



# Safety Data Sheet

## Section 1: Identification

### 1.1. Product Identifier

**Trade Name or Designation:** Kleenflow Acidic

**Product Numbers:** A001251, 1L

### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

### 1.3. Details of the Supplier of the Safety Data Sheet

**Company:** EZkem Corp

**Address:** 1045 Cannon Drive  
Hood River, OR  
97031

**Telephone:** 541-387-0343

### 1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300  
CHEMTREC (International) 1+ 703-527-3887

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## Section 2: Hazard(s) Identification

### 2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

| Hazard Class   | Category   | Hazard    |   |
|--|------------|-----------|---|
|  |            | Statement | Precautionary Statements  |
| Acute Toxicity - Inhalation  | Category 4 | H332      | P261, P271, P304+P340, P312   |
| Skin Corrosion / Irritation  | Category 1 | H314      | P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501 |
| Eye Damage / Irritation  | Category 1 | H318      | P280, P305+P351+P338, P310  |
| Respiratory Sensitizer   | Category 1 | H334      | P261, P285, P304+P341, P342+P311, P501  |
| Germ Cell Mutagenicity   | Category 1 | H340      | P201, P202, P280, P308+P313, P405, P501   |
| Reproductive Toxicity  | Category 1 | H360      | P201, P202, P280, P308+P313, P405, P501   |
| Specific Target Organs/Systemic Toxicity Following Single Exposure   | Category 1 | H370      | P260, P264, P270, P307+P311, P321, P405, P501   |
| Specific Target Organs/Systemic Toxicity Following Repeated Exposure | Category 1 | H372      | P260, P264, P270, P314, P501  |
| Corrosive to Metals  | Category 1 | H290      | P234, P390, P406  |
| Hazardous to the Aquatic Environment (Acute)                         | Category 2 | H401      | P273, P501  |

### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**



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## Hazard Statements:

| Hazard Number | Hazard Statement   |
|---------------|--|
| H290          | May be corrosive to metals.  |
| H314          | Causes severe skin burns and eye damage.                                   |
| H318          | Causes serious eye damage.   |
| H332          | Harmful if inhaled.  |
| H334          | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H340          | May cause genetic defects.   |
| H360          | May damage fertility or the unborn child.                                  |
| H370          | Causes damage to organs.   |
| H372          | Causes damage to organs through prolonged or repeated exposure.            |
| H401          | Toxic to aquatic life.   |



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## Precautionary Statements:

| Precautionary Number | Precautionary Statement  |
|----------------------|--|
| P201                 | Obtain special instructions before use.  |
| P202                 | Do not handle until all safety precautions have been read and understood.  |
| P234                 | Keep only in original container.   |
| P260                 | Do not breathe dust, fumes or mist.  |
| P261                 | Avoid breathing dust, fumes or mist.   |
| P264                 | Wash arms, hands and face thoroughly after handling.   |
| P270                 | Do not eat, drink or smoke when using this product.  |
| P271                 | Use only outdoors or in a well-ventilated area.  |
| P273                 | Avoid release to the environment.  |
| P280                 | Wear protective gloves and eye protection.   |
| P285                 | In case of inadequate ventilation wear respiratory protection.   |
| P301+P330+P331       | IF SWALLOWED: rinse mouth. Do NOT induce vomiting.   |
| 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.   |
| P304+P341            | IF INHALED: If breathing is difficult, 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 POISON CENTER or physician.   |
| P308+P313            | IF exposed or concerned: Get medical attention.  |
| P310                 | Immediately call a POISON CENTER or physician.   |
| P312                 | Call a POISON CENTER or physician if you feel unwell.  |
| P314                 | Get medical attention if you feel unwell.  |
| P321                 | Specific treatment (Wash areas of contact with water).   |
| P342+P311            | If experiencing respiratory symptoms: Call a POISON CENTER or physician.   |
| P363                 | Wash contaminated clothing before reuse.   |
| P390                 | Absorb spillage to prevent material damage.  |
| P405                 | Store locked up.   |
| P406                 | Store in corrosive resistant container with a resistant inner liner.   |
| P501                 | Dispose of contents in accordance with local, state, federal and international regulations.                                      |

## 2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

## 2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.





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## Section 3: Composition/ Information on Ingredients

### 3.1. Components of Substance or Mixture

| Chemical Name              | Formula   | Molecular Weight | CAS Number | Weight% |
|----------------------------|---|------------------|------------|---------|
| Water                      | H <sub>2</sub> O  | 18.01 g/mol      | 7732-18-5  | 91.77%  |
| Ethyl Alcohol              | CH <sub>3</sub> CH <sub>2</sub> OH                                | 46.06 g/mol      | 64-17-5    | 4.43%   |
| Hydrochloric Acid          | HCl   | 36.46 g/mol      | 7647-01-0  | 3.56%   |
| Methyl Alcohol             | CH <sub>3</sub> OH  | 32.04 g/mol      | 67-56-1    | 0.22%   |
| Methyl Orange, Sodium Salt | C <sub>14</sub> H <sub>14</sub> N <sub>3</sub> NaO <sub>3</sub> S | 327.33 g/mol     | 547-58-0   | 0.01%   |

## Section 4: First-Aid Measures

### 4.1. General First Aid Information

**Eye Contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Inhalation:** IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

**Skin Contact:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

**Ingestion:** IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

### 4.2. Most Important Symptoms and Effects, Acute and Delayed

May cause mild irritation to areas of contact.

### 4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water).

## Section 5: Fire-Fighting Measures

### 5.1. Extinguishing Media

Not considered to be a fire or explosion hazard.

### 5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

### 5.3. Special Protective Equipment for Firefighters

Wear protective clothing and NIOSH-approved breathing equipment appropriate for the surrounding fire.

## Section 6: Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.



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## 6.2. Cleanup and Containment Methods and Materials

Absorb with suitable material and dispose of in accordance with local regulations.

## Section 7: Handling and Storage

### 7.1. Precautions for Safe Handling and Storage Conditions

Store in corrosive resistant container with a resistant inner liner.

## Section 8: Exposure Controls/ Personal Protection

### 8.1. Control Parameters

| Chemical Name                 | Limit Type  | Country | Exposure Limit                               | Information Source   |
|-------------------------------|-------------|---------|--|--|
| Ethyl Alcohol (64-17-5)       | TWA         | USA     | 1000 ppm TWA<br>1900 mg/m <sup>3</sup> TWA   | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Ethyl Alcohol (64-17-5)       | TLV-STEL    | USA     | 1000 ppm STEL                                | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Hydrochloric Acid (7647-01-0) | TLV-Ceiling | USA     | 2 ppm Ceiling                                | ACGIH - Threshold Limit Values - Ceilings (TLV-C)                      |
| Hydrochloric Acid (7647-01-0) | PEL-Ceiling | USA     | 5 ppm Ceiling<br>7 mg/m <sup>3</sup> Ceiling | U.S. - OSHA - Final PELs - Ceiling Limits                              |
| Methyl Alcohol (67-56-1)      | TWA         | USA     | 200 ppm TWA<br>260 mg/m <sup>3</sup> TWA     | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Methyl Alcohol (67-56-1)      | TLV-STEL    | USA     | 250 ppm STEL                                 | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Methyl Alcohol (67-56-1)      | TLV-TWA     | USA     | 200 ppm TWA                                  | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |

### 8.2. Exposure Controls

**Engineering Controls:** Use only outdoors or in a well-ventilated area.

**Respiratory Protection:** In case of inadequate ventilation wear respiratory protection.

**Skin Protection:** Wear protective gloves and eye protection.

**Eye Protection:** Wear protective gloves and eye protection.

### 8.3. Personal Protective Equipment

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.





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## Section 9: Physical and Chemical Properties

### 9.1. Basic Physical and Chemical Properties

**Appearance:** Dark pink-red liquid

**Physical State:** Liquid

**Odor:** Data not available.

**Odor Threshold:** Data not available.

**pH:** Data not available.

**Melting/Freezing Point:** Approximately 0°C

**Initial Boiling Point /Range:** Approximately 100°C - Approximately 100°C

**Flash Point:** Data not available.

**Evaporation Rate:** Data not available.

**Flammability:** Data not available.

**Flammability/Explosive Limits:** Data not available.

**Vapor Pressure:** Data not available.

**Vapor Density:** Data not available.

**Relative Density:** 1.02

**Solubility:** Miscible

**Partition Coefficient (n-Octanol/Water):** Data not available.

**Auto-Ignition Temperature:** Data not available.

**Decomposition Temperature:** Data not available.

**Viscosity:** Data not available.

**Explosive Properties:** Data not available.

**Oxidizing Properties:** Data not available.

## Section 10: Stability and Reactivity

### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

### 10.2. Possibility of Hazardous Reactions

Data not available.

### 10.3. Conditions to Avoid and Incompatible Materials

Keep only in original container.

### 10.4. Hazardous Decomposition Products

May emit irritating fumes when heated to decomposition.



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## Section 11: Toxicological Information

### 11.1. Information on Toxicological Effects

#### Acute Toxicity - Oral Exposure:

Not applicable.

#### Acute Toxicity - Dermal Exposure:

Not applicable.

#### Acute Toxicity - Inhalation Exposure:

Harmful if inhaled. Avoid breathing dust, fumes or mist. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

#### Acute Toxicity - Other Information:

Data not available.

#### Skin Corrosion and Irritation:

Causes severe skin burns and eye damage. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

#### Serious Eye Damage and Irritation:

Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

#### Respiratory Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing dust, fumes or mist. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

#### Skin Sensitization:

Not applicable.

#### Germ Cell Mutagenicity:

May cause genetic defects. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

#### Carcinogenicity:

Not applicable.





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## **Reproductive Toxicity:**

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

## **Specific Target Organ Toxicity from Single Exposure:**

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

## **Specific Target Organ Toxicity from Repeated Exposure:**

Causes damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

## **Aspiration Hazard:**

Not applicable.

## **Additional Toxicology Information:**

Data not available.

## Section 12: Ecological Information

### **12.1. Ecotoxicity**

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

### **12.2. Persistence and Degradability**

Data not available.

### **12.3. Bioaccumulative Potential**

Data not available.

### **12.4. Mobility in Soil**

Data not available.

### **12.5. Other Adverse Ecological Effects**

Data not available.

## Section 13: Disposal Considerations

### **13.1. Waste Treatment Methods**

Data not available.



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## Section 14: Transportation Information

### 14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

**UN Number:** UN3264

**Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, n.o.s., (Hydrochloric Acid)

**Hazard Class:** 8

**Packing Group:** III

**Hazard Placard Labels:**



### 14.2. Transportation by Air - International Air Transport Association (IATA)

**UN Number:** UN3264

**Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, n.o.s., (Hydrochloric Acid)

**Hazard Class:** 8

**Packing Group:** III

**Hazard Placard Labels:**



## Section 15: Regulatory Information

### 15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

### 15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Hydrochloric Acid (CAS # 7647-01-0): 500 lb TPQ (gas only)

Hydrochloric Acid (CAS # 7647-01-0): 5000 lb EPCRA RQ (gas only)

### 15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Methyl Alcohol (CAS # 67-56-1): 5000 lb final RQ; 2270 kg final RQ

Hydrochloric Acid (CAS # 7647-01-0): 5000 lb final RQ; 2270 kg final RQ

### 15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Methyl Alcohol (CAS # 67-56-1): 1.0 % de minimis concentration

Hydrochloric Acid (CAS # 7647-01-0): 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)



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## 15.5. Massachusetts Right-to-Know Substance List

Ethyl Alcohol (CAS # 64-17-5): Teratogen  
Methyl Alcohol (CAS # 67-56-1): Present  
Hydrochloric Acid (CAS # 7647-01-0): Extraordinarily hazardous

## 15.6. Pennsylvania Right-to-Know Hazardous Substances

Ethyl Alcohol (CAS # 64-17-5): Present  
Methyl Alcohol (CAS # 67-56-1): Environmental hazard  
Methyl Alcohol (CAS # 67-56-1): Present  
Hydrochloric Acid (CAS # 7647-01-0): Environmental hazard  
Hydrochloric Acid (CAS # 7647-01-0): Present  
Water (CAS # 7732-18-5): Present

## 15.7. New Jersey Worker and Community Right-to-Know Components

Ethyl Alcohol (CAS # 64-17-5): carcinogen; flammable - third degree; mutagen; teratogen  
Ethyl Alcohol (CAS # 64-17-5): sn 0844  
Methyl Alcohol (CAS # 67-56-1): flammable - third degree; teratogen  
Methyl Alcohol (CAS # 67-56-1): sn 1222  
Methyl Alcohol (CAS # 67-56-1): SN 1222 TPQ: 500 lb  
Hydrochloric Acid (CAS # 7647-01-0): corrosive  
Hydrochloric Acid (CAS # 7647-01-0): sn 1012  
Hydrochloric Acid (CAS # 7647-01-0): SN 1012 TPQ: 500 lb ( $\geq 37\%$  concentration); SN 2909 TPQ: 500 lb (Hydrogen chloride gas only. NJ uses UN1050 for reporting purposes)

## 15.8. California Proposition 65

Ethyl Alcohol (CAS # 64-17-5): carcinogen, initial date 4/29/11 (in alcoholic beverages)  
Ethyl Alcohol (CAS # 64-17-5): carcinogen, initial date 7/1/88 (when associated with alcohol abuse)  
Ethyl Alcohol (CAS # 64-17-5): developmental toxicity, initial date 10/1/87 (in alcoholic beverages)  
Methyl Alcohol (CAS # 67-56-1): developmental toxicity, initial date 3/16/12

## 15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Methyl Orange, Sodium Salt (CAS # 547-58-0): Present  
Ethyl Alcohol (CAS # 64-17-5): Present  
Methyl Alcohol (CAS # 67-56-1): Present  
Hydrochloric Acid (CAS # 7647-01-0): Present  
Water (CAS # 7732-18-5): Present

## 15.10. United States of America Toxic Substances Control Act (TSCA) List

Methyl Orange, Sodium Salt (CAS # 547-58-0): Present  
Ethyl Alcohol (CAS # 64-17-5): Present  
Methyl Alcohol (CAS # 67-56-1): Present  
Hydrochloric Acid (CAS # 7647-01-0): Present [T]  
Water (CAS # 7732-18-5): Present





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## 15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Not listed.

## Section 16: Other Information

### 16.1. Full Text of Hazard Statements and Precautionary Statements

May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep only in original container. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water). If experiencing respiratory symptoms: Call a POISON CENTER or physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Store locked up. Store in corrosive resistant container with a resistant inner liner.

Dispose of contents in accordance with local, state, federal and international regulations.

### 16.2. Miscellaneous Hazard Classes

**Canadian Carcinogenicity Hazard Class:** Not Applicable.

**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

**Health Hazards Not Otherwise Classified (HHNOC):** Not Applicable.

Not Applicable.



### 16.3. National Fire Protection Association (NFPA) Rating

Health: 2  
Flammability: 0  
Reactivity: 0  
Special Hazard:



### 16.4. Document Revision

Last Revision Date: 02/28/19

## DISCLAIMER:

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and EZkem assumes no legal responsibility or liability whatsoever resulting from its use.