

## SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identity:** Aldahol® 1.8 High Level Disinfectant

**Recommended use of the chemical and restrictions on use:** High Level Disinfection and Sterilization of heat-sensitive, semi-critical medical devices

**Supplier:** DFB Technology, Ltd.  
3909 Hulen Street  
Fort Worth, TX 76107  
Phone (817) 900-4050  
Fax (817) 900-4101

**Emergency Phone:** For Chemical Emergency  
Spill, Leak, Fire, or Accident  
Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

**SDS Date of Preparation:** 06 Sep 2018

### 2. HAZARDS IDENTIFICATION

#### GHS Classification:

<b>Physical:</b>	<b>Health:</b>	<b>Environmental</b>
Flammable Liquid Category 3	Eye Corrosion Category 1 Skin Irritation Category 2 Skin Sensitizer Category 1 Respiratory Sensitizer Category 1 Specific Target Organ Toxicity, Single Exposure Category 3 (narcotic)	Aquatic Acute Toxicity Category 2 Aquatic Chronic Toxicity Category 3

Note: This product is an FDA regulated material and is labeled in accordance with the Food and Drug Administration Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

#### GHS Label Elements:

Danger! Contains isopropanol and glutaraldehyde.



### Statements of Hazard

H226 Flammable Liquid and vapor.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H336 May cause drowsiness or dizziness.  
H401 Toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.

### Prevention

P210 Keep away from heat, sparks, open flames, hot surfaces.- No smoking.  
P233 Keep container tightly closed.  
P240 Ground and bond container and receiving equipment  
P241 Use explosion-proof electrical, and ventilating equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing mist, vapor, or spray.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated clothing should not be allowed out of the work area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves, protective clothing and eye protection.  
P284 In case of inadequate ventilation, wear respiratory 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.  
P310 Immediately call a POISON CENTER or doctor.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
P333+P313 If skin irritation or rash occurs: Get medical attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor.  
P370+P378 In case of fire: Use water for, alcohol-resistant foam, dry chemical or CO2 to extinguish.

### Storage

P405 Store locked up.  
P403+P253 Store in a well-ventilated place. Keep cool.

### Disposal

P501 Dispose of contents and container in accordance with local and national regulations.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Isopropanol (Isopropyl Alcohol)	67-63-0	<23%
Glutaraldehyde	111-30-8	<4%

## 4. FIRST AID MEASURES

**Eye:** Immediately flush eyes with plenty of water for at least 15 minutes while holding the eyelids apart. Remove contact lenses, if present and easy to do after the first 5 minutes, then continue flushing. Get immediate medical attention.

**Skin:** Immediately flush skin with plenty of water for 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops.

**Ingestion:** Do not induce vomiting. If conscious, rinse mouth with a small amount of water and give one glass of water to dilute. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention .

**Inhalation:** Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention.

**Most important Symptoms:** May cause severe eye irritation and burns. Causes skin irritation. Inhalation of vapor or mists may cause irritation of the upper respiratory tract and nervous system effects such as drowsiness. If swallowed, may cause intestinal irritation and discomfort. May cause skin rash or an allergic respiratory reaction in some individuals.

**Indication of immediate medical attention/special treatment:** Immediate medical attention is required for eye contact and ingestion.

## 5. FIRE FIGHTING MEASURES

**Suitable (and Unsuitable) Extinguishing Media:** Extinguish with water fog, alcohol-resistant foam, dry chemical or CO<sub>2</sub>. Cool fire exposed containers and structures with water.

**Specific hazards arising from the chemical:** Flammable liquid and vapor. Vapors are heavier than air and may flow along surfaces to remote ignition sources and flash back. Flammable vapors may collect in confined areas.

**Special Protective Equipment and Precautions for Fire-Fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water spray. Contain water used in firefighting from entering sewers or natural waterways.

**Explosion Data (sensitivity to mechanical impact or static discharge):** None known.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Evacuate spill area and keep unprotected personnel away. Prevent contact with the eyes. Avoid contact with skin and clothing. Wear appropriate protective clothing. Ventilate area with explosion-proof equipment. Eliminate all ignition sources. Avoid releases to the environment.

**Methods and Materials for Containment and Cleaning Up:** Contain and recover liquid if possible or absorb with an inert, non-combustible material. Place in a suitable container for disposal. Report releases as required by local, state and federal authorities.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Prevent contact with the eyes. Avoid contact with skin and clothing. Do not breathe vapors or mists. Wear protective clothing and equipment. Use only with adequate ventilation. Wash thoroughly with soap and water after handling. Keep away from heat and all sources of ignition.

Do not reuse containers. Empty containers retain product residues which can be hazardous. Follow all SDS precautions when handling empty containers.

**Conditions for Safe Storage, Including Any Incompatibilities:** Store in a cool, well-ventilated area away from heat and incompatible materials (strong acids, bases and oxidizers). Store under controlled temperatures 15-25°C.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines:

Isopropanol (Isopropyl Alcohol)	200 ppm TWA, 400 ppm STEL ACGIH TLV 400 ppm TWA OSHA PEL
Glutaraldehyde	0.05 ppm Ceiling ACGIH TLV

**Engineering Controls:** Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits. Use explosion-proof equipment if required.

**Respiratory Protection:** In operations where the occupational exposure limits are exceeded, an approved respirator with organic vapor cartridges or supplied air respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

**Skin Protection:** Impervious gloves such as butyl rubber are recommended to prevent skin contact. Contact glove manufacturer for specific information on glove selection and use.

**Eye Protection:** Chemical safety goggles recommended.

**Other:** Impervious clothing may be required to prevent skin contact and contamination of personal clothing. An eye wash should be available in the immediate work area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor:** Unactivated solution is clear to light yellow, and activated solution is red. Alcohol odor.

<b>Physical State:</b> Liquid	<b>Odor Threshold:</b> 43 ppm (isopropanol)
<b>Vapor Density:</b> 2.1 (isopropanol)	<b>Initial Boiling Point/Range:</b> Not available
<b>Solubility In Water:</b> Soluble	<b>Vapor Pressure:</b> 44 mmHg @ 20°C (68°F) (isopropanol)
<b>Relative Density:</b> 1.01	<b>Evaporation Rate:</b> 2.83 (Buac=1) (isopropanol)
<b>Melting/Freezing Point:</b> Not available	<b>pH:</b> 6.5-7.9
<b>VOC Content:</b> 26.5%	<b>Octanol/Water Coefficient:</b> Not available
<b>Solubility:</b> Soluble in water	<b>Decomposition Temperature:</b> Not available
<b>Viscosity:</b> Not available	<b>Flammability (solid, gas):</b> Not applicable
<b>Flashpoint:</b> 79°C (174°F) COC Does not sustain combustion below 141° F (60.5° C)	<b>Autoignition Temperature:</b> Not applicable
<b>Flammable Limits:</b> LEL: 2.0% (isopropanol) UEL: 12.7% (isopropanol)	

## 10. STABILITY AND REACTIVITY

**Reactivity:** Not normally reactive.

**Chemical Stability:** Stable under normal storage and handling conditions.

**Possibility of Hazardous Reactions:** Isopropanol forms explosive mixtures with trinitromethane and reacts with barium perchlorate to form the highly explosive propyl perchlorate.

**Conditions to Avoid:** Keep away from heat and all sources of ignition.

**Incompatible Materials:** Avoid strong oxidizing agents, acids, bases, chlorine, acetaldehyde, ethylene oxide, isocyanates, phosgene, oleum, and nitroform.

**Hazardous Decomposition Products:** Carbon monoxide and carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

### HEALTH HAZARDS:

**Eye:** Cause severe irritation with redness, tearing with possible burns. Permanent eye damage may occur.

**Skin:** May cause irritation, drying, defatting of the skin and dermatitis. May cause allergic skin reaction.

**Ingestion:** Ingestion may cause mucous membrane and gastrointestinal irritation, abdominal pain, nausea, vomiting, dizziness, drowsiness, diarrhea, unconsciousness and death.

**Inhalation:** Inhalation of vapors may cause mucous membrane and respiratory irritation and central nervous system depression with symptoms of headache, dizziness, drowsiness, staggering, intoxication, and unconsciousness. Repeated inhalation of glutaraldehyde vapors may cause asthmatic symptoms in some individuals, including cough, wheezing and difficulty breathing.

**Chronic:** None known.

**Sensitization:** Repeated exposure to glutaraldehyde may cause skin and respiratory sensitization.

**Carcinogenicity:** None of the components present are listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, or OSHA.

**Germ Cell Mutagenicity:** None of the components are mutagens.

**Reproductive Toxicity:** None of the components are reproductive toxins.

**Numerical Measures of Toxicity: Acute Toxicity Estimate (ATE) calculated: Oral 7874 mg/kg**

**Inhalation: 12 mg/L**

Isopropanol: Oral Rat LD50 5,045 mg/kg; Inhalation Rat LC50 16,000 ppm/8 hour; Skin Rabbit LD50 12,800 mg/kg

Glutaraldehyde: Oral Rat LD50 316 mg/kg; Inhalation Rat LC50 0.48 mg/L/4 hr (aerosol); Skin Rabbit LD50 >2000 mg/kg

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity:

Isopropanol: LC50 Fathead minnow 9,640 mg/L/96 hr; EC50 Daphnia magna - 13,299 mg/L/48 hr

Glutaraldehyde: LC50 fathead minnow 10.8 mg/L/96 hr; EC50 daphnia magna 0.69 mg/L/48 hr; EbC50 green algae 2.64 mg/L/72 hr.

This product is classified as harmful to the aquatic environment with long-term adverse effects. Releases to the environment should be avoided.

**Persistence and Degradability:** Glutaraldehyde and isopropanol are readily biodegradable.

**Bioaccumulative Potential:** Glutaraldehyde: log Kow -0.333, potential for bioaccumulation is low.

**Mobility in Soil:** Glutaraldehyde: highly mobile in soil.

**Other Adverse Effects:** No data available.

## 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local and national environmental regulations.

## 14. TRANSPORT INFORMATION

**DOT Hazardous Materials Description:**

**Proper Shipping Name:** Flammable liquid, n.o.s. (Isopropanol Solution)

**UN Number:** UN1993

**Hazard Class/Packing Group:** 3, PG III

**Labels Required:** Flammable liquid

Note: Packages with inner containers of 5L or less with a gross weight of 30 kg or less can be shipped as limited quantities.

**IMDG Shipping Name:** Flammable liquid, n.o.s. (Isopropanol Solution)

**IMDG Hazard Class:** UN1993

**UN Number:** 3, PG III

**IMDG Hazard Labels Required:** Flammable liquid

Note: Packages with inner contains of 5L or less with a gross weight of 30 kg or less can be shipped as limited quantities.

**IATA Shipping Name:** Flammable liquid, n.o.s. (Isopropanol Solution)

**IATA Hazard Class:** UN1993

**UN Number:** 3, PG III

**IATA Hazard Labels Required:** Flammable liquid

## 15. REGULATORY INFORMATION

**CERCLA 103 Reportable Quantity:** This product is not subject to CERCLA reporting requirements, however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**Hazard Category for Section 311/312:** Acute Health, Fire Hazard

**Section 313 Toxic Chemicals:** This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

**Section 302 Extremely Hazardous Substances (TPQ):** None.

### INTERNATIONAL CHEMICAL INVENTORY STATUS:

**Australia AICS:** All the components are listed.

**Canada DSL:** All the components are listed.

**China IECSC:** All the components are listed.

**European Union EINECS:** All the components are listed.

**Japan ENCS:** All the components are listed.

**Korea KECL:** All the components are listed.

**Philippines PICCS:** All the components are listed.

**New Zealand:** All the components are listed.

**United States TSCA:** All the components are listed.

<b>16. OTHER INFORMATION</b>
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**NFPA Rating:** Health = 3      Flammability = 2      Instability = 0  
**HMIS Rating:** Health = 3\*      Flammability = 2      Physical Hazard = 0

**SDS Date of Preparation:**      02/Jul/2015

Disclaimer: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.