

# Millenium new era Cavity 48

The Future Now: **Formaldehyde Free**

**CPF=48<sup>A</sup>**

Cavity 48 is a special use high reactivity multi-preservative based cavity fluid of the Millenium-New Era line of embalming formulations. Cavity 48 is formaldehyde free, yet exerts the maximum of penetration and embalming with an extreme degree of firmness. In addition, Cavity 48 induces a high level of sanitation and deodorizing action. Cavity 48 can be used on normal cases, but was specifically designed for difficult or extreme cases where maximum embalming action is necessary. Such cases include advanced decomposition, delayed embalming, frozen bodies, highly infectious cases and others. The reaction of Cavity 48 with tissues is almost instantaneous, while, at the same time long-lasting.

<b>NORMAL<sup>B</sup> CASES (# BOTTLES)</b>	<b>SPECIAL CASES<sup>C</sup> REQUIRING GREATER PRESERVATION (# BOTTLES)</b>	<b>SPECIAL CASES<sup>D</sup> REQUIRING GREATER SANITATION</b>
<b>2</b>	<b>2-3</b>	<b>2-3</b>

Cavity 48 is also excellent for treatment of viscera in autopsy cases. Completely submerge the viscera in Cavity 48 and allow 45 minutes or more of contact time for thorough embalming. During reaspiration of normal cases, anticipate extreme firmness of the cavity and a minimum of reaspirated fluid present. Shake thoroughly before using. Use heavy duty autopsy quality gloves to avoid skin contact. Wear other appropriate protective equipment as necessary. Always use adequate ventilation and avoid contact with skin or eyes. Cavity 48 is not intended for use as an external pack or hypo injection of areas of the body that are to be cosmetized or viewed. The extreme embalming ability of Cavity 48 causes some unavoidable tissue darkening and staining. Promptly rinse away with water any spills of the chemical from body skin surfaces to avoid reaction. Protect hand skin surfaces of body from possible leakage of chemical from cavities by use of plastic, etc. Do not use Cavity 48 for arterial injection - the reaction is too intense and the chemicals present are potentially harmful to some embalming machines. If Cavity 48 is exposed to strong sunlight, the color and appearance of the fluid will change. This in no way affects the chemical action or embalming ability of the fluid. Shake thoroughly and use as normal.

## **Notes:**

- A - A value assigned to all Champion fluids ranking them on the basis of preservative ability using recommended dilutions in normal cases. The Champion Preservative Factor is not index but can equal it in certain fluids. It is derived from the total chemical composition of each fluid and results of extensive field research. The Champion Preservative Factor can be used by the embalmer to predict the reactivity, preservative value and firming action of Champion fluids.
- B - Recommended quantity is 2 bottles with reaspiration. If condition of body is uncertain after cavity treatment-reaspirate and reinject one additional bottle.
- C - Cases with higher preservative demand such as cancer, renal and liver diseases with their complications, institutional cases and other wasting diseases, delayed embalming, advanced decomposition, edema and bodies subjected to extensive drug therapy. Recommended quantity is 3 bottles with reaspiration and reinjection of one additional bottle.
- D - Cases with infectious diseases such as AIDS, hepatitis, meningitis, tuberculosis and other conditions requiring a high level of disinfection. Recommended quantity is 3 bottles with reaspiration and reinjection of one additional bottle.

**BEFORE USING, READ SAFETY DATA SHEET.  
FOR PROFESSIONAL EMBALMING USE ONLY.**

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Trade name : Cavity 48

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

Use of the substance/mixture : Cavity Embalming Fluid

Use of the substance/mixture : For professional use only

#### 1.3. Details of the supplier of the safety data sheet

THE CHAMPION COMPANY  
400 Harrison Street  
Springfield, Ohio 45505

Telephone No. (937) 324-5681

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC (800) 424-9300 (Spill, Leak, Fire, Exposure or Accident)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flam. Liq. 3	H226
Acute Tox. 4 (Oral)	H302
Acute Tox. 3 (Inhalation:dust,mist)	H331
Skin Corr. 1B	H314
Eye Dam. 1	H318
Resp. Sens. 1	H334
Skin Sens. 1	H317
Muta. 2	H341
STOT SE 3	H335
STOT SE 2	H371
STOT RE 2	H373

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS02

GHS05

GHS06

GHS07

GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor  
H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H331 - Toxic if inhaled  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H335 - May cause respiratory irritation  
H341 - Suspected of causing genetic defects (inhalation, oral, dermal)  
H371 - May cause damage to organs (kidney, liver, skin and nervous system)  
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground container and receiving equipment  
P241 - Use explosion-proof electrical, ventilating, lighting, and equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge

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P260 - Do not breathe dust, fume, mist, spray, vapors  
P261 - Avoid breathing dust, fume, mist, spray, vapors  
P264 - Wash hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only in a well-ventilated area  
P272 - Contaminated work clothing must not be allowed out of the workplace  
P280 - Wear protective clothing, protective gloves, eye protection, face protection  
P285 - In case of inadequate ventilation wear respiratory protection  
P301+P312 - If swallowed: Call a POISON CENTER  
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting  
P302+P352 - If on skin: Wash with plenty of water  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - If exposed or concerned: Get medical attention  
P310 - Immediately call a doctor  
P311 - Call a doctor  
P312 - Call a POISON CENTER  
P314 - Get medical attention if you feel unwell  
P330 - Rinse mouth  
P333+P313 - If skin irritation or rash occurs: Get medical attention  
P342+P311 - If experiencing respiratory symptoms: Call a doctor  
P362 - Take off contaminated clothing and wash before reuse  
P363 - Wash contaminated clothing before reuse  
P370+P378 - In case of fire: Use alcohol resistant foam, dry powder, carbon dioxide (CO<sub>2</sub>) to extinguish  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents and container to comply with applicable local, state, national and international regulation.

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Glutaraldehyde	(CAS No) 111-30-8	<15.5	Flam. Liq. 4, H227 Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335
Glyoxal	(CAS No) 107-22-2	<8.5	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317 Muta. 2, H341
Isopropyl alcohol	(CAS No) 67-63-0	<7	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Methyl alcohol	(CAS No) 67-56-1	<5	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapor), H331 STOT SE 1, H370

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Name	Product identifier	%	GHS-US classification
Phenol	(CAS No) 108-95-2	<5	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Muta. 2, H341 STOT RE 2, H373
Ethylene glycol	(CAS No) 107-21-1	<3.5	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Methyl salicylate	(CAS No) 119-36-8	<3	Acute Tox. 4 (Oral), H302

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a doctor.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Keep victim warm and rested. Immediately call a doctor. Seek medical attention immediately. If breathing stops, give artificial respiration. Transfer to hospital rapidly.
- First-aid measures after skin contact : Wash immediately with lots of water (15 minutes)/shower. Remove all contaminated clothing and footwear. Seek medical attention immediately.
- First-aid measures after eye contact : In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. Seek medical attention immediately. Transport to hospital.
- First-aid measures after ingestion : Immediately call a POISON CENTER. If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting unless directed to do so by a physician. Take immediately victim to hospital. Seek medical advice (show the label where possible).

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

- Symptoms/injuries : Causes severe skin burns and eye damage. Suspected of causing genetic defects (inhalation, oral, dermal). May cause damage to organs (kidney, liver, skin and nervous system) through prolonged or repeated exposure.
- Symptoms/injuries after inhalation : Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Difficulty breathing and tightness in the chest. Burning in the nasal passage.
- Symptoms/injuries after skin contact : May cause an allergic skin reaction. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Contains phenol. Strong skin absorption as main danger of phenol poisoning at the workplace with paralysis of the central nervous system (with lethal consequences in severe cases) as well as liver and kidney damage. Phenol destroys the nerve endings in the skin. Therefore absence of pain does not necessarily mean the skin has been properly decontaminated.
- Symptoms/injuries after eye contact : Causes serious eye damage. Can cause blindness.
- Symptoms/injuries after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Ingestion may cause immediate pain and severe burns of the mucous membranes. Ingestion may cause nausea, vomiting and diarrhea. Swallowing can cause severe injury leading to death. This material contains methanol, which, when ingested, has caused acidosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

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

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Alcohol resistant foam. Dry powder. Carbon dioxide. Water spray.
- Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture. Vapor heavier than air may travel considerable distance to a source of ignition and flash back. Heating will cause pressure rise with risk of bursting and subsequent explosion.
- Reactivity : Thermal decomposition generates : Corrosive vapors.

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### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Prevent runoff from entering drains, sewers or waterways.
- Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Combustible liquid. Flammable liquid and vapor. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Use water spray to cool unopened containers. Move undamaged containers from immediate hazard area if it can be done safely. On burning: release of toxic/corrosive/combustible gases/vapors. In presence of intense heat may generate acrid fumes . Formaldehyde. unburned hydrocarbons. carbon oxides (CO and CO<sub>2</sub>). Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Alcohols burn with a pale blue flame which may be extremely hard to see under normal lighting conditions. Personnel may be able to feel the heat of the fire without seeing flames. Extreme caution must be exercised in fighting alcohol fires.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Eliminate all ignition sources if safe to do so. Use special care to avoid static electric charges. No open flames. No smoking. Stop leak if safe to do so. Special danger of slipping by leaking/spilling product. Avoid contact with skin, eyes and clothing. Avoid breathing mist or vapor.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Wear suitable protective clothing. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. Avoid breathing mist or vapor.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Keep upwind of the spilled material and isolate exposure . Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Gather the product and place it in a spare container that has been suitably labelled. Store away from other materials. Contain large spillage with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Wear proper protective equipment. Do NOT touch spilled material. Cleanup personnel must be trained in the safe handling of this product. If possible ventilate area by means of non-sparking, grounded ventilation system. Spills may be absorbed on non-reactive absorbents such as vermiculite. Place cells into individual plastic bags and then place into appropriate containers and close tightly for disposal. Ensure that cleanup procedures do not expose spilled material to any moisture. Immediately transport closed containers outside. Eliminate all sources of ignition, avoid sparks, flames and do not smoke in risk area. Incinerate, dispose in sanitary landfill - if permitted. Ensure all national and local regulations are observed. Consult the appropriate authorities about waste disposal.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Work in a well-ventilated area. Use personal protective equipment as required. Avoid breathing dust, fume, mist, spray, vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Before entering storage tanks and commencing any operation in a confined area check the atmosphere for oxygen content and flammability. . Keep away from clothing as well as other incompatible materials. Avoid contact with skin, eyes and clothing.

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Hygiene measures : Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practices. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Discard contaminated leather articles.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : A washing facility for eye and skin cleaning purposes should be present. Ensure adequate ventilation. Proper grounding procedures to avoid static electricity should be followed. Ground container and receiving equipment. Use explosion-proof electrical, ventilating, lighting, and equipment. Comply with applicable regulations.

Storage conditions : Protect containers against physical damage. Keep container tightly closed. Keep only in the original container in a cool, well ventilated place. Store away from direct sunlight or other heat sources.

Incompatible materials : Strong acids, bases. Oxidizing agents.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Methyl alcohol (67-56-1)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	250 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm

Glutaraldehyde (111-30-8)		
USA ACGIH	ACGIH Ceiling (ppm)	0.05 ppm (activated and inactivated)

Phenol (108-95-2)		
USA ACGIH	ACGIH TWA (ppm)	5 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	19 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	5 ppm

Glyoxal (107-22-2)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (inhalable fraction and vapor)

Ethylene glycol (107-21-1)		
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> (aerosol only)

Isopropyl alcohol (67-63-0)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	400 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	980 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	400 ppm

### 8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate ventilation. Monitoring the effectiveness of engineering control is recommended.

Personal protective equipment : Avoid all unnecessary exposure. Wear protective clothing, protective gloves, eye protection/goggles, face protection. For certain operations, additional Personal Protection Equipment (PPE) may be required.

Hand protection : Wear impermeable protective nitrile gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Eye protection : Contact lenses should not be worn. Chemical goggles and face shields are required to prevent potential eye contact, irritation or injury.

Skin and body protection : Long sleeved protective clothing. Overall. Rubber apron, boots. safety foot-wear.

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Respiratory protection	: In case of insufficient ventilation. Wear suitable respiratory equipment. Approved organic vapor respirator.
Environmental exposure controls	: Avoid discharge to the environment.
Other information	: Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Bi-layer liquid or milky if agitated.
Color	: Two color
Odor	: Pungent;odor
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: < 1
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 65.55 °C (150 °F)
Flash point	: 38.33 °C (101 °F TCC)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: ≈ 1
Relative density	: No data available
Density	: 1.03 Specific Gravity
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 6.7 - 72 vol %

#### 9.2. Other information

VOC content	: 25% (Percent volatiles - with heat)
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapors.

#### 10.2. Chemical stability

Stable under normal conditions. Unstable on exposure to heat. Highly flammable liquid and vapor. Explosive vapor/air mixtures may be formed.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

#### 10.5. Incompatible materials

Strong acids. strong bases. Oxidizing agents.

#### 10.6. Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide. May release flammable gases. Thermal decomposition generates : Corrosive vapors.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

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Acute toxicity : Harmful if swallowed. Toxic if inhaled.

<b>Methyl alcohol (67-56-1)</b>	
LC50 inhalation rat (ppm)	22500 ppm (Exposure time: 8 h)
ATE US (oral)	100.00000000 mg/kg bodyweight
ATE US (dermal)	300.00000000 mg/kg bodyweight
ATE US (vapors)	3.00000000 mg/l/4h

<b>Glutaraldehyde (111-30-8)</b>	
LD50 oral rat	252 mg/kg
LD50 dermal rabbit	560 µl/kg
LC50 inhalation rat (mg/l)	0.1 mg/l/4h
ATE US (oral)	252.00000000 mg/kg bodyweight
ATE US (vapors)	0.10000000 mg/l/4h
ATE US (dust,mist)	0.10000000 mg/l/4h

<b>Phenol (108-95-2)</b>	
LD50 dermal rat	525
LD50 dermal rabbit	630 mg/kg
ATE US (oral)	100.00000000 mg/kg bodyweight
ATE US (dermal)	630.00000000 mg/kg bodyweight
ATE US (gases)	700.00000000 ppmv/4h
ATE US (vapors)	3.00000000 mg/l/4h
ATE US (dust,mist)	0.50000000 mg/l/4h

<b>Glyoxal (107-22-2)</b>	
LD50 oral rat	3300 mg/kg
LD50 dermal rabbit	> 800 mg/kg
LC50 inhalation rat (mg/l)	2.44 mg/l/4h
ATE US (oral)	3300.00000000 mg/kg bodyweight
ATE US (gases)	4500.00000000 ppmv/4h
ATE US (vapors)	2.44000000 mg/l/4h
ATE US (dust,mist)	2.44000000 mg/l/4h

<b>Methyl salicylate (119-36-8)</b>	
LD50 oral rat	887 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
ATE US (oral)	887.00000000 mg/kg bodyweight

<b>Ethylene glycol (107-21-1)</b>	
LD50 oral rat	4000 - 10200 mg/kg
LD50 dermal rat	10600 mg/kg
ATE US (oral)	500.00000000 mg/kg bodyweight
ATE US (dermal)	10600.00000000 mg/kg bodyweight

<b>Isopropyl alcohol (67-63-0)</b>	
LD50 oral rat	1870 mg/kg
LD50 dermal rabbit	4059 mg/kg
LC50 inhalation rat (mg/l)	72600 mg/m <sup>3</sup> (Exposure time: 4 h)
ATE US (oral)	4396.000 mg/kg bodyweight
ATE US (dermal)	12800.000 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns and eye damage.  
Serious eye damage/irritation : Causes serious eye damage.  
Respiratory or skin sensitisation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.  
Germ cell mutagenicity : Suspected of causing genetic defects (Inhalation, oral, Dermal).  
Carcinogenicity : Not classified  
(Based on available data, the classification criteria are not met)



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<b>Phenol (108-95-2)</b>	
IARC group	3 - Not classifiable

  

<b>Isopropyl alcohol (67-63-0)</b>	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (single exposure)	: May cause respiratory irritation. May cause damage to organs (kidney, liver, skin and nervous system).
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if inhaled. Toxic if swallowed. Toxic in contact with skin.
Symptoms/injuries after inhalation	: Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Difficulty breathing and tightness in the chest. Burning in the nasal passage.
Symptoms/injuries after skin contact	: May cause an allergic skin reaction. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Strong skin absorption as main danger of phenol poisoning at the workplace with paralysis of the central nervous system (with lethal consequences in severe cases) as well as liver and kidney damage. Phenol destroys the nerve endings in the skin. Therefore absence of pain does not necessarily mean the skin has been properly decontaminated.
Symptoms/injuries after eye contact	: Causes serious eye damage. Can cause blindness.
Symptoms/injuries after ingestion	: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Ingestion may cause immediate pain and severe burns of the mucous membranes. Ingestion may cause nausea, vomiting and diarrhea. Swallowing can cause severe injury leading to death. This material contains methanol, which, when ingested, has caused acidosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Glutaraldehyde (111-30-8)</b>	
LC50 fishes 1	7.8 - 22 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	2.6 - 4.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 2	0.56 - 1.0 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

  

<b>Phenol (108-95-2)</b>	
LC50 fishes 1	11.9 - 50.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	4.24 - 10.7 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	20.5 - 25.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	10.2 - 15.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)

  

<b>Glyoxal (107-22-2)</b>	
LC50 fishes 1	215 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	404 mg/l (Exposure time: 48 h - Species: Daphnia magna)

  

<b>Ethylene glycol (107-21-1)</b>	
LC50 fishes 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

  

<b>Isopropyl alcohol (67-63-0)</b>	
LC50 fish 1	9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

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### 12.2. Persistence and degradability

Cavity 48	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

Cavity 48	
Bioaccumulative potential	Not established.
Glutaraldehyde (111-30-8)	
Log Pow	0.22 (at 25 °C)
Phenol (108-95-2)	
BCF fish 1	(no significant bioaccumulation)
Log Pow	1.47
Glyoxal (107-22-2)	
Log Pow	-0.85 (at 25 °C)
Methyl salicylate (119-36-8)	
Log Pow	2.55
Ethylene glycol (107-21-1)	
Log Pow	-1.93
Isopropyl alcohol (67-63-0)	
Log Pow	0.05 (at 25 °C)

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

- Effect on ozone layer : No additional information available
- Effect on the global warming : No additional information available
- Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Waste disposal recommendations : Dispose of contents and container to comply with applicable local, state, national and international regulation. Consult the appropriate authorities about waste disposal.
- Incinerate, dispose in sanitary landfill - if permitted. Ensure all national and local regulations are observed. It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations. Do not pressurize, cut, weld, braze solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources. Do not re-use empty containers.
- Additional information : Handle empty containers with care because residual vapors are flammable.
- Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

## SECTION 14: Transport information

In accordance with DOT

- Transport document description : UN2924, Flammable liquids, corrosive, n.o.s. (Isopropanol, Methanol, Glutaraldehyde), 3, PGIII, ltd. qty.
- Hazard labels (DOT) : 3 - Flammable liquid  
8 - Corrosive



- Packing group (DOT) : III - Minor Danger
- DOT Packaging Exceptions (49 CFR 173.xxx) : 150

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DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"

### Additional information

Other information : No supplementary information available.

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>Cavity 48</b>	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	12500 lb
<b>Methyl alcohol (67-56-1)</b>	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 313 - Emission Reporting	1.0 %
<b>Phenol (108-95-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on the United States SARA Section 302 Listed on United States SARA Section 313	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 - 10000
SARA Section 313 - Emission Reporting	1.0 %
<b>Ethylene glycol (107-21-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 313 - Emission Reporting	1.0 %
<b>Isopropyl alcohol (67-63-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 313 - Emission Reporting	1.0 % (only if manufactured by the strong acid process, no supplier notification)

### 15.2. International regulations

#### CANADA

<b>Glutaraldehyde (111-30-8)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material

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<b>Phenol (108-95-2)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material
<b>Glyoxal (107-22-2)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class F - Dangerously Reactive Material
<b>Methyl salicylate (119-36-8)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
<b>Ethylene glycol (107-21-1)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
<b>Isopropyl alcohol (67-63-0)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

### EU-Regulations

<b>Glutaraldehyde (111-30-8)</b>
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
<b>Phenol (108-95-2)</b>
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
<b>Glyoxal (107-22-2)</b>
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
<b>Methyl salicylate (119-36-8)</b>
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
<b>Ethylene glycol (107-21-1)</b>
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
<b>Isopropyl alcohol (67-63-0)</b>
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

No additional information available

#### 15.2.2. National regulations

<b>Phenol (108-95-2)</b>
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Poisonous and Deleterious Substances Control Law
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on the Canadian IDL (Ingredient Disclosure List)

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### Glyoxal (107-22-2)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on the Canadian IDL (Ingredient Disclosure List)

### Methyl salicylate (119-36-8)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Canadian IDL (Ingredient Disclosure List)

### Ethylene glycol (107-21-1)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Canadian IDL (Ingredient Disclosure List)

### Isopropyl alcohol (67-63-0)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Canadian IDL (Ingredient Disclosure List)

## 15.3. US State regulations

### Methyl alcohol (67-56-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
	Yes			

## SECTION 16: Other information

Other information : None.

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### Full text of H-phrases:

Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhalation) Category 3
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Liq. 4	Flammable liquids Category 4
Muta. 2	Germ cell mutagenicity, Category 2
Resp. Sens. 1	Sensitisation — Respiratory, category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Sensitisation — Skin, category 1
Skin Sens. 1B	Sensitisation — Skin, category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 2	Specific target organ toxicity (single exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H227	Combustible liquid
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H331	Toxic if inhaled
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H341	Suspected of causing genetic defects
H370	Causes damage to organs
H371	May cause damage to organs
H373	May cause damage to organs through prolonged or repeated exposure

### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur  
Flammability : 2 Moderate Hazard  
Physical : 0 Minimal Hazard

SDS US (GHS HazCom 2012)

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