

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY INFORMATION

Product Name(s): CLEAN BOND CONCENTRATE
 Product Code(s): CB-1
 Uses: Degreaser and treatment for condensate pans and related.
 Company: Controlled Release Technologies, Inc.
 Address: 1016 Industry Drive; Shelby, NC 28152; USA
 Telephone Number: (704) 487-0878 Fax Number: (704) 487-0877
 Emergency Telephone Number: ChemTel Inc. 1- (800) 255-3924; + 01 (813) 248-0585 (International)
 Date Issued: March 27, 2015 Date Revised: August 2, 2018

This SDS complies with the OSHA Hazard Communication Standard 29CFR1910.1200 as revised in May 2012 (GHS). It may not meet requirements in other countries.

SECTION 2 HAZARDS IDENTIFICATION

GHS Classification: **DANGER**
 Flammable Liquid (Category 4)
 Carcinogen (Category 2)
 Acute Toxicity – Inhalation (Category 4)
 Acute Toxicity – Dermal (Category 4)
 Acute Toxicity – Oral (Category 4)
 Repeated Exposure (Category 1)
 Skin Irritation (Category 2)
 Eye Irritation (Category 1)
 Single Exposure (Category 3)
 Aspiration Hazard (Category 1)
 Aquatic Acute Toxicity (Category 3)



GHS Hazard Statements: Combustible liquid
 Suspected of causing cancer.
 Harmful if inhaled
 Harmful in contact with skin
 Harmful if swallowed
 Causes damage to organs <kidney, central nervous system> through prolonged or repeated exposure
 Causes skin irritation
 Causes serious eye damage
 May cause respiratory irritation
 May be fatal if swallowed and enters airways
 Harmful to aquatic life

GHS Precautionary Prevention: Keep away from flames and hot Response: In case of fire: Use dry chemical/carbon

SECTION 2 HAZARDS IDENTIFICATION

Statements: surfaces. – No smoking. dioxide/foam to extinguish.
 Obtain special instructions before use. If exposed or concerned: Get medical advice/attention.
 Do not handle until all safety precautions have been read and understood. If inhaled: Remove person to fresh air and keep comfortable for breathing.
 Wear protective gloves/protective clothing/eye protection/face protection. If on skin: Wash with plenty of water/soap.
 Wash hands/skin thoroughly after handling. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Do not breathe mist/vapors/spray. Do NOT induce vomiting.
 Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse.
 Use only outdoors or in a well-ventilated area. Rinse mouth.
 Avoid release to the environment. Collect spillage.

Storage: Store in a well-ventilated place. Keep container tightly closed. Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.
 Keep cool.
 Store locked up.

GHS Assessment: Approximately 4% of this mixture consists of ingredient(s) of unknown acute toxicity.
 Approximately 4% of the mixture consists of ingredient(s) of unknown hazards to the aquatic environment.

SECTION 3 COMPOSITION / INGREDIENTS

Component	CAS Number	EC Number	Concentration
Solvent naphtha	64742-88-7	265-191-7	15.0 - 35.0%
Ethylene glycol monobutyl ether	111-76-2	203-905-0	15.0 - 35.0%
Alkylamine salt	Proprietary	---	10.0 - 30.0%
Ethoxylated C12-15 alcohols	68131-39-5	500-195-7	5.0 - 15.0%
Cocamide diethanolamine	68603-42-9	271-657-0	5.0 - 10.0%
Diethanolamine	111-42-2	203-868-0	0.1 - 1.0%

Trade Secret Claims: Specific chemical identity and/or exact percentage (concentration) of components has been withheld as a trade secret.

SECTION 4 FIRST AID MEASURES

First Aid - Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention, if irritation develops.

First Aid - Skin: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately if irritation or rash develops and/or persists. Wash contaminated clothing before reuse.

First Aid - Ingestion: If swallowed and feel unwell, call a physician or poison control center. DO NOT

SECTION 4 FIRST AID MEASURES

induce vomiting unless directed to do so by a physician or poison control center. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

First Aid - Inhalation: If respiratory symptoms or other symptoms of exposure develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek immediate medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Important Symptoms / Effects – Acute and Delayed: Tissue redness/irritation, tissue destruction/damage, nausea, breathing difficulty.

Advice to Physician: Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing Media: Treat surrounding material. Dry chemical, carbon dioxide, or foam is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Specific Hazards: This product is combustible. This product may give rise to hazardous vapors in a fire. Vapors/fumes may be irritating, corrosive and/or toxic.

Protective equipment and procedures for fire-fighters: Wear full protective clothing and self-contained breathing apparatus.

Additional Advice: None.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill Procedures: Wipe up spills with an absorbent towel/material and transfer into suitable containers for recovery or disposal. Finally flush area with water.

Personal Precautions: Wear suitable protective clothing.

Environmental Precautions: Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

SECTION 7 HANDLING AND STORAGE

Handling: Wear appropriate personal protection (See Section 8) when handling this material. The work area must be equipped with a safety shower and eye wash station. If exposed to the solution, avoid contact with skin and eyes. Wash thoroughly after handling solution.

Storage: Keep container(s) tightly closed. Use and store this material at temperatures between 15.5 and 26.7°C (60-80°F) away from heat, direct sunlight and hot metal surfaces. Keep from freezing. Keep away from any incompatible materials (see Section 10).

Additional Advice: Store in original container. Store as directed by the manufacturer.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Standards: Exposure limits are listed below, if they exist.

Solvent naphtha: ACGIH TLV: 200 ppm TLV TWA.
NIOSH: 350 mg/m³ TWA.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

	OSHA PEL: 500 ppm (2000 mg/m ³) TWA.
Ethylene glycol monobutyl ether:	ACGIH TLV: 20 ppm TWA. EU: 20 ppm (98mg/m ³) TWA. EU: 50 ppm (246mg/m ³) STEL. UK: 25 ppm TWA. UK: 50 ppm STEL. OSHA PEL: 50 ppm TWA.
Alkylamine salt:	None.
Ethoxylated C12-15 alcohols:	None.
Cocamide diethanolamine:	None.
Diethanolamine:	ACGIH TLV: 2 mg/m ³ TWA. NIOSH REL: 3 ppm TWA.
Engineering Control Measures:	Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.
Respiratory Protection:	A NIOSH certified air purifying respirator with an organic vapor cartridge may be used under conditions where airborne concentrations are expected to exceed exposure limits.
Hand Protection:	The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation and skin damage (see glove manufacturer literature for information on permeability).
Eye Protection:	Approved eye protection (safety glasses with side-shields or goggles) to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.
Body Protection:	Impervious clothing should be worn as needed to prevent skin contact.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Yellow
Odor:	Lemon
Odor Threshold:	Not available.
pH:	7.5
Melting Point/Range (°C/°F):	Not available.
Boiling Point/Range (°C/°F):	> 150°C / 302°F
Flash Point (PMCC) (°C/°F):	> 62°C / 143.6°F
Evaporation Rate:	Not available.
Flammability / Explosivity Limits in Air (%):	Lower explosivity limit: 1.0 vol % Upper explosivity limit: 12.7 vol %
Vapor Pressure:	< 1 mmHg (25°C)
Vapor Density (Air = 1):	Not available.
Relative Density:	0.9
Solubility in Water:	Partly soluble

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Partition Coefficient:	Not available.
Autoignition Temperature (°C/°F):	> 230°C / 446°F
Decomposition Temperature (°C/°F):	Not available.
Viscosity:	Not available.
Explosive Properties:	None.
Oxidizing Properties:	None.
Volatile Organic Content (VOC) (g/l):	ca. 620 g/l (as defined by 40CFR51.100)

SECTION 10 STABILITY AND REACTIVITY

Reactivity:	Product will not undergo additional reaction.
Stability:	Stable under normal storage conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Contact with incompatible materials, excessive heat.
Incompatibilities:	Oxidizing agents, strong acids.
Hazardous Decomposition Products:	Oxides of carbon, oxides of nitrogen, oxides of sulfur, hydrogen sulfide, amines, aliphatic and aromatic compounds, toxic by-products.

SECTION 11 TOXICOLOGICAL INFORMATION

If available, toxicity data for the product is given; otherwise component data is listed.

Acute Toxicity:	This product may be harmful by injection, dermal contact and inhalation. (Solvent naphtha) Oral LD50 (rat) > 5000 mg/kg; Dermal LD50 (rabbit) > 3000 mg/kg; Inhalation LC50 (rat) > 5500 ppm (4 hr) (Ethylene glycol monobutyl ether) Oral LD50 (rat) 1.48 g/kg; Dermal LD50 (rabbit) 400 mg/kg; Inhalation LC50 (rat) 450-486 ppm/4 hr (Alkylamine salt) Oral LD50 (rat) 1836 mg/kg; Dermal LD50 (rabbit) > 2000 mg/kg (Ethoxylated C12-15 alcohols) Oral LD50 (rat) > 2000 mg/kg; Dermal LD50 (rabbit) > 2000 mg/kg (Cocamide diethanolamine) Oral LD50 (rat) 12.2 g/kg; Dermal LD50 (rabbit) > 2 g/kg (Diethanolamine) Oral LD50 (rat) 710-1800 mg/kg; Dermal LD50 (rabbit) 13 g/kg
Skin Corrosion / Irritation:	The product is expected to be irritating to the skin. (Solvent naphtha) Mildly irritating to skin. (Ethylene glycol monobutyl ether) Slightly irritating to skin (rabbit). (Alkylamine salt) Irritating to skin (rabbit). (Ethoxylated C12-15 alcohols) Mildly irritating to skin (rabbit). (Cocamide diethanolamine) Moderately irritating to skin (rabbit). (Diethanolamine) Irritating to skin (rabbit).
Serious Eye Damage / Irritation:	The product is expected to be severely irritating to the eyes with possible damage upon prolonged or repeated exposures. (Solvent naphtha) Slightly irritating to eyes. (Ethylene glycol monobutyl ether) Irritating to eyes (rabbit) (Alkylamine salt) Irritating to eye (rabbit). (Ethoxylated C12-15 alcohols) Severely irritating to eye with potential damage (rabbit). (Cocamide diethanolamine) Severely irritating to eye with potential damage (rabbit).

SECTION 11 TOXICOLOGICAL INFORMATION

	(Diethanolamine) Damaging to eyes, particularly at concentration greater than 15%.
Respiratory or Skin Sensitization:	<p>The product is not expected to be dermally sensitizing.</p> <p>(Solvent naphtha) Non-sensitizing to human skin (patch testing – other naphthas).</p> <p>(Ethylene glycol monobutyl ether) Not sensitizing in guinea pigs.</p> <p>(Alkylamine salt) No data.</p> <p>(Ethoxylated C12-15 alcohols) No data.</p> <p>(Cocamide diethanolamine) Not dermally sensitizing (guinea pig).</p> <p>(Diethanolamine) Not dermally sensitizing (guinea pig and human).</p>
Mutagenicity:	<p>This product is not expected to be mutagenic.</p> <p>(Solvent naphtha) Negative Ames and micronucleus (mice) testing.</p> <p>(Ethylene glycol monobutyl ether) Generally not regarded as genotoxic.</p> <p>(Alkylamine salt) No data.</p> <p>(Ethoxylated C12-15 alcohols) No data.</p> <p>(Cocamide diethanolamine) Not mutagenic (Ames test systems with and without activation). Did not induce chromosomal aberrations or sister chromatid exchanges with or without metabolic activation in Chinese hamster ovary cells. Inconclusive results were observed in mouse lymphoma forward mutation assays.</p> <p>(Diethanolamine) Not mutagenic (Ames, rat liver cell, Chinese Hamster ovary E. coli and mammalian cell gene mutation, mouse lymphoma test systems...with or without activation).</p>
Carcinogenicity:	<p>This product may be carcinogenic.</p> <p>(Solvent naphtha) Some evidence of kidney tumors in rats during a 2-year inhalation study. The increased tumors were deemed not significant. No or equivocal evidence in mice. Not classified as to carcinogenicity to humans (IARC).</p> <p>(Ethylene glycol monobutyl ether) In inhalation studies there was some evidence of carcinomas of the liver and stomach in mice. Studies on rats were equivocal. Classified as non-carcinogenic in humans (IARC).</p> <p>(Alkylamine salt) No data.</p> <p>(Ethoxylated C12-15 alcohols) No data.</p> <p>(Cocamide diethanolamine) Liver and kidney tumors developed in mice, but this increase was attributed to free diethanolamine present. Equivocal evidence in rats. Determined to be possibly carcinogenic to humans (EPA and IARC).</p> <p>(Diethanolamine) Increased liver and kidney tumors developed in rats. Determined to be possibly carcinogenic to humans (IARC and NTP).</p>
Reproductive / Developmental Toxicity:	<p>This product is not expected to be developmentally harmful.</p> <p>(Solvent naphtha) Exposures of up to 8000 mg/m3 partially vaporized reformat produced no significant subchronic or developmental toxicity in rats. No adverse effects were observed for fetal parameters at the time of cesarean section (viability, body weight, external development) or subsequent fetal skeletal and visceral examinations.</p> <p>(Ethylene glycol monobutyl ether) No adverse reproductive or developmental effects have been observed at less than toxic doses.</p> <p>(Alkylamine salt) No data.</p> <p>(Ethoxylated C12-15 alcohols) No data.</p> <p>(Cocamide diethanolamine) Skeletal retardation in rat fetuses were considered to be incidental because the values were within the normal range of variation for this strain (oral administration). NOAEL: 1000 mg/kg/day.</p> <p>(Diethanolamine) No treatment-related morphological abnormalities in pups were detected in orally administered rats.</p>
Chronic/Subchronic	(Solvent naphtha) Central nervous system depression has been observed in

SECTION 11 TOXICOLOGICAL INFORMATION

<p>Toxicity: Specific Target Organ/Systemic Toxicity – Single Exposure:</p> <p>Chronic/Subchronic Toxicity: Specific Target Organ/Systemic Toxicity – Repeated Exposure:</p> <p>Aspiration Hazard:</p> <p>Additional Information:</p>	<p>humans and laboratory animals. NOEL was estimated at 100 ppm.</p> <p>(Ethylene glycol monobutyl ether) Significant changes to red blood cells have been observed in rats and mice.</p> <p>(Alkylamine salt) No data.</p> <p>(Ethoxylated C12-15 alcohols) Nervous systems effects (ataxia) were noted in rats during oral studies.</p> <p>(Cocamide diethanolamine) No pathological changes were observed in the liver and kidneys of mice (dermal application). Kidney damage was noted in rats at higher dose rates (200 and 400 mg/kg).</p> <p>(Diethanolamine) No data.</p> <p>(Solvent naphtha) Caused kidney damage in male rats which was not considered relevant to humans. Long-lasting neuropsychological changes were observed in rats exposed to an airborne concentration of 800 ppm, 6 hr/day, 5 days/wk for 6 months.</p> <p>(Ethylene glycol monobutyl ether) Adverse effects on the central nervous system, kidneys and liver occur at higher exposure concentrations than do the blood effects in rats.</p> <p>(Alkylamine salt) No data.</p> <p>(Ethoxylated C12-15 alcohols) No data.</p> <p>(Cocamide diethanolamine) No data.</p> <p>(Diethanolamine) Liver and kidney damage and abnormalities were observed in rats by inhalation and oral administration. Decreased sperm motility and sperm count resulted in male rats.</p> <p>This product poses an aspiration hazard. It may cause chemical pneumonitis, which can be fatal.</p> <p>None.</p>
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SECTION 12 ECOLOGICAL INFORMATION

If available, ecological data for the product is given; otherwise component data is listed.

<p>Acute Ecotoxicity:</p> <p>Mobility:</p> <p>Persistence/Degradability:</p>	<p>This product may be harmful to aquatic species.</p> <p>(Solvent naphtha) LC50 (fish) > 1000 mg/l; EC50 (Daphnia) > 1000 mg/l; EC50 (algae) >1000 mg/l.</p> <p>(Ethylene glycol monobutyl ether) LC50 (Rainbow trout) >1000 mg/l/96 hr; LC50 (Fathead minnow) 2137 mg/l/96 hr; LC50 (Daphnia magna) 1720 mg/l/24 hr</p> <p>(Alkylamine salt) LC50 (fish) 1.18 - 6.5 mg/l/96 hr; EC50 (Daphnia) 6.9 mg/l/48 hr; EC50 (algae) 50 - 100 mg/l/72 hr.</p> <p>(Ethoxylated C12-15 alcohols) LC50 (fish) 5 - 10 mg/l/96 hr; EC50 (Daphnia) 5 - 10 mg/l/48 hr; EC50 (algae) 10 - 100 mg/l/72 hr.</p> <p>(Cocamide diethanolamine) LC50 (Zebra fish) 3.6 mg/l/96 hr; EC50 (Daphnia magna) 3.3 mg/l/24 hr; EC50 (algae) 2.2 mg/l/72 hr.</p> <p>(Diethanolamine) LC50 (Goldfish) 800 mg/l/24 hr; EC50 (Daphnia magna) 77.5 mg/l/48 hr; EC50 (algae) 7.8-75 mg/l/72 hr.</p> <p>(Solvent naphtha) Adsorbs to soil and has low mobility.</p> <p>(Ethylene glycol monobutyl ether) Expected to have high mobility based upon an estimated Koc of 67.</p> <p>(Alkylamine salt) No data.</p> <p>(Ethoxylated C12-15 alcohols) No data.</p> <p>(Cocamide diethanolamine) No data.</p> <p>(Diethanolamine) Should leach in soil. Extremely mobile in soil (Koc estimated to be 4).</p> <p>(Solvent naphtha) Readily biodegradable.</p> <p>(Ethylene glycol monobutyl ether) Expected to rapidly degrade in water.</p> <p>(Alkylamine salt) Expected to be readily biodegradable.</p>
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SECTION 12 ECOLOGICAL INFORMATION

(Ethoxylated C12-15 alcohols) Readily biodegradable.
 (Cocamide diethanolamine) No data.
 (Diethanolamine) Expected to biodegrade fairly rapidly following acclimation (97% in 10 days).

Bioaccumulation: (Solvent naphtha) Has the potential to bioaccumulate.
 (Ethylene glycol monobutyl ether) An estimated BCF of 3 suggests the potential for bioconcentration in aquatic organisms is low.
 (Alkylamine salt) Not expected to bioaccumulate.
 (Ethoxylated C12-15 alcohols) No data.
 (Cocamide diethanolamine) No data.
 (Diethanolamine) A bioconcentration factor (BCF) of <1 was estimated, which suggests insignificant to low potential.

Other adverse effects: None.

SECTION 13 DISPOSAL CONSIDERATION

Environmental precautions: Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

Product Disposal: Dispose in accordance with all local, state (provincial), and federal regulations. Under RCRA, it is the responsibility of the product's user to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because the product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous.

Container Disposal: Do not remove label until container is thoroughly cleaned. Empty containers may contain hazardous residues. This material and its container must be disposed of in a safe way.

SECTION 14 TRANSPORT INFORMATION

DOT Proper Shipping Name: Combustible liquid, n.o.s. (solvent naphtha , ethylene glycol monobutyl ether)

UN Number: NA1993

UN Class: Combustible liquid

UN Packaging Group: III

Reportable Quantity: 100 pounds (Diethanolamine)

Marine Pollutant: None.

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Consult current IATA Regulations prior to shipping by air.

SECTION 15 REGULATORY INFORMATION

US Toxic Substance Control Act: All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Canadian Domestic Substance List: One or more component(s) of this product are not listed on the Canadian Domestic List. Limited quantities may be permitted.

EU Existing Inventory of Chemical Substances: One or more component(s) of this product are not in compliance with the inventory listing requirements of the E.U. Existing Inventory of Chemical Substances (EINECS). One or more component(s) of this product have not been pre-listed under REACH. Limited quantities may be permitted.

SECTION 15 REGULATORY INFORMATION

TSCA Sec.12(b) Export Notification:	This product does not contain a chemical at or above de minimis concentrations which requires reporting.
Canadian WHMIS Classification:	E, B.3, D.2.A, D.2.B This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.
Massachusetts Right-To-Know:	This product contains materials subject to disclosure under the Massachusetts' Right-To-Know Law: - Solvent naphtha (as petroleum distillates) - Ethylene glycol monobutyl ether - Diethanolamine
New Jersey Right-To-Know:	This product contains materials subject to disclosure under the New Jersey's Right-To-Know Law: - Solvent naphtha (as petroleum distillates) (2648) - Ethylene glycol monobutyl ether (0275) - Diethanolamine (0686)
Pennsylvania Right-To-Know:	This product contains materials subject to disclosure under the Pennsylvania's Right-To-Know Law: - Solvent naphtha (as petroleum distillates) - Ethylene glycol monobutyl ether - Diethanolamine
California Proposition 65:	This product contains materials which the State of California has found to cause cancer, birth defects or other reproductive harm: - Cocamide diethanolamine - Diethanolamine - Ethylene oxide (trace) - Dioxane, 1,4- (trace)
SARA TITLE III-Section 311/312 Categorization (40 CFR 370):	Fire, immediate (acute), delayed (chronic) hazard
SARA TITLE III-Section 313 (40 CFR 372):	This product contains materials which are listed in Section 313 at or above de minimis concentrations: - Ethylene glycol monobutyl ether (as glycol ethers) - Diethanolamine
CERCLA Hazardous Substance (40 CFR 302)	This product contains materials subject to reporting under CERCLA and Section 304 of EPCRA: - Ethylene glycol monobutyl ether (as glycol ethers) - Diethanolamine (100 pounds)
Water Hazard Class (WGK):	This product is slightly water-endangering (WGK=1).
Other Chemical Inventories:	Australia (AICS): One or more component(s) not listed. China (IECSC): One or more component(s) not listed. Japan (ENCS): One or more component(s) not listed. Korea (KCI): One or more component(s) not listed. Philippines (PICCS): One or more component(s) not listed.

SECTION 16 OTHER INFORMATION

NFPA Rating - HEALTH:	3
NFPA Rating - FIRE:	2

SECTION 16 OTHER INFORMATION

NFPA Rating - REACTIVITY: 0
 NFPA Rating - SPECIAL: NONE
 SDS Date Issued: March 27, 2015
 SDS Current Version: 1.1 Version Date: August 2, 2018
 SDS Revision History: v1.0 Initial version.
 v1.1 Company logo changed.

Abbreviations:

GHS: Globally Harmonized System of Classification and Labeling of Chemicals
 CAS#: Chemical Abstract Services Number
 ACGIH: American Conference of Governmental Industrial Hygienists
 OSHA: Occupational Safety and Health Administration
 NFPA: National Fire Protection Association
 DOT: US Department of Transportation
 RCRA: US Resource Conservation and Recovery Act
 TLV: Threshold Limit Value
 TWA: Time-Weighted Average
 PEL: Permissible Exposure Limit
 STEL: Short Term Exposure Limit
 WEEL: Workplace Environmental Exposure Levels
 AIHA: American Industrial Hygiene Association
 NTP: National Toxicology Program
 IARC: International Agency for Research on Cancer
 R: Risk
 S: Safety
 LD50: Lethal Dose 50%
 LC50: Lethal Concentration 50%
 EC50: Effective Concentration 50%
 BCF: Bioconcentration Factor
 BOD: Biological Oxygen Demand
 Koc: Soil Organic Carbon Partition Coefficient.
 TIm: Median Tolerance Limit

Key References: United States National Library of Medicine's TOXNET
 Patty's Toxicology, 5th Edition
 European Commission's Institute for Health and Consumer Protection
 American Conference of Governmental Industrial Hygienists
 International Agency for Research on Cancer
 United States National Toxicology Program
 United States Occupational Safety and Health Administration
 United States Department of Transportation
 Supplier Material Safety Data Sheets

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Prepared by: ChemOne Compliance, LLC