



Choline Bitartrate Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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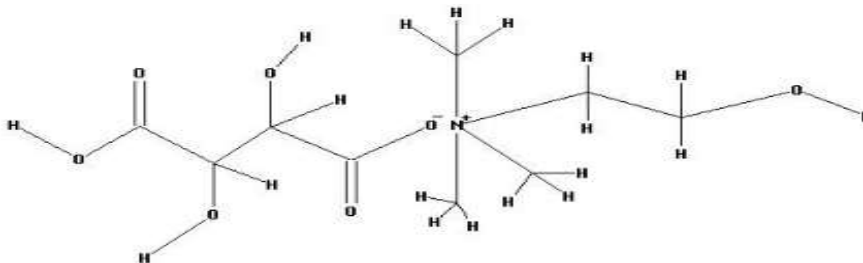
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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 Product Identifier

Product name	: Choline Bitartrate
CAS RN	: 87-67-2
EC#	: 201-763-4
Synonyms	: 2-(Hydroxyethyl)trimethylammonium bitartrate, (2-hydroxyethyl)trimethylazanium 3-carboxy-2,3-dihydroxypropanoate, 2-Hydroxy-N,N,N-trimethylethanaminium bitartrate, Choline Hydrogen Tartrate
Systematic name	: (2-hydroxyethyl)trimethylazanium 3-carboxy-2,3-dihydroxypropanoate
Molecular formula	: C ₉ H ₁₉ NO ₇
Structural formula	:



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

Relevant identified uses: As a fortificant in food & beverage

Uses advised against: None

1.3 Details of the supplier of the safety data sheet

Jubilant Ingrevia Limited

FACTORY OFFICE: Jubilant Ingrevia Limited.(Unit-1), Plot No: -P1-L1, Within Jubilant SEZ at Plot No:5, Vilayat GIDC, Taluka-Vagra, Dist.: Bharuch Vagra, Distt: Bharuch, Gujarat,392012 Tel: +91-2641-281500, 281507, Fax: +91-2641-281515

HEAD OFFICE:

Jubilant Ingrevia Limited

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T +91-120-4361000 - F +91-120-4234881 / 84 / 85 / 87 / 95 / 96 support@jubl.com - www.jubilantingrevia.com

1.4 Emergency telephone number

For Chemical Emergency ONLY (in the case of fire, leak, spill, exposure or accident) Call

Chemtrec: 1-800-424-9300 (US), 1-703-527-3887 (Outside U.S.)

Chemtrec (India) : 000-800-100-7141

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture

GHS-US classification

Material is not classified as Hazardous according to Directive 67/548/EEC and (EC) No 1272/2008.



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2.2 Label Elements

Signal Word: None

Pictogram: None

Hazard and Precautionary Statements:

HAZARD STATEMENTS

- Not classified. Material is not hazardous.

PRECAUTIONARY STATEMENTS

- Not classified. Material is not hazardous.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance	CAS Number	Concentration (%)
Choline bitartrate	87-67-2	NLT 98 %

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.
- **Inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **Skin contact:** Wash off with soap and plenty of water. Consult a physician.
- **Eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- **Ingestion:** 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:

- None reasonably foreseeable.

4.3. Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 : Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Unsuitable extinguishing media: No information available

5.2 : Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products: Carbon oxides, nitrogen oxides (NO_x). May be combustible at high temperatures

Potential for Dust explosion: Choline bitartrate has a Minimum Ignition Energy (MIE) of more than 1000 mJ. Static electricity is not critical, provided the powder is processed in grounded equipment.



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Special Flammability Hazards: Precautions against static ignition are required when handling this dust. All other sources of ignition (welding, cutting etc.) must be controlled by permit to work systems. Personnel must be prevented from smoking and using unapproved electrical equipment in the area. It is also recommended to know powder resistivity to assess the static charge accumulation

5.3 : Advice for firefighters

Specific Methods: No information available

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 : Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid dust formation.

Advice for emergency responders: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

6.2 : Environmental precautions

Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

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

SECTION 7: HANDLING AND STORAGE

7.1 : Precautions for safe handling

- Ensure adequate ventilation.
- Wear protective equipment
- Keep away from Incompatible products
- Avoid contact with skin and eyes.
- Avoid formation of dust and aerosols.
- Wear protective equipment (see Section 8.2).
- Keep away from heat and sources of ignition.
- Do not ingest.
- Do not breathe vapors/dust.
- Handle in accordance with good industrial hygiene and safety practice
- No drinking, eating and smoking at the workplace.

7.2 : Storage

- Preserve in well closed container
- Store away from incompatible materials. Hygroscopic.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

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8.1 : Control parameters

8.1.1 : Occupational Exposure Limits

- Contains no substances with occupational exposure limit values.

8.1.2 Derived No-Effect-Levels (DNEL) Predicted No-Effect-concentration (PNEC)

- No information available.

8.2 : Exposure controls

8.2.1 Appropriate engineering controls

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

8.2.2 - Personal Protection

Eye protection: Goggles or Safety glasses with side-shields.

Skin and body protection: Long sleeved clothing, Chemical resistant apron, Gloves

Respiratory protection: Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

8.2.3 Occupational hygiene

- When using, do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

8.2.4 Additional Information

- Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

8.2.5 Control of environmental exposure

- Contain any spillage.
- Avoid discharges to the environment.
- Dispose of any rinse water in accordance with local and national regulations.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- Information on basic physical and chemical properties.

Sr. No.	Parameter	Typical value
1.	Appearance	white to off white crystals
2.	Molecular weight	253.25
3.	Odor	faint
4.	Odor Threshold	No data available
5.	pH	3.0-4.0 (1 g/10 ml aq. Sol)
6.	Melting point	150°C to 153 °C
7.	Boiling point	399.30 °C. @ 760.00 mm Hg (est)



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Sr. No.	Parameter	Typical value
8.	Flash point	209.40 °C (est)
9.	Evaporation rate (n-BuAc=1)	No applicable (Solid)
10.	Flammability (Solid, gas)	Product is not flammable
11.	Upper/lower flammability or Explosive limits	No data available
12.	Vapor pressure	No data available
13.	Relative Density	1.47 g/cm ³
14.	Solubility	Freely soluble in water, Partially soluble in methanol, insoluble in ether, chloroform and benzene.
15.	Partition coefficient (Octonol /water)	-3.77 (est)
16.	Auto-ignition temperature	No data available
17.	Decomposition temperature	No data available
18.	Viscosity	No applicable (solid)
19.	Explosive property	No data available
20.	Oxidizing property	No data available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

- No information available

9.2.2. Other safety characteristics

- **DSC Result:** The thermogram shows endotherm onset at 108°C may be due to melting, first exothermic decomposition onset at 174°C with heat evolution of 205 J/g of sample (Severity: Medium) & second exothermic decomposition onset at 258°C with heat evolution of 165 J/g of sample (Severity: Medium)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

- Reactive with oxidizing agents

10.2 Chemical Stability

- Stable under recommended storage and handling conditions (see Section 7), Hygroscopic.

10.3 Possibility of hazardous reactions

- Hazardous polymerization does not occur

10.4 Conditions to Avoid

- Excess Heat, Exposure to moisture. Exposure to moist air, Incompatible materials.

10.5 Incompatible materials

- Strong oxidizing agents, Strong bases. Acid anhydrides. Acid chlorides.

10.6 Hazardous decomposition products

- Carbon oxides. Nitrogen oxides (NO_x).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 : Information on toxicological effects

Acute Toxicity:

- **Oral:** No data available
- **Dermal:** No data available
- **Inhalation:** No data available



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Skin Corrosion/Irritation

- May cause skin irritation

Serious eye damage/irritation

- May cause eye irritation

Respiratory or skin sensitization

- No data available

Germ cell mutagenicity

- No data available

Carcinogenicity

- No data available
- There are no known carcinogenic chemicals in this product

Reproductive toxicity

- No data on reproduction toxicity available.

STOT-single exposure

- May cause respiratory irritation

STOT-repeated exposure

- No data available

Aspiration hazard

- Not applicable (Solid)

11.2 Additional Information

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

After uptake of large quantities: Possible effects can be:

Dizziness

Nausea

Vomiting

Diarrhoea

- However, when the product is handled appropriately, hazardous effects are unlikely to occur.

SECTION 12: ECOLOGICAL INFORMATION

12.1 : Toxicity

- No data available
- Do not empty into drains.

12.2 : Persistence and degradability

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Persistence and degradability

Soluble in water. Persistence is unlikely based on information available

12.3 : Bio accumulative potential

Choline bitartrate

Bio accumulative potential Bioaccumulation is unlikely

12.4 : Mobility in Soil

Choline bitartrate

Mobility in Soil The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5 : PBT and vPvB assessment

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

12.6 : Other adverse effects

No other adverse effects are identified

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 : Waste treatment methods

Waste treatment methods

Waste from residues / unused product: Product may be burned in an incinerator equipped with afterburner and scrubber. Excess and expired materials are to be offered to a licensed hazardous material disposal company. Ensure that all Federal and Local regulations regarding the disposal and destruction of this material are followed.

Contaminated packaging: Dispose of as above.

Product is not to be disposed of in sanitary sewers, storm sewers, or landfills.

SECTION 14: TRANSPORT INFORMATION

- This substance is considered to be non-Hazardous for transport by Air/ Rail/ Road and Sea and thus not regulated by IATA/ ICAO/ US DOT/ IMO/ IMDG.

	ADR/ RID/ DOT	IMDG	IATA
14.1 UN number	Not regulated	Not regulated.	Not regulated
14.2 UN proper shipping name	Not classified as dangerous for transport.	Not classified as dangerous for transport.	Not classified as dangerous for transport.
14.3 Transport hazard class(es)	Not classified as dangerous for transport.	Not classified as dangerous for transport.	Not classified as dangerous for transport.
14.4 Packing group	Not classified as dangerous for transport.	Not classified as dangerous for transport.	Not classified as dangerous for transport.



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14.5 Environmental hazards

Not classified as dangerous for transport.	Not classified as dangerous for transport.	Not classified as dangerous for transport.
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SECTION 15: REGULATORY INFORMATION

Classification as per CLP Regulation 1272/2008:

Not classified.

Hazard Statements: None

International Inventories

Chemical Inventory Lists: (Choline bitartrate)	Status
TSCA:	Listed
EC Inventory	Listed (201-763-4)
Canada(DSL/NDSL):	Listed (DSL)
China Catalog of Hazardous chemicals 2015	Not Listed
New Zealand Inventory of Chemicals (NZIoC)	Listed
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Not Listed
Inventory of Existing and New Chemical Substances (ENCS)	Not Listed
Japan ISHL Existing Substances List (ISHL)	Not Listed
China: IECSC	Listed
Existing Chemicals List (KECI)	Listed
Australian Inventory of Chemical Substances (AICS)	Listed
Taiwan Existing Chemical Substance Inventory (TCSI)	Listed

U.S. Federal Regulations

SARA 313: Product not listed

SARA 311/312: Hazard Categories See section 2 for more information

CWA (Clean Water Act): Product not listed

CAA (Clean Air Act): Product not listed

CERCLA: Product not listed

California Proposition 65: Product not listed

SECTION 16: OTHER INFORMATION

a) : **Compilation information of safety data sheet**

Date of Compilation : May 26, 2022

Date of Revision : January 31, 2024

Revision due date : December, 2026

Revision Number : 05

Version Name : 1115Bh Ghs05 Div.9 sds Choline Bitartrate

Supersedes date : November 27, 2023



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b) A key or legend to aberrations and acronyms used in the safety data sheet

GHS	= Globally Harmonized System.
Bh	= Bharuch Location
CAS RN	= Chemical Abstracts Service Registry Number
EC#	= European Community number
MSHA	= Mine Safety and Health Administration
SCBA	= Self Contained Breathing Apparatus.
EU	= European Union
NIOSH REL	= National Institute for Occupational Safety and Health Recommended Exposure Limit.
TSCA	= Toxic Substances Control Act.
DSL/NDSL	= Domestic/Non-Domestic Substances List.
CLP	= Classification, Labeling and Packaging.
IMDG-Code	= International Maritime Code for Dangerous Goods.
ICAO	= International Civil Aviation Organization.
IATA/DGR	= International Air Transport Association/Dangerous Goods Regulation.

c) Key Literature reference and sources for data

Biographical reference and data sources

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009
- REG (EC) no. 1907/2006, last modification by REG (EC) Nr. 830/2015

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

(End of Safety Data Sheet)