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### **Section 1: Product & Company Information**

Product Identifier: Ethyl Alcohol SDA 3C 200 Proof

Other Means of Identification

Product Number: 151022

**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

### Health Hazard(s)

(Corrosion)Damage/Irritation, Eye - 2A Specific Target Organ Toxicity (STOT) CNS, Single exposure - 3

### 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.

H336: May cause drowsiness or dizziness.

### **Precautionary Statements**

### General

Not applicable.

### Prevention

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

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

 ${\tt P241: Use\ explosion-proof\ electrical/ventilating/lighting/equipment}.$ 

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P264: Wash face, hands and any exposed skin thoroughly after handling.



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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.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P312 - Call a poison center or doctor if you feel unwell.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P370 + P378: In case of fire: Use suitable extinguishing media for extinction.

#### 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 (HNOC)

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	95%	No
Propanol	Isopropyl alcohol	67-63-0	5%	No
Water		7732-18-5	0.00 - 29.62	No

- 1. 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.
- 2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- 3. "—"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

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Obtain medical attention if breathing difficulty persists.

### **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.

### Eve Contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

### Ingestion

Call a physician or poison control center immediately. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

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

### Symptoms

Headache. Serve eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.

**Symptoms/Injuries After Inhalation:** High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms.

 $\textbf{Symptoms/Injuries After Skin Contact:} \ \textbf{Prolonged exposure may cause skin irritation}.$ 

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

 $\textbf{Symptoms/Injuries After Ingestion:} \ \ \textbf{Ingestion may cause adverse effects}.$ 

Chronic Symptoms: Repeated exposure may cause skin dryness or cracking.

# Indication of immediate medical attention and special treatment needed

Hazards



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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

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 (CO2).

### **Unsuitable Extinguishing Media**

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

### **Specific Hazards Arising from the Chemical**

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Combustion products may include carbon oxides.

**Fire Hazard:** Highly flammable liquid and vapor. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Alcohols burn with a pale blue flame that is difficult to see under normal lighting conditions.

Explosion Hazard: May form flammable or explosive vapor-air mixture. Heating will cause rise in pressure with risk of bursting.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

### **Special Protective Equipment and Precautions for Firefighters**

#### **Special Fire-Fighting Equipment Procedures**

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so, 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 from and 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. For personal protection, see section 8 of the SDS.

### 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 the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.

### **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**

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Use appropriate containment of product and firefighting water to avoid environmental contamination. Prevent from spreading or entering drains, ditches, or rivers by using sand, earth, or other appropriate barriers.

### Section 7: Handling and Storage

### **Precautions for Safe Handling**

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. SDS for Personal Protective Equipment. Avoid contact with eyes. Avoid contact with skin.



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### Conditions for Safe Storage, including any Incompatibilities

**Technical Measures:** Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

**Storage Conditions:** Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: Strong oxidizers. Acetaldehyde. Chlorine. Ethylene oxide. Acids. Isocyanates. Peroxides.

### **Section 8: Exposure Controls/Personal Protection**

#### **Control Parameters**

#### **Occupational Exposure Limits**

Chemical Identity	Туре	Value	Source	
Ethyl alcohol	PEL	1900 mg/m3	US OSHA Table Z-1	
-		1000 ppm	US OSHA Table Z-1	
Isopropyl Alcohol	PEL	980 mg/m3	US OSHA Table Z-1	
		400 ppm	US OSHA Table Z-1	
Ethyl alcohol	STEL	1000 ppm	US. ACGIH Threshold Limit Values	
Isopropyl Alcohol	STEL	400 ppm	US. ACGIH Threshold Limit Values	
	TWA	200 ppm	US. ACGIH Threshold Limit Values	

### **Biological Limit Values**

Chemical Identity	CAS#	Parameter	Value	Biological Specimen	Source
Isopropyl Alcohol	67-63-0	Acetone	40 mg/l	Urine	ACGIH – Biological Exposure Indices (BEI)
	Remarks:				

#### **Appropriate Engineering Controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation 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. Provide eyewash station and safety shower.

### 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.

### **Eye/Face Protection**

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

### Skin Protection

### **Hand Protection**

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

### Other

Wear appropriate chemical resistant clothing.

### Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

### Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

### **Section 9: Physical and Chemical Properties**

Appearance:

Physical State: Liquid

Color: Clear liquid, Invisible vapor.

Odor: No data available.
Odor Threshold: No data available.



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pH: No data available.

Melting Point/Freezing Point: -148 °F (-100 °C)

Initial Boiling Point and Boiling 176 °F (80 °C)

Range:

**Flash Point:** 57.2 - 68.0 °F (14.0 - 20.0 °C) Closed Cup

Evaporation Rate (butyl acetate=1): 3.3 (butyl acetate = 1)
Flammability (solid, gas): Not applicable.
Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: 19 % v/v (Ethyl alcohol)
Flammability Limit – Lower: 3.3 % v/v (Ethyl alcohol)
Explosive Limit – Upper: No data available.
Explosive Limit – Lower: No data available.

**Vapor Pressure:** 79.05 kPa (Ethyl alcohol) (68 °F (20 °C))

**Vapor Density** (air = 1): 1.6 (air = 1)

**Relative Density** (water=1): 6.608 - 6.86 lb/gal (60.01 °F (15.56 °C))

Solubility(ies):

Solubility in water: Completely soluble Solubility (other): No data available.

Partition coefficient (n- No data available.

octanol/water):

**Auto-Ignition Temperature:** 685.4 °F (363 °C) (Ethyl alcohol)

**Decomposition Temperature:** °C / °F No data available. Not applicable.

Viscosity: No data available.

Other Information:

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.

### **Chemical Stability**

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

### **Possibility of Hazardous Reactions**

No dangerous reaction known under conditions of normal use.

### **Conditions to Avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

### **Incompatible Materials**

Strong oxidizing agents. Acetaldehyde. Chlorine. Ethylene oxide. Acids. Isocyanates. Peroxides.

### **Hazardous Decomposition Products**

No hazardous decomposition products are known. Thermal decomposition may produce: Carbon oxides (CO, CO2). 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) 10470 mg/kg Isopropyl Alcohol: LD50 (Rat) 4710 mg/kg

### Dermal

Isopropyl Alcohol: LD50 (Rabbit) 12956 mg/kg

### Inhalation

Isopropyl Alcohol: (rat) 72600 mg/m³ (Exposure time: 4 h)



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#### **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

Group 3, Not classifiable as to its carcinogenicity to humans.

### 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

May cause drowsiness or dizziness.

#### 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

Isopropyl Alcohol: LC50 Pimephales promelas 9640 mg/l, 96 hours Ethyl Alcohol: Fish: 11200 mg/l

### **Aquatic Invertebrates**

Isopropyl Alcohol: Crustacea LC50 Daphnia magna > 10000 mg/l, 24 hours Isopropyl Alcohol: Crustacea EC50 Daphnia magna > 100 mg/l, 21 days Ethyl Alcohol: 9268 - 14221 mg/l (Exposure time: 48 h - Species: Daphnia magna)

### **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**



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### Biodegradation

There are no data on the degradability of this product.

#### **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**

The product is water soluble and may spread in water systems.

#### **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**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### **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. The following chemicals(s) in this material are subject to reporting levels established by SARA Title III, Section 302:



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### **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: Yes

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

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 313: Isopropyl alcohol: CAS- 67-63-0, % by wt.- 3.32 – 4.78

### **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 W OX COR POI

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

Prepared By: Regulatory Manager Version #: 001 Issue Date: 4/20/2020 Last Revised By: Regulatory Assistant C Last Revision Date: 3/25/2024

Current Revision: 02

Sections Revised: Changes were made to sections 2-4, 7, 9, 12, 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 I – Liter Ib – 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

 $\ensuremath{\mathsf{NIOSH}}$  – 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



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