# SAFETY DATA SHEET

**Revision Date** 14-Jun-2015 **Version** 3

## 1. IDENTIFICATION

**Product Name** Reagent Alcohol, 100% (Anhydrous)

**Product Code** 1200
**Synonyms** Reagent Alcohol Absolute, Denatured Ethyl Alcohol.

**Recommended Use** For laboratory, scientific, R&D or manufacturing use.

**Company**
E K Industries, Inc.
1403 Herkimer St.
Joliet, IL 60432
Tel. (800) 283-4244

**Emergency Telephone** Call CHEMTREC 1-800-424-9300 (EKI CCN 7453)

## 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 |
| Specific target organ toxicity (single exposure) | Category 1 |
| Flammable liquids | Category 2 |

**Label elements**

**Signal word**
Danger

**Hazard statements**
Harmful if swallowed. Causes damage to organs.
Highly flammable liquid and vapor.

**Precautionary Statements - Prevention**
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 explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary Statements - Response**
IF exposed: Call a POISON CENTER or doctor/physician.
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 | ~90 |
| Methyl alcohol | 67-56-1 | ~5 |
| Isopropyl alcohol | 67-63-0 | ~5 |

## 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice** In case of accident or exposure, seek medical attention immediately. Show this Safety Data Sheet if possible.

**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 thoroughly with soap and water while removing contaminated garments. Get medical attention if irritation develops. Wash contaminated clothing before reuse.

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

**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** If swallowed or inhaled, causes irritation. Intoxicant. May cause headache, drowsiness, nausea, vomiting, blurred vision, blindness, coma, and death.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**
In case of fire, use water fog, dry chemical, CO2 or "alcohol resistant" foam

**Specific hazards arising from the chemical**
Vapors can flow along surfaces to distant ignition sources and flash back.

**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** Remove all sources of ignition. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas. Avoid contact with skin, eyes and inhalation of vapors.

**Environmental precautions** Do not allow into any sewer, on the ground or into any body of water. Avoid release to the environment.

**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** Absorb spill with inert material, scoop up and containerize for disposal. Take precautionary measures against static discharges.

## 7. HANDLING AND STORAGE

**Precautions for safe handling** Use personal protective equipment as required

**Advice on safe handling** Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing.

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place. Store in an approved Flammable Liquids storage area. Store at 15C to 25C. Keep away from heat.

**Incompatible materials** Strong oxidizing agents. Alkali. Ammonia.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational exposure limits**

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|---|---|---|
| Ethyl alcohol<br>64-17-5 | STEL: 1000 ppm | TWA: 1000 ppm<br>TWA: 1900 mg/m³<br>(vacated) TWA: 1000 ppm<br>(vacated) TWA: 1900 mg/m³ | IDLH: 3300 ppm<br>TWA: 1000 ppm<br>TWA: 1900 mg/m³ |
| Methyl alcohol<br>67-56-1 | STEL: 250 ppm<br>TWA: 200 ppm<br>Skin | TWA: 200 ppm<br>TWA: 260 mg/m³<br>(vacated) TWA: 200 ppm<br>(vacated) TWA: 260 mg/m³<br>(vacated) STEL: 250 ppm<br>(vacated) STEL: 325 mg/m³<br>(vacated) Skin | IDLH: 6000 ppm<br>TWA: 200 ppm<br>TWA: 260 mg/m³<br>STEL: 250 ppm<br>STEL: 325 mg/m³ |
| Isopropyl alcohol<br>67-63-0 | STEL: 400 ppm<br>TWA: 200 ppm | TWA: 400 ppm<br>TWA: 980 mg/m³<br>(vacated) TWA: 400 ppm<br>(vacated) TWA: 980 mg/m³<br>(vacated) STEL: 500 ppm<br>(vacated) STEL: 1225 mg/m³ | IDLH: 2000 ppm<br>TWA: 400 ppm<br>TWA: 980 mg/m³<br>STEL: 500 ppm<br>STEL: 1225 mg/m³ |

**Appropriate engineering controls**

**Engineering Controls** Emergency showers, eyewash stations, ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Tight sealing safety goggles.

| | |
|---|---|
| **Skin and body protection** | Wear fire/flame resistant/retardant clothing. 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** | Clear, colorless |
| **Odor** | Odor of grain alcohol |
| **Odor threshold** | No information available |
| **pH** | No information available |
| **Melting point / freezing point** | -114 C |
| **Boiling point / boiling range** | ~78 C |
| **Flash point** | 13 C |
| **Evaporation rate** | 3.3 (BuAc=1) |
| **Flammability (solid, gas)** | No information available |
| **Flammability Limit in Air** | |
| **Upper flammability limit:** | 19% |
| **Lower flammability limit:** | 3.3% |
| **Vapor pressure** | 44 |
| **Vapor density** | 1.6 |
| **Relative density** | 0.79 |
| **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 normal conditions. |
| **Possibility of Hazardous Reactions** | None under normal processing. |
| **Conditions to avoid** | Sources of ignition |
| **Incompatible materials** | Strong oxidizing agents. Alkali. Ammonia. |
| **Hazardous Decomposition Products** | None known based on information supplied. |

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | No data available. |
| **Eye contact** | Avoid contact with eyes. |
| **Skin contact** | Avoid contact with skin and clothing. |

**Ingestion** Harmful if swallowed.

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Ethyl alcohol 64-17-5 | - | - | = 124.7 mg/L ( Rat ) 4 h |
| Methyl alcohol 67-56-1 | = 5628 mg/kg ( Rat ) | - | = 83.2 mg/L ( Rat ) 4 h |
| Isopropyl alcohol 67-63-0 | = 4396 mg/kg ( Rat ) | = 12800 mg/kg ( Rabbit ) | = 16000 ppm ( Rat ) 8 h |

**Information on toxicological effects**

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

**Skin corrosion/irritation** May cause irritation and dryness. Repeated exposure may cause dermatitis. Harmful if absorbed through skin.
**Serious eye damage/eye irritation** Irritating to eyes.
**Sensitization** No information available.
**Germ cell mutagenicity** No information available.
**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|---|---|---|---|---|
| Isopropyl alcohol 67-63-0 | - | Group 3 | - | - |

*IARC (International Agency for Research on Cancer)*
*Group 3 - Not classifiable as to carcinogenicity in humans*

**STOT - single exposure**
- Eyes
- Skin
- Respiratory system
- Central nervous system
- Liver
- Reproductive System

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## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|---|---|---|---|
| Ethyl alcohol 64-17-5 | - | 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through | 9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 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: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50 | 9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50 | 13299: 48 h Daphnia magna mg/L EC50 |

**Persistence and degradability**
No information available.

**Bioaccumulation**
No information available.

| Chemical Name | Partition coefficient |
|---|---|
| Ethyl alcohol<br>64-17-5 | -0.32 |
| Methyl alcohol<br>67-56-1 | -0.77 |
| Isopropyl alcohol<br>67-63-0 | 0.05 |

**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<br>67-56-1 | - | Included in waste stream:<br>F039 | - | U154 |

| Chemical Name | California Hazardous Waste Status |
|---|---|
| Ethyl alcohol<br>64-17-5 | Toxic<br>Ignitable |
| Methyl alcohol<br>67-56-1 | Toxic<br>Ignitable |
| Isopropyl alcohol<br>67-63-0 | Toxic<br>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 CRF 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.** | 1170 |
| **Proper shipping name** | Ethanol |
| **Hazard Class** | 3 |
| **Packing Group** | II |

**IATA**

| | |
|---|---|
| **UN/ID no.** | 1170 |
| **Proper shipping name** | Ethanol |
| **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)

**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<br>67-56-1 | 5000 lb | - | RQ 5000 lb final RQ<br>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<br>Developmental |
| Methyl alcohol - 67-56-1 | Developmental |

**U.S. State Right-to-Know Regulations**

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---|---|---|---|
| Ethyl alcohol<br>64-17-5 | X | X | X |
| Methyl alcohol<br>67-56-1 | X | X | X |
| Isopropyl alcohol<br>67-63-0 | X | X | X |

## 16. OTHER INFORMATION

**Prepared By** EKI Regulatory Affairs
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**Revision Date** 14-Jun-2015

**Disclaimer**

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**End of Safety Data Sheet**