

Millenium

new era

Arterial 24

Alpha α Factor

The Future Now: **Formaldehyde Free**

CPF=24^A

Arterial 24 Alpha Factor is a formaldehyde-free arterial embalming fluid of the Millenium New Era line of embalming formulations. Arterial 24 Alpha Factor is a high reactivity multi-aldehyde based formulation that exhibits a high level of penetration and saturation of tissues with significantly improved embalming results. Arterial 24 Alpha Factor is for all normal cases and can be used for difficult or extreme cases if dilutions are increased accordingly and appropriate accessory chemicals are used. Arterial 24 Alpha Factor requires that Arterial 24 Beta Factor be used ounce-for-ounce in equal amounts in order for activation and buffering to occur. Arterial 24 Alpha Factor should never be used without Arterial 24 Beta Factor as the reaction with tissue will be rapid and uncontrolled. Do not use dilutions over the table values unless conditions warrant (decomposition, disease, etc.). Expect moderate to definite firmness with rubbery flexibility. Rock hard firmness will not occur due to lack of formaldehyde dehydration effect. Always add dye to achieve uniform cosmetic effect and to trace distribution. Do not inject more than 2½ - 3 gallons of total solution unless conditions warrant (large bodies, etc.). Use of higher concentrations of chemical or excessive gallons of injection will result in significant overembalming and slight darkening of the tissues (which can be overcome with the use of an appropriate amount of dye).

PH-A ¹	ARTERIAL 24 ALPHA FACTOR ^B		ARTERIAL ²⁴ BETA FACTOR	HUMECTANT ALOE FACTOR ³	TRISAN POWER FACTOR ⁴ ADD FOR EXTRA FIRMNESS	HUMECTANT ALOE FACTOR ⁵ ADD TO RESTORE MOISTURE CONTENTS
	MODERATE FIRMNESS	DEFINITE ² FIRMNESS				
3-4	8-9	10-11	EQUAL AMOUNT TO ALPHA FACTOR	2-4	1-2	4-8
<p style="text-align: center;"> → → MIX IN THIS ORDER → → OUNCES PER GALLON </p>						

Read all label warnings and precautions prior to use. Always wear protective clothing and good quality gloves while using Arterial 24 Alpha Factor. Always use adequate ventilation and avoid contact with eyes, skin or clothing. Arterial 24 Alpha Factor is not designed for use as an external pack or hypo injection into areas of the body that are to be cosmetized or viewed. Used full strength, Arterial 24 Alpha Factor will cause some staining and darkening of tissues. Always shake thoroughly before use -some separation is possible due to the high level of active ingredients present in the concentrated chemical. Use caution when using plastic tank machines — clouding may possibly occur. Rinse machines after use and do not allow chemical to stand in machines for long periods of time.

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 - Add dye concentrate cosmetic factor at rate of ½ oz. or as needed.
- 1 - For proper water conditioning and pH balance to maximize fluid efficiency (if using soft water - reduce amount to 2-3 ozs.)
- 2 - These are recommended amounts for normal cases. Additional amounts of fluid will be needed for cases with higher aldehyde demand such as cancer, renal and liver diseases with their complications, institutional cases and other wasting diseases, delayed embalming cases, edema and bodies subjected to extensive drug therapy.
- 3 - HUMECTANT to control aldehyde action and prevent dehydration during embalming. Do not use in cases of moisture retention (edema. etc.).
- 4 - For increased aldehyde action of fluid with improved rigidity and preservation. (Increases preservation factor of fluid without inducing dehydration or other unwanted effects.)
- 5 - For maximum rehydration of tissues. Restores moisture in cases of dehydration or emaciation. Use in last 1 to 1½ gallons of solution with intermittent or restricted drainage

**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 : Arterial 24 Alpha Factor

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

Use of the substance/mixture : Arterial 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

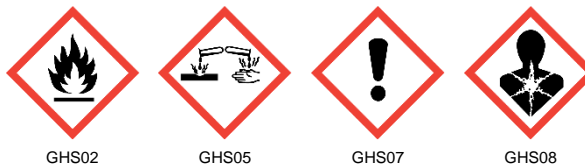
Flam. Liq. 3	H226
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Corr. 1B	H314
Eye Dam. 1	H318
Resp. Sens. 1	H334
Skin Sens. 1	H317
Muta. 2	H341
STOT SE 1	H370
STOT RE 2	H373

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor
H302+H332 - Harmful if swallowed or if inhaled
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341 - Suspected of causing genetic defects
H370 - Causes damage to organs (optic nerve, central 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, hot surfaces, open flames, sparks. - 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
P260 - Do not breathe dust, fume, mist, spray, vapors
P261 - Avoid breathing dust, fume, mist, spray, vapors

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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 - If inadequate ventilation wear respiratory protection.
P301+P312 - If swallowed: Call a POISON CENTER if you feel unwell
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
P307+P311 - If exposed: Call a doctor
P308+P313 - If exposed or concerned: Get medical attention
P310 - Immediately call a doctor
P312 - Call a POISON CENTER if you feel unwell
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 (CO₂) to extinguish
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	<8	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
Isopropyl alcohol	(CAS No) 67-63-0	<5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Phenol	(CAS No) 108-95-2	4	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
Methyl alcohol	(CAS No) 67-56-1	≤4	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapor), H331 STOT SE 1, H370
Tetrahydrofurfuryl alcohol	(CAS No) 97-99-4	<2.5	Flam. Liq. 4, H227 Eye Irrit. 2A, H319
Ethylene glycol	(CAS No) 107-21-1	0.5 – 1.5	Acute Tox. 4 (Oral), H302 STOT RE 2, H373

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Name	Product identifier	%	GHS-US classification
Glyoxal	(CAS No) 107-22-2	<0.5	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317 Muta. 2, H341

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. Seek medical attention immediately. Immediately call doctor. If breathing stops, give artificial respiration. Transfer to hospital rapidly.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash immediately with lots of water (15 minutes)/shower. Get medical attention. Wash contaminated clothing before reuse.
- 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. Remove contact lenses, if present and easy to do. Continue rinsing. 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 : If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Immediately call a POISON CENTER. 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. Causes damage to organs.
- Symptoms/injuries after inhalation : Harmful if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. Excessive concentrations may cause nervous system depression, headache, and weakness leading to unconsciousness. Causes damage to liver through prolonged or repeated exposure if inhaled. Difficulty in breathing.
Product contains phenol. Inhalation of phenol vapors can lead to damage of the bronchial system and pulmonary oedema. Systemic damage to kidneys, liver and heart as well as neuropsychiatric disturbances are produced.
- Symptoms/injuries after skin contact : Harmful in contact with skin. Absorbed through the skin. 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 : Redness and pain. Impaired vision, watering of eyes, defects in the cornea. Burning sensation. Inflammation. Can cause blindness. Causes serious eye damage.
- Symptoms/injuries after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Ingestion may cause nausea, vomiting and diarrhea. Swallowing can cause severe injury leading to death. Contains: Phenol and methanol. The swallowing of even a small amount of methanol can cause blindness or lead to death. The following may result in the case of a low dosage: nausea, headache, stomach-ache, vomiting and impaired vision (blurred vision, photophobia). There is furthermore risk of damage to liver, kidneys and heart. Effects may be delayed and manifest within 18 to 48 hours. Stinging sensation. Headache. Disorientation. Dizziness. Unconsciousness. Contains ethanol; constant ingestion of ethanol can lead to cirrhosis of the liver.

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 (CO₂). Water spray. Sand.
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

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.
- Reactivity : Thermal decomposition generates : Corrosive vapors.

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5.3. Advice for firefighters

- Firefighting instructions : Prevent runoff from entering drains, sewers or waterways. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Combustible liquid. 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. 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. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. On burning: release of carbon monoxide - carbon dioxide. unburned hydrocarbons. Formaldehyde.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop leak if safe to do so. Avoid breathing dust, fume, mist, spray, vapors. Avoid contact with skin, eyes and clothing. Eliminate all ignition sources if safe to do so. Use special care to avoid static electric charges. No naked lights. No smoking.

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.
- 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 : Wear proper protective equipment. Keep upwind of the spilled material and isolate exposure. 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. Contain large spillage with sand or earth. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Gather the product and place it in a spare container that has been suitably labelled. Store away from other materials. Consult the appropriate authorities about waste disposal. Eliminate all sources of ignition, avoid sparks, flames and do not smoke in risk area. Thoroughly wash the area with water after a spill or leak clean-up. Ensure all national and local regulations are observed.

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 : Keep away from heat, sparks, open flames, hot surfaces. - No smoking. 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. Avoid contact with skin, eyes and clothing. Avoid breathing dust, fume, mist, spray, vapors. Work in a well-ventilated area. Use only outdoors or in a well-ventilated area. Provide good ventilation in process area to prevent formation of vapor. 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. No naked lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Use personal protective equipment as required.

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Hygiene measures : Handle in accordance with good industrial hygiene and safety practices. Discard contaminated leather articles. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

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. Use explosion-proof electrical, ventilating, lighting, and equipment. Proper grounding procedures to avoid static electricity should be followed. Ground container and receiving equipment. Comply with applicable regulations.

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

Incompatible materials : Strong acids, bases. Oxidizing agents.

Heat and ignition sources : Store away from direct sunlight or other heat sources.

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 ³)	260 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm

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

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

Ethylene glycol (107-21-1)		
USA ACGIH	ACGIH Ceiling (mg/m ³)	100 mg/m ³

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

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

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.

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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.
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
Color	: Red
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	: 37.77 °C (100 °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 Specific Gravity
Solubility	: Water: completely soluble
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	: No data available

9.2. Other information

VOC content	: 20 % (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. Flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Oxidizing agents. Strong acids. strong bases.

10.6. Hazardous decomposition products

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

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed. Harmful if inhaled.

Methyl alcohol (67-56-1)	
LC50 inhalation rat (mg/l)	130.7 mg/l/4h (lit. ECHA)
ATE US (oral)	100.00000000 mg/kg bodyweight
ATE US (dermal)	300.00000000 mg/kg bodyweight
ATE US (vapors)	3.00000000 mg/l/4h

Phenol (108-95-2)	
LD50 oral rat	317
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

Isopropyl alcohol (67-63-0)	
LD50 oral rat	4396 mg/kg
LD50 dermal rabbit	12800 mg/kg
LC50 inhalation rat (ppm)	16000 ppm (Exposure time: 8 h)
ATE US (oral)	4396.00000000 mg/kg bodyweight
ATE US (dermal)	12800.00000000 mg/kg bodyweight

Ethylene glycol (107-21-1)	
LD50 oral rat	4000 mg/kg
ATE US (oral)	500.00000000 mg/kg bodyweight

Glutaraldehyde (111-30-8)	
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

Glyoxal (107-22-2)	
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

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.
Carcinogenicity : Not classified
Based on available data, the classification criteria are not met.

Phenol (108-95-2)	
IARC group	3 - Not classifiable

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Isopropyl alcohol (67-63-0)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Causes damage to organs (optic nerve, central 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	: Harmful in contact with skin. Harmful if inhaled. Toxic if swallowed.
Symptoms/injuries after inhalation	: Harmful if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. Excessive concentrations may cause nervous system depression, headache, and weakness leading to unconsciousness. Causes damage to liver through prolonged or repeated exposure if inhaled. Difficulty in breathing. Product contains phenol. Inhalation of phenol vapors can lead to damage of the bronchial system and pulmonary oedema. Systemic damage to kidneys, liver and heart as well as neuropsychiatric disturbances are produced.
Symptoms/injuries after skin contact	: Harmful in contact with skin. Absorbed through the skin. 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	: Redness and pain. Impaired vision, watering of eyes, defects in the cornea. Burning sensation. Inflammation. Can cause blindness. Causes serious eye damage.
Symptoms/injuries after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Ingestion may cause nausea, vomiting and diarrhea. Swallowing can cause severe injury leading to death. Contains: Phenol and methanol. The swallowing of even a small amount of methanol can cause blindness or lead to death. The following may result in the case of a low dosage: nausea, headache, stomach-ache, vomiting and impaired vision (blurred vision, photophobia). There is furthermore risk of damage to liver, kidneys and heart. Effects may be delayed and manifest within 18 to 48 hours. Stinging sensation. Headache. Disorientation. Dizziness. Unconsciousness. Contains ethanol; constant ingestion of ethanol can lead to cirrhosis of the liver.

SECTION 12: Ecological information

12.1. Toxicity

Methyl alcohol (67-56-1)	
LC50 fishes 1	> 12700 mg/l 96 hours
EC50 Daphnia 1	> 10000 mg/l
Phenol (108-95-2)	
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)
Isopropyl alcohol (67-63-0)	
LC50 fishes 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])
Ethylene glycol (107-21-1)	
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])
Glutaraldehyde (111-30-8)	
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])

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Glyoxal (107-22-2)	
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)

12.2. Persistence and degradability

Arterial 24 Alpha Factor	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Arterial 24 Alpha Factor	
Bioaccumulative potential	Not established.

Phenol (108-95-2)	
BCF fish 1	(no significant bioaccumulation)
Log Pow	1.47

Isopropyl alcohol (67-63-0)	
Log Pow	0.05 (at 25 °C)

Ethylene glycol (107-21-1)	
Log Pow	-1.93

Glutaraldehyde (111-30-8)	
Log Pow	0.22 (at 25 °C)

Glyoxal (107-22-2)	
Log Pow	-0.85 (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. It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations. Ensure all national and local regulations are observed. 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
- DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

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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

Methyl alcohol (67-56-1)	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb
SARA Section 313 - Emission Reporting	1.0 %
Phenol (108-95-2)	
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 %
Isopropyl alcohol (67-63-0)	
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)
Ethylene glycol (107-21-1)	
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 %

15.2. International regulations

CANADA

Phenol (108-95-2)	
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
Isopropyl alcohol (67-63-0)	
Listed on the Canadian DSL (Domestic Substances List)	

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Isopropyl alcohol (67-63-0)	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Ethylene glycol (107-21-1)	
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
Glutaraldehyde (111-30-8)	
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
Glyoxal (107-22-2)	
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

EU-Regulations

Phenol (108-95-2)	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
Isopropyl alcohol (67-63-0)	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
Ethylene glycol (107-21-1)	
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

Phenol (108-95-2)
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 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)
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)
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)

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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.

Full text of H-phrases: see section 16:

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: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 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) 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	Flammable liquids Category 1 flammable liquids Category 4
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 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
H373	May cause damage to organs through prolonged or repeated exposure

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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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