

PLX is a glutaraldehyde arterial fluid which contains Entrone for achieving penetration to the point of complete saturation and AD-P for control of aldehyde action to obtain better diffusion and improvement of cosmetic effect. In addition, PLX contains ultra-fine lanolins and cosmetic oils to prevent dehydration and produce a natural look and texture to tissues. PLX has a superior sanitizing action due to the glutaraldehyde present. PLX is suitable for use in all normal embalming situations. PLX is not recommended in cases of edema or advanced decomposition.

| PLX <sup>B</sup> |   | TRI-SAN <sup>3</sup> ALOE FACTOR <sup>4</sup> |                           |                                    |  |
|------------------|---|---|---------------------------|------------------------------------|--|
| PH-A1            | MODERATE<br>FIRMNESS  | DEFINITE <sup>2</sup><br>FIRMNESS             | ADD FOR<br>EXTRA FIRMNESS | ADD TO RESTORE<br>MOISTURE CONTENT |  |
|                  |   |   |                           |                                    |  |
| 3-4              | 8-10  | 12-14   | 2-4                       | 4-8                                |  |
|                  | $\longrightarrow \longrightarrow MIX IN THIS ORDER \longrightarrow \longrightarrow$ OUNCES PER GALLON |   |                           |                                    |  |

## 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 Champion Coloro Dyes as needed to achieve desired cosmetic effect.
- 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 For increased aldehyde action of fluid with improved rigidity and preservation. (Increases preservative factor of fluid without inducing dehydration or other unwanted effects.)
- 4 For maximum rehydration of tissues. Restores moisture in cases of dehydration or emaciation. Use in last 1 to 1-1/2 gallons of solution with intermittent or restricted drainage.

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



## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012) Date of issue: 11/19/2018 Version: 2.0

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

1.1. Product identifier Trade name

: PLX

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

Use of the substance/mixture Use of the substance/mixture

: Arterial Embalming Fluid: 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

INFOTRAC: 1-800-535-5053 DOMESTIC or 352-323-3500 INTERNATIONAL

## **SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

### **GHS-US** classification

| Acute Tox. 4 (Oral)                 | H302 |
|-------------------------------------|------|
| Acute Tox. 3 (Dermal)               | H311 |
| Acute Tox. 4 (Inhalation:dust,mist) | H332 |
| Skin Irrit. 2                       | H315 |
| Eye Dam. 1                          | H318 |
| Resp. Sens. 1                       | H334 |
| Skin Sens. 1                        | H317 |
| Carc. 1A                            | H350 |
| STOT SE 1                           | H370 |

## 2.2. Label elements

## **GHS-US** labelling

Hazard pictograms (GHS-US)

|                                   | GHS05 GHS06 GHS08   |
|-----------------------------------|---|
| Signal word (GHS-US)              | : Danger  |
| Hazard statements (GHS-US)        | <ul> <li>H302+H332 - Harmful if swallowed or if inhaled<br/>H311 - Toxic in contact with skin<br/>H315 - Causes skin irritation<br/>H317 - May cause an allergic skin reaction<br/>H318 - Causes serious eye damage<br/>H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled<br/>H335 - May cause respiratory irritation<br/>H350 - May cause cancer<br/>H370 - Causes damage to organs</li> </ul>  |
| Precautionary statements (GHS-US) | <ul> <li>P201 - Obtain special instructions before use</li> <li>P202 - Do not handle until all safety precautions have been read and understood</li> <li>P233 - Keep container tightly closed</li> <li>P260 - Do not breathe dust, fume, mist, spray, vapors</li> <li>P261 - Avoid breathing dust, fume, mist, spray, vapors</li> <li>P264 - Wash hands thoroughly after handling</li> <li>P270 - Do not eat, drink or smoke when using this product</li> <li>P271 - Use only in a well-ventilated area</li> <li>P272 - Contaminated work clothing must not be allowed out of the workplace</li> <li>P280 - Wear protective clothing, protective gloves, eye protection, face protection</li> <li>P301+P312 - If swallowed: Call a POISON CENTER</li> <li>P302+P352 - If on skin: Wash with plenty of water</li> <li>P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing</li> </ul> |
|                                   |   |

| P310 - Immedia<br>P312 - Call a P0<br>P330 - Rinse m0<br>P332+P313 - If<br>P333+P313 - If<br>P342+P311 - If<br>P361 - Take off<br>P362 - Take off<br>P363 - Wash co<br>P403 - Store in<br>P405 - Store loc | skin irritation occurs: Get medical attention<br>skin irritation or rash occurs: Get medical attention<br>experiencing respiratory symptoms: Call a doctor<br>immediately all contaminated clothing<br>contaminated clothing and wash before reuse<br>ntaminated clothing before reuse<br>a well-ventilated place<br>ked up<br>of contents and container to comply with applicable local, state, national and |
|--|---|
| 2.3. Other hazards   |   |

other hazards which do not result in classification

: Spills of this product present a serious slipping hazard.

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  |
|---|---------------------|---------|--|
| Methyl alcohol                          | (CAS No) 67-56-1    | 10 - 17 | Flam. Liq. 2, H225<br>Acute Tox. 3 (Oral), H301<br>Acute Tox. 3 (Dermal), H311<br>Acute Tox. 3 (Inhalation:vapor),<br>H331<br>STOT SE 1, H370  |
| Formaldehyde                            | (CAS No) 50-00-0    | < 15    | Acute Tox. 3 (Oral), H301<br>Acute Tox. 3 (Dermal), H311<br>Acute Tox. 3 (Inhalation), H331<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317<br>Carc. 1A, H350<br>STOT SE 3, H335          |
| Glutaraldehyde                          | (CAS No) 111-30-8   | 6       | Flam. Liq. 4, H227<br>Acute Tox. 3 (Oral), H301<br>Acute Tox. 2 (Inhalation:dust,mist),<br>H330<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317<br>STOT SE 3, H335 |
| Boric acid, disodium salt, pentahydrate | (CAS No) 12179-04-3 | <2.5    | Repr. 1B, H360   |
| Ethyl formate                           | (CAS No) 109-94-4   | < 0.3   | Flam. Liq. 2, H225<br>Acute Tox. 4 (Oral), H302<br>Acute Tox. 4 (Inhalation), H332<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335   |
| Oils, cedarwood, Texan                  | (CAS No) 68990-83-0 | < 0.3   | Asp. Tox. 1, H304  |

| 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 advi<br>(show the label where possible).                                | се |
| First-aid measures after inhalation    | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artifici respiration if necessary. Immediately get medical attention. | al |
| First-aid measures after skin contact  | : Remove affected clothing and wash all exposed skin area with mild soap and water, followed warm water rinse. If skin irritation occurs: Get medical attention.  | зу |
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| First-aid measures after eye contact | : In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention immediately.   |
|--------------------------------------|---|
| First-aid measures after ingestion   | : If swallowed, rinse mouth with water (only if the person is conscious). Call a doctor. Obtain emergency medical attention. Give water or milk if the person is fully conscious. Never give anything by mouth to a person who is not fully conscious. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.  |
| 4.2. Most important symptoms and ef  | fects, both acute and delayed   |
| Symptoms/injuries                    | : Causes damage to organs.  |
| Symptoms/injuries after inhalation   | : Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Inhalation of concentrated vapors may cause serious damage to the lining of the nose, throat, and lungs. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination. Difficulty in breathing. Danger of serious damage to health by prolonged exposure through inhalation. May cause cancer by inhalation. Causes damage to liver through prolonged or repeated exposure if inhaled. |
| Symptoms/injuries after skin contact | : Toxic in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. May cause an allergic skin reaction. Causes skin irritation. Redness. Dermatitis. Contains formaldehyde which can combine with epidermal protein to produce a hapten-protein couple capable of sensitising T-lymphocytes. Subsequent exposures cause a type IV hypersensitivity reaction.   |
| Symptoms/injuries after eye contact  | : Causes serious eye damage. Can cause blindness.   |
| Symptoms/injuries after ingestion    | : Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Ingestion may cause nausea and vomiting. Can cause blindness. Death in extreme cases. This material contains methanol, which, when ingested, has cards acidosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.   |

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

No additional information available

| SECTION 5: Firefighting measu  | res   |
|--|---|
| 5.1. Extinguishing media   |   |
| Suitable extinguishing media   | : Foam. Dry powder. Carbon dioxide. 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 t                                      | he substance or mixture   |
| Explosion hazard   | : Heating will cause pressure rise with risk of bursting and subsequent explosion. May form flammable/explosive vapor-air mixture. Vapors can travel considerable distances to a source of ignition where they can ignite, flash back, or explode.                                |
| 5.3. Advice for firefighters   |   |
| Firefighting instructions  | : Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering<br>environment.   |
| Protective equipment for firefighters                                    | : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus.  |
| Other information  | : Special danger of slipping by leaking and spilling product. Thermal combustion may release carbon monoxide and dioxide. unburned hydrocarbons. Toxic gases and fumes may be released in a fire.   |
| SECTION 6: Accidental release  | moocuroo  |
|  | ineasures   |
| 6.1. Personal precautions, protecti                                      | ive equipment and emergency procedures  |
| 6.1. Personal precautions, protecti<br>General measures                  |   |
| General measures   | <ul> <li>Avoid breathing dust, fume, mist, spray, vapors. Stop leak if safe to do so. Surface will become slippery when wet or damp. No open flames. No smoking. Take precautionary measures against static discharge.</li> </ul>   |
| General measures   | <ul> <li>ive equipment and emergency procedures</li> <li>Avoid breathing dust, fume, mist, spray, vapors. Stop leak if safe to do so. Surface will become slippery when wet or damp. No open flames. No smoking. Take precautionary measures against static discharge.</li> </ul> |
| General measures 6.1.1. For non-emergency personnel Emergency procedures | <ul> <li>ive equipment and emergency procedures</li> <li>Avoid breathing dust, fume, mist, spray, vapors. Stop leak if safe to do so. Surface will become slippery when wet or damp. No open flames. No smoking. Take precautionary measures against static discharge.</li> </ul> |
| General measures 6.1.1. For non-emergency personnel Emergency procedures | <ul> <li>Avoid breathing dust, fume, mist, spray, vapors. Stop leak if safe to do so. Surface will become slippery when wet or damp. No open flames. No smoking. Take precautionary measures against static discharge.</li> </ul>   |

#### 6.2. **Environmental precautions**

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

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| 6.3. Methods and material              | for containment a   | and cleaning up  |   |
|--|---------------------|--|---|
| Methods for cleaning up                |                     | Soak up spills with inert solids, such a spillage. Store away from other materi dispose according to local legislation | as clay or diatomaceous earth as soon as possible. Collect<br>als. Collect all waste in suitable and labelled containers and<br>b. Ensure all national and local regulations are observed.<br>after a spill or leak clean-up. Dispose of waste according to |
| 6.4. Reference to other se             | ctions              |  |   |
| See Heading 8. Exposure control        | s and personal prot | ection.  |   |
| SECTION 7: Handling and                | d storage           |  |   |
| 7.1. Precautions for safe h            | andling             |  |   |
| Precautions for safe handling          | :                   | area. When not in use, keep container  | Avoid contact with skin and eyes. Work in a well-ventilated<br>is tightly closed. Wash hands and other exposed areas with<br>nking or smoking and when leaving work.  |
| Hygiene measures                       | :                   | Do not eat, drink or smoke when usin hygiene and safety practices.   | ng this product. Handle in accordance with good industrial  |
| 7.2. Conditions for safe st            | orage, including a  | ny incompatibilities   |   |
| Technical measures                     | :                   | Provide local exhaust or general room purposes should be present.  | m ventilation. A washing facility for eye and skin cleaning   |
| Storage conditions                     | :                   |  | only in the original container in a cool, well-ventilated place<br>es. Keep container tightly closed and dry. Store away from   |
| Incompatible materials                 | :                   | Strong acids, bases. Oxidizing agents  |   |
| 7.3. Specific end use(s)               |                     |  |   |
| No additional information availabl     | e                   |  |   |
| <b>SECTION 8: Exposure co</b>          | ontrols/persona     | al protection  |   |
| 8.1. Control parameters                |                     |  |   |
| Boric acid, disodium salt, pe          | entahydrate (12179  | )-04-3)  |   |
| USA ACGIH                              | ACGIH TWA (mg       |  | 2 mg/m <sup>3</sup> (inhalable fraction)  |
| USA ACGIH                              | ACGIH STEL (mg      | ŋ/m³)  | 6 mg/m <sup>3</sup> (inhalable fraction)  |
|  |                     |  |   |
| Glutaraldehyde (111-30-8)<br>USA ACGIH | ACGIH Ceiling (p    | pm)  | 0.05 ppm (activated and inactivated)  |
|  |                     | Piii)  |   |
| Formaldehyde (50-00-0)                 |                     |  |   |
| USA ACGIH                              | ACGIH Ceiling (p    | pm)  | 0.3 ppm   |
| USA OSHA                               | OSHA PEL (TWA       | .) (ppm)   | 0.75 ppm  |
| USA OSHA                               | OSHA PEL (STEI      | L) (ppm)   | 2 ppm (see 29 CFR 1910.1048)  |
| Methyl alcohol (67-56-1)               |                     |  |   |
| USA ACGIH                              | ACGIH TWA (ppn      | n)   | 200 ppm   |
| USA ACGIH                              | ACGIH STEL (pp      | m)   | 250 ppm   |
| USA OSHA                               | OSHA PEL (TWA       | ,  | 260 mg/m <sup>3</sup>   |
| USA OSHA                               | OSHA PEL (TWA       | , , ,  | 200 ppm   |
|  |                     |  |   |
| Ethyl formate (109-94-4)<br>USA ACGIH  | ACGIH STEL (pp      | m)   | 100 ppm   |
|  | OSHA PEL (TWA       |  |   |
| USA OSHA                               | ``                  | , , ,  | 300 mg/m <sup>3</sup>   |
| USA OSHA                               | OSHA PEL (TWA       | (ppm)  | 100 ppm   |

## 8.2. Exposure controls

Appropriate engineering controls

: Provide local exhaust or general room ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

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| Chemicals must be chosen as a function of the specific working place concentration and quare<br>of hazardous substances.Eye protection: Contact lenses should not be worn. Chemical goggles and face shields are required to prever<br>potential eye contact, irritation or injury.Skin and body protection: Long sleeved protective clothing. Overall. Rubber apron, boots. safety foot-wear.   |                               |  |
|--|-------------------------------|--|
| Eye protectionContact lenses should not be worn. Chemical goggles and face shields are required to prever<br>potential eye contact, irritation or injury.Skin and body protection: Contact lenses should not be worn. Chemical goggles and face shields are required to prever<br>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 vap<br>respirator. | Personal protective equipment | protection/goggles, face protection. For certain operations, additional Personal Protection  |
| 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 vap respirator.  | 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. |
| Respiratory protection : In case of insufficient ventilation. Wear suitable respiratory equipment. Approved organic vap respirator.  | Eye protection                | : Contact lenses should not be worn. Chemical goggles and face shields are required to prevent potential eye contact, irritation or injury.  |
| respirator.  | Skin and body protection      | : Long sleeved protective clothing. Overall. Rubber apron, boots. safety foot-wear.  |
| Other information : Do not eat, drink or smoke during use.   | Respiratory protection        | : In case of insufficient ventilation. Wear suitable respiratory equipment. Approved organic vapor respirator.   |
|  | Other information             | : Do not eat, drink or smoke during use.   |

| SECTION 9: Physical and chemical properties |                                      |  |  |
|---|--------------------------------------|--|--|
| 9.1. Information on basic physical and cl   | hemical properties                   |  |  |
| Physical state                              | : Liquid                             |  |  |
| Color                                       | : Pink                               |  |  |
| Odor  | : Mild 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                               | : 90.55 °C (195) °F                  |  |  |
| Flash point                                 | : 93.33 °C (200 °F COC)              |  |  |
| 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                                     | : 1.04 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                            | : 6.7 - 72 vol %                     |  |  |
| 9.2. Other information                      |                                      |  |  |
| VOC content                                 | : 31 % Percent Volatiles (with heat) |  |  |

| SECT     | ION 10: Stability and reactivity             |              |      |
|----------|--|--------------|------|
| 10.1.    | Reactivity                                   |              |      |
| No addi  | tional information available                 |              |      |
| 10.2.    | Chemical stability                           |              |      |
| Stable a | at normal conditions.                        |              |      |
| 10.3.    | Possibility of hazardous reactions           |              |      |
| Hazardo  | ous polymerization will not occur.           |              |      |
| 10.4.    | Conditions to avoid                          |              |      |
| Direct s | unlight. Extremely high or low temperatures. |              |      |
| 10.5.    | Incompatible materials                       |              |      |
| Strong a | acids. Strong bases. Oxidizing agents.       |              |      |
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#### 10.6. Hazardous decomposition products

On thermal combustion form: Fume. Carbon monoxide. Carbon dioxide. unburned hydrocarbons. Toxic fumes.

| ECTION 11: Toxicological informatic                  | on   |
|--|--|
| .1. Information on toxicological effects             |  |
| Acute toxicity                                       | : Harmful if swallowed. Toxic in contact with skin. Harmful if inhaled.  |
| Boric acid, disodium salt, pentahydrate (121         |  |
| LD50 oral rat  | 2403 mg/kg   |
| ATE US (oral)  | 2403.0000000 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)  | 252.0000000 mg/kg bodyweight   |
| ATE US (vapors)                                      | 0.1000000 mg/l/4h  |
| ATE US (dust,mist)                                   | 0.1000000 mg/l/4h  |
| Formaldehyde (50-00-0)                               |  |
| LD50 oral rat  | 600 mg/kg  |
| LD50 dermal rabbit                                   | 270 mg/kg  |
| LC50 inhalation rat (mg/l)                           | 0.578 mg/l/4h  |
| ATE US (oral)  | 100.0000000 mg/kg bodyweight   |
| ATE US (dermal)                                      | 270.0000000 mg/kg bodyweight   |
| ATE US (gases)                                       | 700.0000000 ppmv/4h  |
| ATE US (vapors)                                      | 0.57800000 mg/l/4h   |
| ATE US (dust,mist)                                   | 0.57800000 mg/l/4h   |
| · · · · ·  |  |
| Methyl alcohol (67-56-1)                             |  |
| LC50 inhalation rat (ppm)                            | 22500 ppm (Exposure time: 8 h)   |
| ATE US (oral)  | 100.0000000 mg/kg bodyweight   |
| ATE US (dermal)                                      | 300.0000000 mg/kg bodyweight   |
| ATE US (vapors)                                      | 3.0000000 mg/l/4h  |
| Ethyl formate (109-94-4)                             |  |
| LD50 oral rat  | 1850 mg/kg   |
| LD50 dermal rabbit                                   | > 5000 mg/kg   |
| ATE US (oral)  | 1850.0000000 mg/kg bodyweight  |
| ATE US (gases)                                       | 4500.0000000 ppmv/4h   |
| ATE US (vapors)                                      | 11.00000000 mg/l/4h  |
| ATE US (dust,mist)                                   | 1.5000000 mg/l/4h  |
| Skin corrosion/irritation                            | : Causes skin irritation.  |
|  |  |
| 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 aller skin reaction. |
| Germ cell mutagenicity                               | : Not classified   |
|  | Based on available data, the classification criteria are not met.  |
| Poroino gonicity                                     |  |
| Carcinogenicity                                      | : May cause cancer.  |
| Formaldehyde (50-00-0)                               |  |
| IARC group   | 1 - Carcinogenic to humans   |
| National Toxicity Program (NTP) Status               | 2 - Known Human Carcinogens  |
| Reproductive toxicity                                | : Not classified   |
|  | Based on available data, the classification criteria are not met.  |
| Specific target organ toxicity (cingle overcure)     |  |
| Specific target organ toxicity (single exposure)     | : Causes damage to organs.   |
| Sho officiation and a second statistic for a statist | . Not allocation   |
| Specific target organ toxicity (repeated             | : Not classified   |
| exposure)  | Based on available data, the classification criteria are not met.  |
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**SECTION 12: Ecological information** 

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| Aspiration hazard                    | : Not classified  |
|--------------------------------------|---|
|                                      | Based on available data, the classification criteria are not met.   |
| Symptoms/injuries after inhalation   | : Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Inhalation of concentrated vapors may cause serious damage to the lining of the nose, throat, and lungs. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination. Difficulty in breathing. Danger of serious damage to health by prolonged exposure through inhalation. May cause cancer by inhalation. Causes damage to liver through prolonged or repeated exposure if inhaled. |
| Symptoms/injuries after skin contact | : Toxic in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. May cause an allergic skin reaction. Causes skin irritation. Redness. Dermatitis.   |
| Symptoms/injuries after eye contact  | : Causes serious eye damage. Can cause blindness.   |
| Symptoms/injuries after ingestion    | : Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Ingestion may cause nausea and vomiting. Can cause blindness. Death in extreme cases.  |

| 12.1. Toxicity                      |  |
|-------------------------------------|--|
| 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])  |
| Formaldehyde (50-00-0)              |  |
| LC50 fishes 1                       | 22.6 - 25.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])   |
| EC50 Daphnia 1                      | 2 mg/l (Exposure time: 48 h - Species: Daphnia magna)  |
| LC50 fish 2                         | 1510 μg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])  |
| EC50 Daphnia 2                      | 11.3 - 18 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])   |
| 12.2. Persistence and degradability |  |
| PLX                                 |  |
| Persistence and degradability       | Not established.   |
| 12.3. Bioaccumulative potential     |  |
| PLX                                 |  |
| Bioaccumulative potential           | Not established.   |
| Glutaraldehyde (111-30-8)           |  |
| Log Pow                             | 0.22 (at 25 °C)  |
| Formaldehyde (50-00-0)              |  |
| Log Pow                             | 0.35 (at 25 °C)  |
| Ethyl formate (109-94-4)            |  |
| BCF fish 1                          | (will not bioconcentrate)  |
| 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 consideration  | nns  |
| 13.1. Waste treatment methods       |  |
| Waste disposal recommendations      | : Dispose in a safe manner in accordance with local and national regulations. Incinerate, dispose i<br>sanitary landfill - if permitted. Ensure all national and local regulations are observed. |
| Additional information              | : Do not re-use empty containers. Do not pressurize, cut, weld, braze, solder, drill, grind, or expos containers to flames, sparks, heat, or other potential ignition sources.                   |
| Ecology - waste materials           | : Avoid release to the environment.  |

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| SECTION 14: Transport information                                |   |
|--|---|
| In accordance with DOT   |   |
| Transport document description                                   | : UN2922, Corrosive liquids, toxic, n.o.s. (Formaldehyde, Methanol), 8, PGIII, ltd.qty.   |
| Hazard labels (DOT)  | : 8 - Corrosive<br>6.1 - Poison inhalation hazard   |
|  |   |
| Packing group (DOT)  | : III - Minor Danger  |
| DOT Packaging Exceptions (49 CFR 173.xxx)                        | : 154   |
| 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) | : 5L  |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)     | : 60 L  |
| DOT Vessel Stowage Location                                      | : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded. |
| 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  |   |
| / an a datop of t  |   |

No additional information available

| SECTION 15: Regulatory information  |              |        |  |
|---|--------------|--------|--|
| 5.1. US Federal regulations   |              |        |  |
| PLX   |              |        |  |
| RQ (Reportable quantity, section 304 of EPA's Li  | st of Lists) | 764 lb |  |
| Formaldehyde (50-00-0)  |              |        |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory<br>Listed on the United States SARA Section 302<br>Listed on United States SARA Section 313 |              |        |  |
| RQ (Reportable quantity, section 304 of EPA's List of Lists)  | 100 lb       |        |  |
| SARA Section 302 Threshold Planning<br>Quantity (TPQ)   | 500          |        |  |
| SARA Section 313 - Emission Reporting   | 0.1 %        |        |  |
| 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 %        |        |  |

## 15.2. International regulations

## CANADA

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

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| Formaldehyde (50-00-0) Listed on the Canadian DSL (Domestic Sustances List) |  |                      |
|---|--|----------------------|
|   |  | WHMIS Classification |
| Ethyl formate (109-94-4)  |  |                      |
| Listed on the Canadian DSL (Domestic Sustances List)                        |  |                      |
| WHMIS Classification  | Class B Division 2 - Flammable Liquid<br>Class D Division 2 Subdivision B - Toxic material causing other toxic effects |                      |

### **EU-Regulations**

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| Formaldenyde (50-00-0) |  |
|------------------------|--|
|                        | 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

### Formaldehyde (50-00-0)

Listed on IARC (International Agency for Research on Cancer)

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 as carcinogen on NTP (National Toxicology Program)

Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

| Formaldehyde (50-00-0)                                   |  |   |   |                                      |
|--|--|---|---|--------------------------------------|
| U.S California -<br>Proposition 65 -<br>Carcinogens List | U.S California -<br>Proposition 65 -<br>Developmental Toxicity | U.S California -<br>Proposition 65 -<br>Reproductive Toxicity -<br>Female | U.S California -<br>Proposition 65 -<br>Reproductive Toxicity -<br>Male | No significance risk level<br>(NSRL) |
| Yes  |  |   |   |                                      |
| Methyl alcohol (67-56-1)                                 |  |   |   |                                      |
| U.S California -<br>Proposition 65 -<br>Carcinogens List | U.S California -<br>Proposition 65 -<br>Developmental Toxicity | U.S California -<br>Proposition 65 -<br>Reproductive Toxicity -<br>Female | U.S California -<br>Proposition 65 -<br>Reproductive Toxicity -<br>Male | No significance risk level<br>(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           |

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| 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   |
| Asp. Tox. 1                         | Aspiration hazard, Category 1   |
| Carc. 1A                            | Carcinogenicity, Category 1A  |
| 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. 4                        | Flammable liquids Category 4  |
| Repr. 1B                            | Reproductive toxicity Category 1B   |
| 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  |
| STOT SE 1                           | Specific target organ toxicity (single exposure) Category 1               |
| STOT SE 3                           | Specific target organ toxicity (single exposure) Category 3               |
| H225                                | Highly flammable liquid and vapor   |
| H227                                | Combustible liquid  |
| H301                                | Toxic if swallowed  |
| H302                                | Harmful if swallowed  |
| H304                                | May be fatal if swallowed and enters airways                              |
| 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  |
| H350                                | May cause cancer  |
| H360                                | May damage fertility or the unborn child                                  |
| H370                                | Causes damage to organs   |
|                                     |   |

## **HMIS III Rating**

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

- : 2 Moderate Hazard
- : 0 Minimal Hazard

SDS US (GHS HazCom 2012)

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