



MATERIAL SAFETY DATA SHEET (MSDS)

BETAINE HYDROCHLORIDE

Section 1 - Chemical Product and Company Identification

Product Name: BETAINE HYDROCHLORIDE 95%
BETAINE HYDROCHLORIDE 98%

MSDS Name: Betaine Hydrochloride

Synonyms: Acidol hydrochloride

Chemical molecular formula: C₅H₁₂ClNO₂

Chemical molecular weight: 153.61

➤ Company Identification:

Supplier: TAIAN HAVAY CHEMICALS CO., LTD

Address: Tai'an Dawenkou Gypsum Industry Park, Shandong, China

Tel number: +86-25-8478 8580

Fax number: +86-25-8478 8596

Website: <http://www.goldenhighway.com>

E-mail: cc@goldenhighway.com

Section 2 - Composition and Information on Ingredients

CAS No.	Chemical Name	Content %	Einecs/Elincs
590-46-5	Betaine Hydrochloride	95 MIN	209-683-1

Section 3 - Hazards Identification

Emergency overview:

Caution!

The toxicological properties of this material have not been fully investigated.

May cause eye, skin and respiratory tract irritation.

Target Organs: None known.

Potential Health Effects

- Eye:** ✧ May cause eye irritation.
- Skin:** ✧ May cause skin irritation.
May be harmful if absorbed through the skin.
- Ingestion:** ✧ May cause irritation of the digestive tract.
May be harmful if swallowed.
- Inhalation:** ✧ May cause respiratory tract irritation.
May be harmful if inhaled.
- Chronic:** ✧ No information found.

Section 4 - First Aid Measures



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Eyes: ✧ Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

✧ If irritation developed, get medical aid immediately.

Skin: ✧ Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

✧ Get medical aid if irritation develops or persists.

Ingestion: ✧ Do not induce vomiting.

✧ Get medical aid if irritation or symptoms occur.

Inhalation: ✧ Remove from exposure and move to fresh air immediately.

✧ If not breathing, give artificial respiration.

✧ If breathing is difficult, give oxygen.

✧ Get medical aid if cough or other symptoms appear.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, and full protective gear.

Extinguishing Media: Water spray, Dry chemical, CO₂, Chemical Foam

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower/Upper: Not available.

Section 6 - Accidental Release Measures

General Information: ✧ Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: ✧ Vacuum or sweep up material and place into a suitable clean, dry, closed container for disposal.

✧ Avoid generating dusty conditions.

✧ Provide ventilation.

✧ Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: ✧ Use with adequate ventilation.

✧ Minimize dust generation and accumulation.

✧ Avoid contact with eyes, skin and clothing.

✧ Avoid ingestion and inhalation.

Storage: ✧ Store in a cool, dry place.

✧ Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped



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with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits: None listed.

Personal Protective Equipment

Eyes: Wear appropriate protective eye glasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Product:	Betaine Hydrochloride
Physical State:	Crystals
Appearance:	White powder
Molecular Formula:	C ₅ H ₁₂ ClNO ₂
Molecular Weight:	153.61
Odor:	Odorless
pH:	1 (50g/L aq. Sol.)
Boiling Point:	Not available
Freezing/Melting point:	241 °C
Decomposition Temperature:	Not available
Vapor Pressure:	Not available
Vapor Density:	Not available
Evaporation Rate:	Not available
Viscosity:	Not available

Section 10 - Stability and Reactivity

Chemical Stability: ✧ Stable under normal temperatures and pressures.

Conditions to Avoid: ✧ Incompatible materials, dust generation, excess heat.

Incompatibilities with Other Materials: ✧ Not available.

Hazardous Decomposition Products: ✧ Nitrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: ✧ Will not occur.

Section 11 - Toxicological Information

RTECS#: ✧ CAS#590-46-5: BP3136000



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- LD₅₀/LC₅₀:** ✧ RTECS: Not available.
Carcinogenicity: ✧ Not listed as a carcinogen by ACGIH, IARC, NTP or CA Prop 65.
Other: ✧ See actual entry in RTECS for complete information.

Section 12 - Ecological Information

- Ecotoxicity:** Not available.
BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation:

The product of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state and local regulations.

Section 14 - Transport Information

- US DOT:** ✧ Not regulated as a hazardous material.
Canada TDG: ✧ Not available.

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

Canada Regulations:

- DSL:** ✧ Listed on the DSL list.
WHMIS: ✧ Not controlled under WHMIS (Canada).

U.S. Federal Regulations:



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TSCA:

✧ Listed on the TSCA inventory.

Section 16 - Additional Information

MSDS Creation Date: Apr 2, 2015

