

**Section 1: Product & Company Information**

**Product Identifier:** Ethyl Alcohol SDA 40B, 190 Proof

**Other Means of Identification**

Product Number: 151006

**Recommended Use and Restrictions on Use**

Recommended Use: General purpose solvent

Restrictions on Use: Use in accordance with manufacture's recommendations

**Manufacturer / Importer / Supplier / Distributor Information**

**Company Name:** CORECHEM Inc.

**Address:** 4320 Greenway Drive  
Knoxville, TN 37918 USA

**Information Telephone Number:** 1-865-524-4239

**Fax Number:** 1-865-524-3375

**Website:** www.corecheminc.com

**Contact Person:** Regulatory Manager

**E-mail:** regulatory@corecheminc.com

**Emergency Phone Number:** Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

**Section 2: Hazards Identification**

**GHS Hazard Classification(s)**

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

**Physical Hazard(s)**

Flammable, Liquids - 2

(Corrosion) Damage/Irritation, Eye - 2A

Specific Target Organ Toxicity (STOT)-CNS, Single exposure - 3

Specific Target Organ Toxicity (STOT)-Respiratory Irritation, Single exposure - 3

**Health Hazard(s)**

Not classified.

**Environmental Hazard(s)**

Not classified.

**Label Elements**

**Signal Word**

**DANGER**

**Hazard Symbol(s)**



**Hazard Statement(s)**

H225: Highly flammable liquid and vapor.

H319: Causes serious eye Irritation.

H335+H336: May cause respiratory irritation. May cause drowsiness or dizziness.

**Precautionary Statements**

**General**

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

**Prevention**

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233: Keep container tightly closed.

P241: Use explosion-proof electrical/ventilating/lighting/equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

## Response

P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

## Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

## Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## Hazard(s) not otherwise classified (HNOG)

None known.

## Section 3: Composition/Information on Ingredients

### Mixture

| Chemical Identity <sup>2</sup> | Common Name/Synonym(s) | CAS # <sup>3</sup> | Weight %  | Impurity or Stabilizing Additive |
|--------------------------------|------------------------|--------------------|-----------|----------------------------------|
| Ethyl alcohol                  | Ethanol                | 64-17-5            | 90 – 100% | No                               |

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- “—”Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

## Section 4: First-Aid Measures

### General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Skin Contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

### Eye Contact

Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

### Ingestion

Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

### Most important symptoms/effects, acute and delayed

#### Symptoms

Frostbite: Try to warm up the frozen tissues and seek medical attention.

### Indication of immediate medical attention and special treatment needed

#### Hazards

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

#### Treatment

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## Section 5: Fire-Fighting Measures

### General Fire Hazards

Highly flammable liquid and vapor.

**Suitable (and Unsuitable) Extinguishing Media**

**Suitable Extinguishing Media**

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable Extinguishing Media**

Do not use water jet as an extinguisher, as this will spread the fire.

**Specific Hazards Arising from the Chemical**

Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous Thermal Decomposition Products: Carbon dioxide and carbon monoxide

**Special Protective Equipment and Precautions for Firefighters**

**Special Fire-Fighting Equipment Procedures**

In case of fire and/or explosion do not breathe fumes. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special Protective Equipment for Fire-Fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

## Section 6: Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures**

Keep unnecessary personnel away. Keep people away upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**Methods and Materials for Containment and Clean-Up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. The product is completely soluble in water.

**Large Spills:** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

**Small Spills:** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Notification Procedures**

Notify authorities if any exposure to the general public or environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained.

**Environmental Precautions**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

## Section 7: Handling and Storage

**Precautions for Safe Handling**

Put on appropriate personal protective equipment. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear an appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Conditions for Safe Storage, including any Incompatibilities**

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8: Exposure Controls/Personal Protection

### Control Parameters

#### Occupational Exposure Limits

| Chemical Identity | Type | Value                  | Source                           |
|-------------------|------|------------------------|----------------------------------|
| Ethyl alcohol     | TWA  | 1900 mg/m <sup>3</sup> | US OSHA Table Z-1                |
| Ethyl alcohol     | TWA  | 1000 ppm               | US OSHA Table Z-1                |
| Ethyl alcohol     | TWA  | 1000 ppm               | NIOSH REL                        |
| Ethyl alcohol     | TWA  | 1900 mg/m <sup>3</sup> | NIOSH REL                        |
| Ethyl alcohol     | STEL | 1000 ppm               | US. ACGIH Threshold Limit Values |

#### Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

### Appropriate Engineering Controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Individual protection measures, such as personal protective equipment (PPE)

#### General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

#### Eye/Face Protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side shields.

#### Skin Protection

##### Hand Protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

##### Other

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Respiratory Protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

#### Hygiene Measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

## Section 9: Physical and Chemical Properties

### Appearance:

Physical State: Liquid  
Color: Clear, colorless liquid.

### Odor:

Alcohol-like

### Odor Threshold:

No data available.

### pH:

No data available.

### Melting Point/Freezing Point:

-174°F (-114 °C)

### Initial Boiling Point and Boiling Range:

174°F (79 °C)

### Flash Point:

54°F (12 °C)

### Evaporation Rate (butyl acetate=1):

1

### Flammability (solid, gas):

Not applicable.

### Upper/Lower Limit on Flammability or Explosive Limits

|   |                                 |
|---|---------------------------------|
| Flammability Limit – Upper:                     | 3.3%                            |
| Flammability Limit – Lower:                     | 19%                             |
| Explosive Limit – Upper:                        | No data available.              |
| Explosive Limit – Lower:                        | No data available.              |
| <b>Vapor Pressure: (mmHg)</b>                   | 60 hPa at 20°C (68 °F)          |
| <b>Vapor Density (air = 1):</b>                 | 1.6 (air = 1)                   |
| <b>Relative Density (water=1):</b>              | .789 at 20°C                    |
| <b>Solubility(ies):</b>                         |                                 |
| Solubility in water:                            | > 10% by weight at 20 °C        |
| Solubility (other):                             | No data available.              |
| <b>Partition coefficient (n-octanol/water):</b> | No data available.              |
| <b>Auto-Ignition Temperature:</b>               | 685 °F (365 °C) (Ethyl alcohol) |
| <b>Decomposition Temperature:</b>               | No data available.              |
| <b>Viscosity:</b>                               | 1.2 mPa.s                       |
| <b>Other Information:</b>                       |                                 |
| Molecular Weight:                               | No data available.              |
| Formula:  | No data available.              |

## Section 10: Stability and Reactivity

### Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport. Reacts violently with strong oxidizers. Increased risk of fire or explosion.

### Chemical Stability

Extremely flammable liquid and vapor. May form flammable or explosive vapor-air mixture.

### Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

### Conditions to Avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas. Extremes of temperature and direct sunlight. Heat, flames and sparks.

### Incompatible Materials

Highly reactive or incompatible with the following materials: Alkali metals, Ammonia, Oxidizing agents, and peroxides.

### Hazardous Decomposition Products

No hazardous decomposition products are known. Thermal decomposition may produce: Carbon oxides (CO, CO<sub>2</sub>). Acrid smoke and irritating fumes.

## Section 11: Toxicological Information

### Information on routes of exposure

**Ingestion:** Expected to be a low ingestion hazard.

**Inhalation:** Prolonged inhalation may be harmful.

**Skin Contact:** Prolonged skin contact may cause temporary irritation.

**Eye Contact:** Causes serious eye irritation.

### Information on Toxicological Effects

#### Acute Toxicity (List all possible routes of exposure)

##### Oral

Ethyl alcohol: LC50 (Rat) 117 - 125 mg/l, 4 Hours (Vapor)

Ethyl alcohol: LD50 (Rat) 10,470 mg/kg

Isopropyl Alcohol: LD50 (Rat) 4,710 mg/kg

##### Dermal

Ethyl alcohol: 20 ml/kg

Isopropyl Alcohol: LD50 (Rabbit) 12,870 mg/kg

##### Inhalation

Ethyl alcohol: 124.7 mg/l/4h

#### Repeated Dose Toxicity

No data available.

### Skin Corrosion/Irritation

Prolonged skin contact may cause temporary irritation.

### Serious Eye Damage/Eye Irritation

Causes serious eye irritation.

### Respiratory/Skin Sensitization

Not a respiratory sensitizer

**Carcinogenicity**

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans**

No data available.

**US. National Toxicology Program (NTP) Report on Carcinogens**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Germ Cell Mutagenicity**

**In Vitro**

No mutagenic components identified.

**In Vivo**

No mutagenic components identified.

**Reproductive Toxicity**

None known.

**Specific Target Organ Toxicity – Single Exposure**

None known.

**Specific Target Organ Toxicity – Repeated Exposure**

None known.

**Aspiration Hazard**

Not classified.

**Other Effects**

None known.

**Section 12: Ecological Information**

**Ecotoxicity**

**Acute Hazards to the Aquatic Environment**

**Fish**

LC50 Pimephales promelas 9640 mg/l, 96 hours

**Aquatic Invertebrates**

Crustacea LC50 Daphnia magna > 10000 mg/l, 24 hours

Crustacea EC50 Daphnia magna > 100 mg/l, 21 days

**Toxicity to Aquatic Plants**

No data available.

**Chronic Hazards to the Aquatic Environment**

**Fish**

Fish: LC50 Freshwater fish 11200 mg/l, 24 hours

Fish: NOEC Freshwater fish 250 mg/l

**Aquatic Invertebrates**

Invertebrate: EC50 Freshwater invertebrate 5012 mg/l, 48 hours

Invertebrate: EC50 Marine water invertebrate 857 mg/l, 48 hours

**Toxicity to Aquatic Plants**

Algae: EC10 Freshwater algae 11.5 mg/l, 72 hours

Algae: EC50 Freshwater algae 275 mg/l, 72 hours

**Persistence and Degradability**

**Biodegradation**

Not established.

**BOD/COD Ratio**

No data available.

**Bioaccumulative Potential**

**Bioconcentration Factor (BCF)**

No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

No data available.

**Mobility in Soil**

No data available.

**Other Adverse Effects**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation)

potential, endocrine disruption, global warming potential) are expected from this component.

### Section 13: Disposal Considerations

#### Disposal Instructions

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

#### Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

### Section 14: Transportation Information

#### US Department of Transportation (DOT)

UN Number: UN1170  
UN Proper Shipping Name: Ethyl Alcohol  
Technical Name:  
Hazard Class: 3  
Subsidiary Hazard Risk: -  
Packing Group: II  
DOT Label/Placard Exemptions: Not determined  
Special Provisions: Read safety instructions, SDS and emergency procedures before handling  
Packaging Exceptions: 49CFR 173.150  
Packaging Non-Bulk: 49CFR 173.212  
Packaging Bulk: 49CFR 173.242  
Reportable Quantity (RQ): 1,000lb (454kg)  
Marine Pollutant: No  
Poison Inhalation Hazard: No  
Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.  
Emergency Response Guidebook (ERG) #: 127

*Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.*

### Section 15: Regulatory Information

#### US Federal Regulations

##### Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

##### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA:  
Isopropyl Alcohol 67-63-0

##### Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

##### Emergency Planning and Community Right-To-Know Act (EPCRA)

###### EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

###### EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

###### EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: Yes  
Sudden Release of Pressure: No  
Reactive: No  
Acute (Immediate) Health Hazard: Yes  
Chronic (Delayed) Health Hazard: No

**EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting**

This material does not have any chemicals subject to reporting levels established by SARA Title III, Section 313.

**US State Regulations****California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

*Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.*

**Section 16: Other Information****Hazardous Materials Identification System (HMIS®) Classification**

Health Hazard: 2

Chronic Health Hazard: /

Flammability: 3

Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

**National Fire Protection Association (NFPA 704) Rating**

Health Hazard: 2

Fire Hazard: 3

Reactivity Hazard: 0

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Current Revision: 01

Sections Revised: 2, 9-11, 15-16

**Key to Abbreviations and Acronyms**

ATE - Acute Toxicity Estimate

BCF - Bioconcentration Factor

EC50 - Effective concentration, 50%

IDHL - Immediately Dangerous to Life and Health

Kg - Kilogram

l - Liter

lb - Pound

LC50 - Lethal Concentration, 50%

LD50 - Lethal Dose, 50%

mg - milligram

ml - milliliter

N/A - Not Applicable

N/D - Not Determined

PEL - Permissible Exposure Limit

REL - Recommended Exposure Limit

STEL - Short-term Exposure Limit

TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists

AIHA - American Industrial Hygiene Association

BEI - Biological Exposure Indices

CAS - Chemical Abstracts Service

DOT - US Department of Transportation

EPA - US Environmental Protection Agency

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - Intermediate Bulk Container

IMDG - International Maritime Dangerous Goods

NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - US Occupational Health and Safety Administration

SARA - US EPA Superfund Amendments and Reauthorization Act

TSCA - US EPA Toxic Substances Control Act

UN - United Nations

**References**

HSDB® - Hazardous Substances Data Bank

**Disclaimer**

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