

Revision Date 2007-01-15

Version 1

1. IDENTIFICATION

| | |
|----------------------------|---|
| Product Name | 01-2-1000 @ 100 |
| Product Code | 01-2-1000 1000 1000 |
| Recommended Use | For laboratory, scientific, R&D or manufacturing use. |
| Company | 01-2-1000 @ 100, Inc. 116 Page Point Circle 01-2-1000, 1000 1000 Tel. (811) 111-1111 |
| Emergency Telephone | Call CHEMTREC 1-800-424-9300 |

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|------------|
| Acute toxicity - Oral | Category 4 |
| Acute toxicity - Dermal | Category 4 |
| Specific target organ toxicity (single exposure) | Category 1 |
| Flammable liquids | Category 2 |

Label elements

Signal word

Danger

Hazard statements

 Harmful if swallowed. Harmful in contact with skin. Causes damage to organs.
 Highly flammable liquid and vapor.


Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting/equipment.

Precautionary Statements - Response

IF exposed: Call a POISON CENTER or doctor/physician.

Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse. IF ON SKIN (or hair):

Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

In case of fire: Use CO₂, dry chemical, or foam for extinction.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight-% |
|-------------------|-----------|----------|
| Ethyl alcohol | 64-17-5 | <75 |
| Water | 7732-18-5 | <25 |
| Methyl alcohol | 67-56-1 | <5 |
| Isopropyl alcohol | 67-63-0 | <5 |
| Acetic acid | 64-19-7 | <5 |

4. FIRST AID MEASURES

Description of first aid measures

Eye contact

Immediately flush with plenty of water for at least 15 minutes, separating eyelids occasionally. Remove contact lenses if present. Get immediate medical attention.

Skin contact

Wash skin with soap and water.

Inhalation

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion

Do NOT induce vomiting unless instructed to do so by medical personnel. If conscious, rinse mouth and give several glasses of water to drink. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms

No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Specific hazards arising from the chemical

No information available.

Protective equipment and precautions for firefighters

Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

NFPA

Health hazards 2

Flammability 3

Instability 0

Physical and Chemical
Properties -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational exposure limits**

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|------------------------------|---------------------------------------|--|---|
| Ethyl alcohol 64-17-5 | STEL: 1000 ppm | TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³ | IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³ |
| Methyl alcohol 67-56-1 | STEL: 250 ppm TWA: 200 ppm Skin | TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) Skin | IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ |
| Isopropyl alcohol 67-63-0 | STEL: 400 ppm TWA: 200 ppm | TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³ | IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³ |
| Acetic acid 64-19-7 | STEL: 15 ppm TWA: 10 ppm | TWA: 10 ppm TWA: 25 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m ³ | IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³ |

Appropriate engineering controls

Engineering Controls Emergency showers, eyewash stations, ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|---------------------------------------|--------------------------|
| Physical state | Liquid |
| Appearance | Red liquid |
| Odor | No information available |
| Odor threshold | No information available |
| pH | No information available |
| Melting point / freezing point | No information available |
| Boiling point / boiling range | No information available |
| Flash point | ~20 C |
| Evaporation rate | No information available |
| Flammability (solid, gas) | No information available |
| Flammability Limit in Air | |
| Upper flammability limit: | No information available |
| Lower flammability limit: | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Relative density | No information available |
| Water solubility | Miscible with water |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Kinematic viscosity | No information available |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Stability | Stable under recommended storage conditions. |
| Possibility of Hazardous Reactions | None under normal processing. |
| Conditions to avoid | Extremes of temperature and direct sunlight. |
| Incompatible materials | None known based on information supplied. |
| Hazardous Decomposition Products | None known based on information supplied. |

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

| | |
|---------------------|--------------------|
| Inhalation | No data available. |
| Eye contact | No data available. |
| Skin contact | No data available. |
| Ingestion | No data available. |

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|------------------------------|----------------------|---|---|
| Ethyl alcohol 64-17-5 | = 7060 mg/kg (Rat) | - | = 124.7 mg/L (Rat) 4 h |
| Water 7732-18-5 | > 90 mL/kg (Rat) | - | - |
| Methyl alcohol 67-56-1 | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) = 15840 mg/kg (Rabbit) | = 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h |
| Isopropyl alcohol 67-63-0 | = 1870 mg/kg (Rat) | = 4059 mg/kg (Rabbit) | = 72600 mg/m ³ (Rat) 4 h |
| Acetic acid | = 3310 mg/kg (Rat) | = 1060 mg/kg (Rabbit) | = 11.4 mg/L (Rat) 4 h |

| | | | |
|---------|--|--|--|
| 64-19-7 | | | |
|---------|--|--|--|

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|-------------------------------|---|
| Sensitization | No information available. |
| Germ cell mutagenicity | No information available. |
| Carcinogenicity | This chemical does not contain any carcinogens or potential carcinogens as listed by ACGIH, OSHA, IARC or NTP |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|------------------------------|---|--|---|
| Ethyl alcohol 64-17-5 | - | 100: 96 h Pimephales promelas mg/L LC50 static 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through | 10800: 24 h Daphnia magna mg/L EC50 9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static |
| Methyl alcohol 67-56-1 | - | 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through | - |
| Isopropyl alcohol 67-63-0 | 1000: 72 h Desmodemus subspicatus mg/L EC50 1000: 96 h Desmodemus subspicatus mg/L EC50 | 11130: 96 h Pimephales promelas mg/L LC50 static 9640: 96 h Pimephales promelas mg/L LC50 flow-through 1400000: 96 h Lepomis macrochirus µg/L LC50 | 13299: 48 h Daphnia magna mg/L EC50 |
| Acetic acid 64-19-7 | - | 79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static | 65: 48 h Daphnia magna mg/L EC50 Static 47: 24 h Daphnia magna mg/L EC50 |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

| Chemical Name | Partition coefficient |
|------------------------------|-----------------------|
| Ethyl alcohol 64-17-5 | -0.32 |
| Methyl alcohol 67-56-1 | -0.77 |
| Isopropyl alcohol 67-63-0 | 0.05 |
| Acetic acid 64-19-7 | -0.31 |

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---------------------------|------|-----------------------------------|------------------------|------------------------|
| Methyl alcohol 67-56-1 | - | Included in waste stream: F039 | - | U154 |

| Chemical Name | California Hazardous Waste Status |
|------------------------------|-----------------------------------|
| Ethyl alcohol 64-17-5 | Toxic Ignitable |
| Methyl alcohol 67-56-1 | Toxic Ignitable |
| Isopropyl alcohol 67-63-0 | Toxic Ignitable |
| Acetic acid 64-19-7 | Toxic Corrosive Ignitable |

14. TRANSPORT INFORMATION

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR §173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

DOT

UN/ID no. UN1170
Proper shipping name Ethanol solutions
Hazard Class 3
Packing Group II

IATA

UN/ID no. UN1170
Proper shipping name Ethanol solutions
Hazard Class 3
Packing Group II

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name | SARA 313 - Threshold Values % |
|-----------------------------|-------------------------------|
| Methyl alcohol - 67-56-1 | 1.0 |
| Isopropyl alcohol - 67-63-0 | 1.0 |

SARA 311/312 Hazard Categories

Acute health hazard No
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous |
|---------------|------------------|------------------------|---------------------------|-----------------|
|---------------|------------------|------------------------|---------------------------|-----------------|

| | Quantities | | | Substances |
|------------------------|------------|---|---|------------|
| Acetic acid 64-19-7 | 5000 lb | - | - | X |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|---------------------------|--------------------------|----------------|--|
| Methyl alcohol 67-56-1 | 5000 lb | - | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Acetic acid 64-19-7 | 5000 lb | - | RQ 5000 lb final RQ RQ 2270 kg final RQ |

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals

| Chemical Name | California Proposition 65 |
|--------------------------|-----------------------------|
| Ethyl alcohol - 64-17-5 | Carcinogen Developmental |
| Methyl alcohol - 67-56-1 | Developmental |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|------------------------------|------------|---------------|--------------|
| Ethyl alcohol 64-17-5 | X | X | X |
| Water 7732-18-5 | - | - | X |
| Methyl alcohol 67-56-1 | X | X | X |
| Isopropyl alcohol 67-63-0 | X | X | X |
| Acetic acid 64-19-7 | X | X | X |

16. OTHER INFORMATION

Prepared By
Revision Date

Regulatory Affairs (Email: & { } | & & @ & & ! & & } { • & .com)
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End of Safety Data Sheet