

## SAFETY DATA SHEET

Preparation Date: 5/07/2015

Revision Date: 6/7/2018

Revision Number: G3

### 1. IDENTIFICATION

#### Product identifier

**Product code:** B1068  
**Product Name:** BENZALKONIUM CHLORIDE, 50 PERCENT SOLUTION, NF

#### Other means of identification

**Synonyms:** No information available  
**CAS #:** Mixture  
**RTECS #** Not available  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
**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)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1B
Skin sensitization	Category 1B
Reproductive toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 1
Flammable liquids	Category 3

#### Label elements

**Danger**

**Hazard statements**

**Product code:** B1068

**Product name:** BENZALKONIUM  
 CHLORIDE, 50 PERCENT SOLUTION,  
 NF

1 / 16

Harmful if swallowed  
Causes severe skin burns and eye damage  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction  
May damage fertility or the unborn child  
Causes damage to organs through prolonged or repeated exposure  
Flammable liquid and vapor



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

May be harmful in contact with skin

**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Do not breathe dust/fume/gas/mist/vapors/spray  
In case of inadequate ventilation wear respiratory protection  
Contaminated work clothing must not be allowed out of the workplace  
Wear protective gloves/protective clothing/eye protection/face protection  
Wear respiratory protection  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/.../equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or doctor/physician*  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER or doctor/physician.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse  
If skin irritation or rash occurs: Get medical advice/attention  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth  
Do NOT induce vomiting

**Precautionary Statements - Storage**

**Product code:** B1068

**Product name:** BENZALKONIUM  
CHLORIDE, 50 PERCENT SOLUTION,  
NF

Store locked up  
Store in a well-ventilated place. Keep cool

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Benzalkonium Chloride	8001-54-5	50
Water	7732-18-5	46
Ethyl Alcohol 200 proof	64-17-5	4
Benzyl Chloride	100-44-7	<=0.05 (impurity)

### 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.

**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. Get medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

#### Most important symptoms and effects, both acute and delayed

**Symptoms**

- Severe skin and eye irritation or burns
- Causes eye damage
- May cause an allergic skin reaction
- May cause allergy or asthma symptoms or breathing difficulties if inhaled
- May cause chemical burns to the respiratory tract
- Causes digestive (gastrointestinal) tract irritation
- May cause gastrointestinal (digestive) tract burns
- Can burn mouth, throat, and stomach
- Dyspnea (Shortness of breath and difficulty breathing)
- May cause pulmonary edema
- May affect the cardiovascular system
- Central nervous system effects
- May affect the liver
- It may affect the kidneys

#### Indication of any immediate medical attention and special treatment needed

**Notes to Physician:** Treat symptomatically.

**Product code:** B1068

**Product name:** BENZALKONIUM  
CHLORIDE, 50 PERCENT SOLUTION,  
NF

3 / 16

### **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:**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. Alcohol-resistant foam. Water spray.

#### **Unsuitable Extinguishing Media:**

Do not use a solid (straight) water stream as it may scatter and spread fire.

### **Specific hazards arising from the chemical**

#### **Hazardous Combustion Products:**

Carbon Monoxide, Carbon Dioxide.

#### **Specific hazards:**

Flammable. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks).

### **Special Protective Actions for Firefighters**

#### **Specific Methods:**

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

#### **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. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

**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** Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. 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. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. 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. Keep away from heat and sources of ignition. Store away from incompatible materials. Store in a segregated and approved area.

#### **Incompatible Materials:**

Strong oxidizing agents  
Nitrates  
Anionic surfactants

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

### **National occupational exposure limits**

## United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Benzalkonium Chloride	8001-54-5	None	None	None	None
Water	7732-18-5	None	None	None	None
Ethyl Alcohol 200 proof	64-17-5	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA	1000 ppm STEL	None
Benzyl Chloride	100-44-7	1 ppm TWA 5 mg/m <sup>3</sup> TWA	1 ppm Ceiling 15 min 5 mg/m <sup>3</sup> Ceiling 15 min	1 ppm TWA	None

## Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Benzalkonium Chloride	8001-54-5	None	None	None	None
Water	7732-18-5	None	None	None	None
Ethyl Alcohol 200 proof	64-17-5	1000 ppm TWA 1880 mg/m <sup>3</sup> TWA	1000 ppm STEL	1000 ppm STEL	None
Benzyl Chloride	100-44-7	1 ppm TWA 5.2 mg/m <sup>3</sup> TWA	1 ppm Ceiling	1 ppm TWA	1 ppm TWAEV 5.2 mg/m <sup>3</sup> TWAEV

## Australia and Mexico

Components	CAS-No.	Australia	Mexico
Benzalkonium Chloride	8001-54-5	None	None
Water	7732-18-5	None	None
Ethyl Alcohol 200 proof	64-17-5	1000 ppm TWA 1880 mg/m <sup>3</sup> TWA	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA
Benzyl Chloride	100-44-7	1 ppm TWA 5.2 mg/m <sup>3</sup> TWA	1 ppm TWA 5 mg/m <sup>3</sup> TWA

## Appropriate engineering controls

### Engineering measures to reduce exposure:

Ensure adequate ventilation. 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:** Face-shield

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

**Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid	<b>Appearance:</b> No information available.	<b>Color:</b> Clear. Colorless.
<b>Odor:</b> Aromatic.	<b>Taste</b> Bitter.	<b>Formula:</b> No information available
<b>Molecular/Formula weight:</b> No information available	<b>Flammability:</b> flammable	<b>Flashpoint (°C/°F):</b> 52.2°-56.1°C/126°-132.98°F
<b>Flash Point Tested according to:</b> Closed cup	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> No information available	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> 0.97 @ 25 deg. C
<b>Specific gravity:</b> No information available	<b>pH:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> >1	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> The highest known value is 100 ppm (Ethyl alcohol 200 Proof)	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> Easily soluble in cold water Easily soluble in hot water Partially soluble in diethyl ether Soluble in Acetone Soluble in Methanol	

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with strong oxidizing agents

### 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  
Nitrates  
Anionic surfactants

**Hazardous decomposition products:** No information available.

### Other Information

**Corrosivity:** No information available

**Product code:** B1068

**Product name:** BENZALKONIUM  
CHLORIDE, 50 PERCENT SOLUTION,  
NF

7 / 16

Special Remarks on Corrosivity: No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Principal Routes of Exposure:

Eyes. Skin. Ingestion. Inhalation.

### Acute Toxicity

#### Component Information

Benzalkonium Chloride

CAS-No. 8001-54-5

**LD50/oral/rat** = 240 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = 1420 mg/kg Dermal LD50  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = No information available

Water

CAS-No. 7732-18-5

**LD50/oral/rat** = > 90 mL/kg Oral LD50 Rat  
**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 LC50information** = No information available

Ethyl Alcohol 200 proof

CAS-No. 64-17-5

**LD50/oral/rat** = 7060 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = 3450 mg/kg Oral LD50 Mouse  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = 124.7 mg/L Inhalation LC50 Rat 4 h  
**LC50/inhalation/mouse** = 39000 mg/m<sup>3</sup> 4 h  
**Other LD50 or LC50information** = >60000 ppm Inhalation LC50 Mouse 1 h  
5900 mg/m<sup>3</sup> Inhalation LC50 Rat 6 h  
20000 ppm Inhalation LC50 Rat 10 h  
5560 mg/kg Oral LD50 Guinea Pig  
6300 mg/kg Oral LD50 Rabbit

Benzyl Chloride

CAS-No. 100-44-7

**LD50/oral/rat** = 625 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = 150 ppm Inhalation LC50 Rat 2 h  
0.74mg/L Inhalation LC50Rat 2 h  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = 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:** Causes severe irritation and burns. May be harmful in contact with skin. May cause allergic skin reaction.

**Eye Contact:** Causes severe eye irritation and possible burns.

**Inhalation** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory tract and mucous membrane irritation with sore throat, coughing, shortness of breath, and delayed lung edema. May cause chemical burns to the respiratory tract. Inhalation of high concentrations of vapor may cause central nervous system effects (affect behavior).

**Ingestion** Harmful if swallowed. Causes gastrointestinal/digestive tract irritation and burns. May affect behavior (central nervous system depression, depression) and metabolism. May produce burning pains in the mouth, throat, and abdomen, profuse salivation, muscle weakness. May also affect the respiratory system and cardiovascular system, liver and kidneys.

**Aspiration hazard** No information available.

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity** Skin: Sensitizer. May cause allergic skin reaction (allergic contact dermatitis). Inhalation: May cause allergic respiratory reaction (occupational asthma). Prolonged or repeated ingestion may affect the liver. Prolonged or repeated ingestion may affect the cardiovascular system.

**Sensitization:** May cause sensitization by inhalation and skin contact.

**Mutagenic Effects:** May affect genetic material  
Experiments with bacteria and/or yeast have shown mutagenic effects  
Sister Chromatid Exchange (hamster embryo)

**Product code:** B1068

**Product name:** BENZALKONIUM  
CHLORIDE, 50 PERCENT SOLUTION,  
NF

**9 / 16**

Sister Chromatid Exchange (human lymphocyte)

**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Benzalkonium Chloride	8001-54-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Ethyl Alcohol 200 proof	64-17-5	Group 1 - Monograph 100E [2012] in alcoholic beverages Monograph 96 [2010] in alcoholic beverages	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Not listed	Present	Not listed	Not listed
Benzyl Chloride	100-44-7	Group 2A - Probably Carcinogenic to Humans - Monograph 71 [1999] combined exposures to .alpha.-Chlorinated toluenes and Benzoyl chloride	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Not listed	Present	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** May damage fertility. May damage the unborn child

**Reproductive Effects:** Benzalkonium Chloride is an active ingredient in vaginal spermicides. When applied in the vagina of pregnant rats at much higher doses than those used in spermicides, it caused increased resorptions leading to fetal death, and reduced litter size and weight. No adverse reproductive effects have been reported after oral treatment of rats and guinea pigs and dermal administration to rats

For Ethyl alcohol:

Causes adverse reproductive effects

**Developmental Effects:**

For Ethyl alcohol:

May cause harm to the unborn child

May cause adverse developmental effects

**Teratogenic Effects:**

For Ethyl alcohol:

Causes birth defects (teratogenic effects)

**Specific Target Organ Toxicity**

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Target Organs:**

Skin. Liver. Central nervous system. Nervous system. Cardiovascular system. Heart.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity effects:** Aquatic environment.

*Benzalkonium Chloride - 8001-54-5*

**Freshwater Fish Species Data:** 0.223 - 0.46 mg/L LC50 *Lepomis macrochirus* 96 h static 1 0.823 - 1.61 mg/L LC50 *Oncorhynchus mykiss* 96 h static 1 2.4 mg/L LC50 *Oryzias latipes* 96 h semi-static 1 1.3 mg/L LC50 *Poecilia reticulata* 96 h semi-static 1

*Ethyl Alcohol 200 proof - 64-17-5*

**Freshwater Fish Species Data:** 12.0 - 16.0 mL/L LC50 *Oncorhynchus mykiss* 96 h static 1 100 mg/L LC50 *Pimephales promelas* 96 h static 1 13400 - 15100 mg/L LC50 *Pimephales promelas* 96 h flow-through 1

**Water Flea Data:** 9268 - 14221 mg/L LC50 *Daphnia magna* 48 h 2 mg/L EC50 *Daphnia magna* 48 h 10800 mg/L EC50 *Daphnia magna* 24 h

*Benzyl Chloride - 100-44-7*

**Freshwater Fish Species Data:** 4.4 - 5.6 mg/L LC50 *Pimephales promelas* 96 h static 1 4 mg/L LC50 *Brachydanio rerio* 96 h static 1

**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
Benzalkonium Chloride	8001-54-5	None	None	None	None
Water	7732-18-5	None	None	None	None
Ethyl Alcohol 200 proof	64-17-5	None	None	None	None
Benzyl Chloride	100-44-7	None	None	P028	None

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** UN2920  
**Proper Shipping Name:** Corrosive liquids, flammable, n.o.s. (Benzalkonium Chloride solution)  
**Hazard Class:** 8  
**Subsidiary Class:** 3  
**Packing group:** II  
**Emergency Response Guide Number:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** No Information available

**Product code:** B1068

**Product name:** BENZALKONIUM  
CHLORIDE, 50 PERCENT SOLUTION,  
NF

11 / 16

**Symbol(s):** [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.  
**Description:** UN2920, Corrosive liquids, flammable, n.o.s. (benzalkonium chloride solution ),8,(3),PG II

**TDG (Canada)**

**UN-No:** UN2920  
**Proper Shipping Name:** Corrosive liquid, flammable, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** (3)  
**Packing Group:** II  
**Marine Pollutant Description:** No Information available  
UN2920, CORROSIVE LIQUID, FLAMMABLE, N.O.S. (benzalkonium chloride solution ),8,(3),PG II

**ADR**

**UN-No:** UN2920  
**Proper Shipping Name:** Corrosive liquid, flammable, n.o.s.  
**Hazard Class:** 8  
**Packing Group:** II  
**Subsidiary Risk:** 3  
**Description:** UN2920 Corrosive liquid, flammable, n.o.s. (benzalkonium chloride solution ),8,(3),II

**IMO / IMDG**

**UN-No:** UN2920  
**Proper Shipping Name:** Corrosive liquid, flammable, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** 3  
**Packing Group:** II  
**Marine Pollutant Description:** No information available  
**EMS:** F-E

**RID**

**UN-No:** UN2920  
**Proper Shipping Name:** Corrosive liquid, flammable, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** 3  
**Packing Group:** II  
**Description:** UN2920 Corrosive liquid, flammable, n.o.s. (benzalkonium chloride solution ),8,(3),II

**ICAO**

**UN-No:** UN2920  
**Proper Shipping Name:** Corrosive liquid, flammable, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** 3  
**Packing Group:** II  
**Description:** UN2920, Corrosive liquid, flammable, n.o.s. (benzalkonium chloride solution ),8,(3),PG II

**IATA**

**UN-No:** UN2920  
**Proper Shipping Name:** Corrosive liquid, flammable, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** 3  
**Packing Group:** II  
**ERG Code:** 8F  
**Special Provisions:** No information available

**Description:** UN2920, Corrosive liquid, flammable, n.o.s. (benzalkonium chloride solution), 8(3), PG II

**15. REGULATORY INFORMATION**

**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Benzalkonium Chloride	8001-54-5	Not Listed	Present KE-00790	Present	Not present	Present	Present	Not present
Water	7732-18-5	Present(ACTIVE)	Present KE-35400	Present	Not present	Present	Present	Present 231-791-2
Ethyl Alcohol 200 proof	64-17-5	Present(ACTIVE)	KE-13217	Present	(2)-202	Present	Present	Present 200-578-6
Benzyl Chloride	100-44-7	Present	Present KE-05729	Present	Present (3)-39, (3)-102	Present	Present	Present 202-853-6

**U.S. Regulations**

*Ethyl Alcohol 200 proof*

- Massachusetts RTK:** Present
- New Jersey RTK Hazardous Substance List:** 0844
- Pennsylvania RTK:** Present
- Minnesota - Hazardous Substance List:** Present
- Louisiana Reportable Quantity List for Pollutants:** Present (listed as Volatile Organic Compounds)
- California Directors List of Hazardous Substances:** Present
- FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 184.1293
- FDA - 21 CFR - Total Food Additives** 169.175, 169.176, 169.177, 169.181, 172.340, 172.560, 172.580, 175.105, 176.180, 176.200, 177.1200, 177.1650, 178.1010, 184.1293, 73.30, 73.345, 73.615

*Benzyl Chloride*

- Massachusetts RTK:** Present
- New Jersey RTK Hazardous Substance List:** 0217
- New Jersey (EHS) List:** 0217 500 lb TPQ
- New Jersey - Discharge Prevention - List of Hazardous Substances:** Present
- Pennsylvania RTK:** Environmental hazard
- Pennsylvania RTK - Environmental Hazard List** Present
- Minnesota - Hazardous Substance List:** Present
- New York Release Reporting - List of Hazardous Substances:**  
100 lb RQ  
1 lb RQ
- Louisiana Reportable Quantity List for Pollutants:** 100lbfinal RQ  
45.4kgfinal RQ
- California Directors List of Hazardous Substances:** Present

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

**Chemicals Known to the State of California to Cause Cancer:**

 **WARNING:** This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause cancer. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

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

 **WARNING:** This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Benzalkonium Chloride	8001-54-5	Not Listed	Not Listed	Not Listed	Not Listed
Water	7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed
Ethyl Alcohol 200 proof	64-17-5	carcinogen (Ethanol in alcoholic)	developmental toxicity (Ethyl alcohol in alcoholic beverages)	Not Listed	Not Listed

		beverages)			
Benzyl Chloride	100-44-7	carcinogen	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
Benzalkonium Chloride	8001-54-5	None	None	None	None	None
Water	7732-18-5	None	None	None	None	None
Ethyl Alcohol 200 proof	64-17-5	None	None	None	None	None
Benzyl Chloride	100-44-7	100 lb final RQ 45.4 kg final RQ	500 lb TPQ	None	None	1.0 % de minimis concentration

### 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
Benzalkonium Chloride	8001-54-5	Not Applicable	Not Applicable
Water	7732-18-5	Not Applicable	Not Applicable
Ethyl Alcohol 200 proof	64-17-5	Not Applicable	Not Applicable
Benzyl Chloride	100-44-7	Not Applicable	03/11/199406/30/1998

### Canada

#### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Benzalkonium Chloride  
8001-54-5 ( 50 )

Water  
7732-18-5 ( 46 )  
Ethyl Alcohol 200 proof  
64-17-5 ( 4 )

Benzyl Chloride  
100-44-7 ( <=0.05 (impurity) )

WHMIS 2015 Hazard Classification  
Acute toxicity - Oral - Category 3: H301 Toxic if swallowed.;  
Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.;  
Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.  
Not a dangerous product according to HPR classification criteria

Flammable liquids - Category 2: H225 Highly flammable liquid and vapour.; Serious Eye Damage/Eye Irritation - Category 2B: H320 Causes eye irritation.  
Flammable liquids - Category 4: H227 Combustible liquid.;  
Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.; Acute toxicity - Inhalation - Category 2: H330 Fatal if inhaled.; Skin corrosion/irritation - Category 2: H315 Causes skin irritation.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Skin sensitizers - Category 1: H317 May cause allergic skin reaction.;  
Carcinogenicity - Category 2: H351 Suspected of causing cancer.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

#### WHMIS 1988 Hazard Class

B3 Combustible liquid  
D1B Toxic materials  
E Corrosive material

**Product code:** B1068

**Product name:** BENZALKONIUM  
CHLORIDE, 50 PERCENT SOLUTION,  
NF

**14 / 16**

**Components**Benzalkonium Chloride  
Water

Ethyl Alcohol 200 proof

WHMIS 1988

D1B,E

Uncontrolled product according to WHMIS classification  
criteria  
B2,D2B**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.

Components	WHMIS Ingredient Disclosure List -
Ethyl Alcohol 200 proof	0.1 %
Benzyl Chloride	1 %

**Inventory**

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Benzalkonium Chloride	8001-54-5	Present	Not Listed
Water	7732-18-5	Present	Not Listed
Ethyl Alcohol 200 proof	64-17-5	Present	Not Listed
Benzyl Chloride	100-44-7	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Benzalkonium Chloride	8001-54-5	Not listed
Water	7732-18-5	Not listed
Ethyl Alcohol 200 proof	64-17-5	Not listed
Benzyl Chloride	100-44-7	Present

  

Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Benzalkonium Chloride	8001-54-5	Not listed
Water	7732-18-5	Not listed
Ethyl Alcohol 200 proof	64-17-5	Not listed
Benzyl Chloride	100-44-7	Not listed

**EU Classification****EU GHS - SV - CLP 1272/2008**

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Benzalkonium Chloride	8001-54-5	Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Acute toxicity - Dermal - Acute Tox. 4: H312 Harmful in contact with skin. (Minimum classification); Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage.; Hazardous to aquatic environment - acute hazard - Aquatic Acute 1: H400 Very toxic to aquatic life.612-140-00-5
Water	7732-18-5	
Ethyl Alcohol 200 proof	64-17-5	Flammable liquids - Flam. Liq. 2: H225 Highly flammable liquid and vapour.603-002-00-5
Benzyl Chloride	100-44-7	

**EU - CLP (1272/2008)****R-phrases(s)**

R10 - Flammable.

R34 - Causes burns.

R50 - Very toxic to aquatic organisms.

**Product code:** B1068**Product name:** BENZALKONIUM  
CHLORIDE, 50 PERCENT SOLUTION,  
NF**15 / 16**

R21/22 - Harmful in contact with skin and if swallowed.

**S -phrase(s)**

S 2 - Keep out of the reach of children.

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

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

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

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Benzalkonium Chloride	8001-54-5		No information	S: (2)-36/37/39-45-61
Water	7732-18-5		No information	
Ethyl Alcohol 200 proof	64-17-5	F; R11	No information	S(2) S7 S16
Benzyl Chloride	100-44-7	Xn; R22-48/22 T; R23 Xi; R37/38-41 Carc.Cat.2; R45	No information	S53 S45

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

**Indication of danger:**

T - Toxic

C - Corrosive.

T



C



**16. OTHER INFORMATION**

Preparation Date: 5/07/2015  
Revision Date: 6/7/2018  
Prepared by: Sonia Owen

**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**

**Product code:** B1068

**Product name:** BENZALKONIUM  
CHLORIDE, 50 PERCENT SOLUTION,  
NF

**16 / 16**