

SAFETY DATA SHEET

Preparation Date: 11/23/2016

Revision Date: Not Applicable

Revision Number: Not Applicable

1. IDENTIFICATION

Product identifier

Product code: C1689
Product Name: 4-Chlorobutyric Acid

Other means of identification

Synonyms: No information available
CAS #: 627-00-9
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: For manufacturing or laboratory use only.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000.

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Martin LaBenz (West Coast)

Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1
Corrosive to metals	Category 1

Label elements

Danger

Hazard statements

Causes severe skin burns and eye damage
 May be corrosive to metals

**Hazards not otherwise classified (HNOC)**

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
Absorb spillage to prevent material damage
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage

Store locked up
Store in corrosive resistant/ .? container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
4-Chlorobutyric Acid	627-00-9	100

4. FIRST AID MEASURES**First aid measures**

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact: Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

Eye Contact: Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or

corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms Severe skin and eye irritation or burns. Corrosive to the eyes and may cause severe damage including blindness. Skin contact may result in redness, pain, inflammation, itching, scaling.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Dry chemical. Carbon dioxide (CO₂). Water spray, mist, or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon Oxides. Hydrogen Chloride Gas. Halogenated Compounds.

Specific hazards: May be combustible at high temperatures

Special Protective Actions 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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container.

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store in a segregated and approved area. Store away from incompatible materials. Keep away from heat and sources of ignition.

Incompatible Materials:

Strong oxidizing agents
Strong bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
4-Chlorobutyric Acid	627-00-9	None	None	None	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
4-Chlorobutyric Acid	627-00-9	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
4-Chlorobutyric Acid	627-00-9	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:	Goggles or Face-shield
Skin and body protection:	Gloves. Long sleeved clothing. Chemical resistant apron.
Respiratory protection:	Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid	Appearance: Clear.	Color: Colorless to pale yellow.
Odor: Stench.	Taste No information available.	Formula: C4H7ClO2
Molecular/Formula weight: 122.55	Flammability: No information available	Flashpoint (°C/°F): 112°C (234°F)
Flash Point Tested according to: Closed cup	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): 14°C (57°F) (Freezing)	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): 196°C (385°F) at 29 hPa (22 mmHg)	Bulk density: No information available	Density (g/cm3): 1.23
Specific gravity: No information available	pH: No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Soluble in Ether	

10. STABILITY AND REACTIVITY

Reactivity

Reactive with strong oxidizing agents

Reacts with strong bases
Corrodes in contact with metals

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Strong oxidizing agents
Strong bases

Hazardous decomposition products: Carbon oxides. Hydrogen chloride gas. Halogenated compounds.

Other Information

Corrosivity: Corrodes on contact with metals

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Skin. Eyes. Ingestion. Inhalation.

Acute Toxicity

Component Information

4-Chlorobutyric Acid	
CAS-No.	627-00-9

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms**Skin Contact:** Corrosive. Contact causes severe skin irritation and possible burns. Can cause burning pain, inflammation and blisters.**Eye Contact:** Causes severe eye irritation and possible burns. Corrosive to the eyes and may cause severe damage including blindness. Can cause severe injury.**Inhalation** May cause irritation of respiratory tract. May cause chemical burns to the respiratory tract.**Ingestion** Causes digestive (gastrointestinal) tract irritation. Causes digestive or gastrointestinal tract burns. May cause perforation of the digestive tract. Corrosive to the mouth, throat, and stomach. Symptoms may include a burning sensation in the mouth, throat, and stomach. Ingestion may cause nausea, vomiting.**Aspiration hazard** No information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Chronic Toxicity** No information available.**Sensitization:** No information available.**Mutagenic Effects:** No information available**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
4-Chlorobutyric Acid	627-00-9	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)**IARC (International Agency for Research on Cancer)**NTP (National Toxicology Program)**OSHA (Occupational Safety and Health Administration of the US Department of Labor)***Reproductive toxicity** No data is available**Reproductive Effects:** No information available**Developmental Effects:** No information available**Teratogenic Effects:** No information available**Specific Target Organ Toxicity****STOT - single exposure** No information available.**STOT - repeated exposure** No information available.**Product code:** C1689**Product name:** 4-Chlorobutyric Acid

Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
4-Chlorobutyric Acid	627-00-9	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN3265
Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid)
Hazard Class: 8
Subsidiary Class: No information available
Packing group: II
Emergency Response Guide Number: 153
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Special Provisions: B2, IB2, T11, TP2, TP27
Symbol(s): No information available
Description: UN3265, Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid), 8, II

TDG (Canada)

UN-No: UN3265
Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant: No Information available
Description: UN3265, Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid), 8, II

ADR

UN-No: UN3265
Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid)

Hazard Class: 8
Packing Group: II
Subsidiary Risk: No information available
Special Provisions 274
Description: UN3265, Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid), 8, II

IMO / IMDG

UN-No: UN3265
Proper Shipping Name: Amines, liquid, corrosive, n.o.s. (4-picolylamine)
 Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant No information available
EMS: F-A
Special Provisions 274
Description UN3265, Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid), 8, II

RID

UN-No: UN3265
Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Special Provisions 274
Description: UN3265, Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid), 8, II

ICAO

UN-No: UN3265
Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Description: UN3265, Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid), 8, II
Special Provisions A3

IATA

UN-No: UN3265
Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
ERG Code: 8L
Special Provisions No information available
Description: UN3265, Corrosive liquid, acidic, organic, n.o.s. (4-Chlorobutyric Acid), 8, II

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
4-Chlorobutyric Acid	627-00-9	Present	Not present	Not present	Not present	Present	Not present	Present 210-977-7

U.S. Regulations

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
4-Chlorobutyric Acid	627-00-9	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
4-Chlorobutyric Acid	627-00-9	None	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
4-Chlorobutyric Acid	627-00-9	Not Applicable	Not Applicable

Canada**WHMIS hazard class:**

E Corrosive material

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
4-Chlorobutyric Acid	627-00-9	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
4-Chlorobutyric Acid	627-00-9	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
4-Chlorobutyric Acid	627-00-9	Not listed

EU Classification**R-phrase(s)**

R34 - Causes burns.

S -phrase(s)

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
4-Chlorobutyric Acid	627-00-9		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

C - Corrosive.

C

**16. OTHER INFORMATION**

Preparation Date: 11/23/2016
Revision Date: Not Applicable
Prepared by: Roumann Pangilinan

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet