known.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Hygroscopic; protect from moisture.
Materials to avoid	Strong bases, strong oxidizing agents.
Hazardous decomposition products	Risk for formation of trimethylamine and hydrogen nitrate in hot, strongly alkaline solution.

SECTION 11. TOXICOLOGICAL INFORMATION

Ingestion	Due to lack of data the classification is not possible.
Inhalation	Due to lack of data the classification is not possible.
Skin contact	Due to lack of data the classification is not possible.
Eye contact	Due to lack of data the classification is not possible.
Symptoms related to the physical, chemical, and toxicological characteristics	Nausea. Diarrhea.
Delayed and immediate effects	Cerebral edema. Hypermethioninemia.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	No ecotoxicity data noted for the ingredient(s).
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal instructions	Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.
Local disposal regulations	Not available.
Hazardous waste code	Not available.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

SECTION 14. TRANSPORTATION INFORMATION

DOT	Not regulated as a hazardous material by DOT.
IATA	Not regulated as a dangerous good.

Transport in bulk according
to Annex II of MARPOL No information available.
73/78 and the IBC Code

SECTION 15. REGULATORY INFORMATION

European/International Regulations:

Hazard Symbols:	XI, XN.
Risk Phrases:	R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R36/37/38 Irritating to the eyes, skin and the respiratory system.
Safety Phrases:	S 24/25 Avoid contact with skin and eyes. S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S 36 Wear suitable protective clothing. S 39 Wear eye/face protection.

WGK (Water Danger/Protection): 3

US federal regulations CERCLA/SARA Hazardous Substances - Not applicable.
All components are on the U.S. EPA TSCA Inventory List.

Other federal regulations

Safe Drinking Water Act (SDWA):	Not regulated.
Food and Drug Administration (FDA):	Not regulated.
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):	This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

SECTION 16. OTHER INFORMATION

References: Not available

Other Special Considerations: Not available

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Jinan Jiuan Ester Chemical Co., Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Jinan Jiuan Ester Chemical Co., Ltd. has been advised of the possibility of such damages.

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