


Material Safety Data Sheet

| Section 1. Chemical Product and Company Identification | | |
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| Product Name: | Acetic Acid | Version: 5 Effective Date: June 20, 2014 |
| Supplier/ Manufacturer: | Chemfax Products Ltd. 11444 – 42 Street SE Calgary, AB T2C 5C4 Tel: 403-287-2055 | |
| Material Uses | Industrial acid, reactant, chemical intermediate | |
| 24 Hour Emergency | Canutec (613) 996-6666 | |
| WHMIS | | |
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| This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR | | |
| HMIS Ratings for this product are: Health 3 , Flammability 2 , Reactivity 0 | | |

| Section 2. Composition and Information on Ingredients | | |
|-----------------------------------------------------------------------------------------|---------|-------------|
| Name | CAS# | % by weight |
| Acetic acid | 64-19-7 | 96 - 100 |
| See Section 8 for information on permissible exposure limits and threshold limit values | | |

| Section 3. Hazards Identification | |
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| Physical State and Appearance | Clear, colourless, viscous liquid with strong acid vinegar odour |
| Hazard Summary | Corrosive |
| Routes of Exposure | Skin contact and absorption, eye contact, inhalation and ingestion |
| Potential Acute Health Effects | Skin: Corrosive. Causes burns. Harmful if absorbed through the skin. Skin may show redness, discolouration, swelling, itching, burning or blistering. Prolonged or repeated contact may cause sensitisation. |

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| | <p>Eyes: Corrosive. Causes severe eye burns. May cause permanent damage to the eyes. Symptoms may include: irritation, burning, pain, watering and or change of vision.</p> <p>Inhalation: Symptoms of exposure may include: nasal discharge, hoarseness, coughing, chest pain and breathing difficulty, general irritation of the respiratory tract. Accumulation of fluid in the lungs may occur (Pulmonary oedema)</p> <p>Ingestion: Corrosive. Causes digestive tract burns. Symptoms may include: inflammation of the mouth, throat, esophagus and /or stomach. Nausea, vomiting, loss of appetite, gastrointestinal irritation and / or diarrhea.</p> |
| Medical Conditions Aggravated by Exposure | Fumes and vapours may affect persons with conditions such as asthma |
| See Toxicological Information – Section 11 | |
| Additional Hazard Identification Remarks | None |

| Section 4. First Aid Measures | |
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| Eye Contact | Flush eyes with water for 15 minutes. Seek medical attention. |
| Skin Contact | Flush area with water. If irritation persists seek medical attention. Launder clothing before reuse. |
| Inhalation | Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention. |
| Ingestion | Give two glasses of water. Do not induce vomiting. Lay victim on left side to prevent aspiration of any vomit. Seek immediate medical attention. |
| Notes to Physician | Treatment should be based on sound judgment of the physician and reactions of the patient. Observe for pulmonary oedema. |
| Additional First Aid Remarks | None |

| Section 5. Fire Fighting Measures | |
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| Flammability of the Product | Combustible liquid |
| Flash Point | 39 °C |
| Explosive Limits | LEL: 4% UEL: 16 % |
| Auto Ignition Temperature | 516 °C |
| Static Discharge | Yes |
| Suitable Extinguishing Media | Dry chemical, CO ₂ , alcohol foam or water spray |

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| Hazardous Combustion Products | Toxic fumes, carbon monoxide, carbon dioxide |
| Precautions for Fire Fighting | Fire fighters should wear self contained breathing apparatus and full protective clothing. Use water spray to cool containers and structures exposed to fire. |

| Section 6. Accidental Release Measures | |
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| Personal Precautions | Chemical resistant gloves (neoprene), coveralls (rubber) and boots rubber |
| Environmental Precautions | Areas downwind of a spill may be exposed to toxic fumes and vapours. Isolate area. Do not allow to enter surface drains and watercourses. |
| Methods for Clean Up | Remove all sources of ignition. Isolate area. If fire potential exists, blanket spill with alcohol type aqueous film-forming foam or use water fog stream to disperse vapours. Neutralise with sodium carbonate or crushed limestone. Absorb with an inert dry material and place in an appropriate container for waste disposal. Flush area with water to remove trace residues. |

| Section 7. Handling and Storage | |
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| Handling | Corrosive and combustible liquid. Use in a well ventilated area. Avoid breathing vapours. Empty containers may contain hazardous residues. Equipment should be grounded to prevent static discharge. |
| Storage | Store in a cool, dry, well ventilated area away from all sources of ignition. Product segregation should be in place. Keep containers closed when not in use. Store out of direct sunlight and on an impermeable floor. |

| Section 8. Exposure Controls and Personal Protection | | | | |
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| Exposure Guidelines | TWA: 8 Hr | STEL: 15 min | Ceiling | IDLH * |
| Acetic acid | 10 ppm OSHA | 15 ppm | | 50 ppm |
| * Immediately Dangerous to Life and Health | | | | |
| Exposure Controls | Local exhaust ventilation | | | |
| Personal Protection | | | | |
| Respiratory | Air purifying respirator fitted with acid vapour cartridges must be worn if exposure limits are exceeded | | | |
| Skin | Chemical resistant gloves (neoprene), coveralls (rubber) and boots (rubber) | | | |
| Eyes | Safety glasses | | | |
| Other | Safety showers and eyewash stations should be available | | | |

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| Section 9. Physical and Chemical Properties | |
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| Physical State and Appearance | Clear, colourless, viscous liquid with strong acrid vinegar odour |
| Odour Threshold | No data |
| pH | 2.4 for a 1 % solution |
| Boiling Point | 118 °C |
| Melting Point / Freezing point | 16.6 °C |
| Evaporation Rate | 0.97 |
| Vapour Density | 2.1 |
| Vapour Pressure | 11 mmHg @ 20 °C |
| Specific Gravity | 1.0492 – 1.0498 @ 20 °C |
| Solubility in Water | Completely soluble |
| % Volatile | No data |
| Other Data | None |

| Section 10. Stability and Reactivity | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical Stability | Stable |
| Hazardous Polymerisation | Will not occur |
| Conditions to Avoid | Excessive heat, open flames and all sources of ignition |
| Materials to Avoid | Strong oxidising agents. Strong alkalis. Common metals and their alloys. Aldehydes. Ammonium nitrate. Sodium peroxide. Carbonates. Hydroxides. Oxides. Phosphates. Perchloric acid |
| Hazardous Decomposition Products | Oxides of carbon. Irritating vapours. Toxic fumes |

| Section 11. Toxicological Information | |
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| Principle Routes of Exposure | |
| Skin: | Corrosive. Causes burns. Harmful if absorbed through the skin. Skin may show redness, discolouration, swelling, itching, burning or blistering. Prolonged or repeated contact may cause sensitisation. |
| Eyes: | Corrosive. Causes severe eye burns. May cause permanent damage to the eyes. Symptoms may include: irritation, burning, pain, watering and or change of vision. |
| Inhalation: | Symptoms of exposure may include: nasal discharge, hoarseness, coughing, chest pain and breathing difficulty, general irritation of the respiratory tract. Accumulation of fluid in the lungs may occur (Pulmonary oedema) |
| Ingestion: | Corrosive. Causes digestive tract burns. Symptoms may include: inflammation of the mouth, throat, esophagus and /or stomach. Nausea, vomiting, loss of appetite, gastrointestinal irritation and / or diarrhea. |
| Additional Information | |

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| Acute Toxicity | |
| Acetic acid | LD50: 3310 mg/kg (Rat, oral) LD50: 1060 mg/kg (Rabbit, dermal) LC50: 11.4 mg/L (Rat, inhalation) |
| Chronic Toxic Effects – None known | |
| Carcinogenicity – Not listed | |
| Reproductive Toxicity / Teratogenicity / Embryotoxicity / Mutagenicity – Mixed results in vitro. The positive results are thought to be a result of acidification of the culture media. | |

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| Section 12. Ecological Information | |
| Ecotoxicity | Acetic acid: LC50: 79 mg/l (Pimephales promelas) LC50: 75 mg/l (Lepomis macrochirus) |
| BOD and COD | BOD: 5 day = 63 – 81 % |
| Biodegradability / OECD | Readily biodegradable in water and air |
| Toxicity of the Products of Biodegradation | No data |
| Special Remarks | Has a low potential to bioaccumulate |

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| Section 13. Disposal Considerations | |
| Dispose of in accordance with local, provincial and federal regulations | |

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| Section 14. Transport Information | |
| TDG Classification | Acetic acid glacial: Class 8 (3), UN 2789, Packing Group II |
| Emergency Response Guide # | ERG # 132 |
| Marine Pollutant | No |
| Special Precautions | None |

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| Section 15. Regulatory Information | |
| Canada – DSL Inventory | All components of this product are either on the Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL) or exempt |
| TSCA | All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt |
| WHMIS Hazard Class | B3 E |
| Additional Information | None |

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Section 16. Other Information**Prepared by:**

Chemfax Products Ltd., Technical Department

Date Prepared: 22 June, 2011**Revision Date:** 20 June, 2014**Disclaimer**

Notice to reader

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