

## **SAFETY DATA SHEET**

### **1. Product and Company Identification**

**Product Name:** BCT Copper Remover

**Chemical Type:** Water Blend

**Product Use:** BCT Copper Remover is safe for barrel steels. It is non-hazardous, low odor, biodegradable, ammonia and petroleum free.

**Manufacturer:** Breakthrough Clean Technologies

**Revision Date:** 08/01/2018

**Address:** 10850 NW 21<sup>st</sup> Street, Ste - 230  
Miami, FL 33172

**Emergency:** Infotrac US (800)535-5053

**Phone:** (888) 455-5499

### **2. Hazards Identification**

**Hazard Category:**

Skin Corrosion/Irritation Hazard Category 2

Eye Damage/Irritation Hazard Category 1

Acute toxicity, Cat. 4;

Specific Target Organ Toxicity (single exposure), Cat. 3;



**Pictogram**

**Signal Word:** DANGER

**Hazard Statements:**

Causes skin irritation.

Causes serious eye irritation.

Causes severe skin burns and eye damage.

Harmful if swallowed, in contact with skin or if inhaled.

May cause respiratory irritation

**Precautionary statement(s)**

**Prevention:**

Do not breathe fume/gas/mist/vapors/spray. Wash exposed skin thoroughly after handling.

Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Remove contact lenses, if present and easy to do. Continue rinsing.

In case of fire: Use water fog or fine spray, alcohol-resistant foam or dry chemical for extinction.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3. Composition / Information on Ingredients

Chemical Name	CAS Number	Wt %
Water	7732-18-5	>70%
Surfactants/detergents	Proprietary	5-10%
2-aminoethanol	141-43-5	10-20%
Propylene Glycol	57-55-6	1-10%

### 4. First Aid Measures

**After Skin Contact:** If on skin (on hair): Take off immediately all contaminated clothing. Rinse with water/safety shower. Call doctor if irritation persists.

**After Eye Contact:** If in eyes: Rinse cautiously for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If irritated, call doctor.

**After Ingestion:** If swallowed: Rinse mouth. Do NOT induce vomiting.

**Most Important Symptoms/Effects**

**Eye:** Irritation of eyes and skin.

**Skin:** This product can cause mild, transient skin irritation. The severity of irritation will depend on the amount of material that is applied to the skin and the speed and thoroughness that it is removed. Symptoms include redness, itching, and burning of the skin. Repeated or prolonged skin contact can produce moderate irritation (dermatitis).

### 5. Fire Fighting Measures

**Suitable and Unsuitable extinguishing media:** Will not burn or support combustion. Use extinguishing media appropriate for surrounding fire, such as water spray, dry chemical, foam or carbon dioxide.

**Specific hazards arising from the chemical:** Carbon oxides may be produced.

**Special protective equipment and precautions for firefighter:** Wear chemical resistant protective equipment and self-contained breathing apparatus (SCBA).

### 6. Accidental Release Measures

**Methods and Materials for containment & cleaning up:**

Stop spill at source Caution: Spilled material may be slippery.

If trained in accordance 29 CFR 1910.120, leaks should be stopped. Spills should be contained and cleaned immediately. Persons performing cleanup work should wear adequate personal protective equipment and clothing. Spills and releases should be reported, if required, to the appropriate local, state and federal regulatory agencies. Absorb the chemical onto sand, vermiculite, or any other non-combustible absorbent, and collect into containers for later disposal.

### 7. Handling and Storage

**Handling: KEEP OUT OF REACH OF CHILDREN**

Use in accordance with good work place practices. Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapor or mists. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Destroy contaminated leather clothing. Empty containers may contain residues from the product. Treat empty containers with the same precautions as the material last contained. Do not cut, weld or apply heat to empty containers.

**Storage:** Store in a cool, dry area, away from heat or direct sunlight. Keep containers closed when not in use. Do not store with incompatible materials. Do Not Allow to freeze.

## 8. Exposure Controls / Personal Protection

**NOTE:** Exposure to this material can be controlled in many ways. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. This general information can be used to help develop specific control measures. Ensure that control systems are properly designed and maintained. Comply with occupational, environmental, fire, and other applicable regulations.

**Engineering Controls:** If methods of use deviate from the manufacturer's recommendations, attention to methods of vapor reduction will be necessary. Engineering control methods to reduce hazardous exposures are preferred. Methods include mechanical ventilation (dilution and local exhaust), process or personnel enclosure, control of process conditions, and process modification. Administrative controls and personal equipment may also be required. Use local exhaust ventilation to remove the vapors or mist at source and prevent release into the workplace. Exhaust directly to the outside, taking necessary precautions for environmental protection. Supply sufficient replacement air to make up for air removed by exhaust systems.

**Respiratory Protection:** When used as recommended by the manufacturer, use of a respirator may not be required. A trained person responsible for workplace safety must select and maintain the proper respiratory equipment for the intended use of this product

**EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS:**

Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA. **ESCAPE:** Gas mask with organic vapor canister; or escape-type SCBA.

**Skin Protection:** Wear clothing to prevent contact with skin. Impervious gloves such as butyl rubber and Viton™ (breakthrough protection > 8 hours), Silver Shield/4H™ (breakthrough protection ≈ 4 hours), or Neoprene rubber, nitrile rubber, or polyvinyl alcohol (breakthrough protection for 1 – 4 hours).

**Exposure Guidelines: Components**

Occupational Exposure Limits: Consult local authorities for acceptable exposure limits.

Ingredient	ACGIH TLV 8-hr. TWA	U.S. OSHA PEL 8-hr. TWA
2-aminoethanol	3 ppm STEL 6 ppm	3 ppm STEL 6 ppm
Propylene Glycol	N/L	N/L

Other exposure guidelines: NIOSH IDLH (immediately dangerous to life or health) = 30 ppm

**Eye and Face Protection:** Chemical safety goggles. A face shield may also be necessary.

**Other:** Wear footwear suitable for the workplace. Installation of an eyewash station capable of flushing the eyes for at least 15 minutes.

**Discretion Advised:** Chemical Solvents Inc. takes no responsibility for determining what measures are required for personal protection in any specific application. The general information should be used with discretion.

## 9. Physical and Chemical Properties

**Appearance:** Clear liquid

**Odor Threshold:** N/A

**Melting Point/Freezing Point:** 32 F

**Flash Point:** None

**Flammability (solid, gas):** Non-flammable

**Upper/Lower flammability or explosive limits:** N/A

**Vapor Pressure:** N/A

**Relative Density:** 0.96

**Odor:** Mild odor

**PH:** 10-12

**Initial Boiling Point and Boiling Point:** 212 F

**Evaporation Rate:** N/A

**Vapor Density:** N/A

**Solubility (ies):** Complete in water

**Partition Coefficient n-octanol/water:** N/A  
**Auto-ignition Temperature:** N/A

**Viscosity:** N/A  
**Decomposition Temperature:** N/A

## 10. Stability and Reactivity

**Stability:** Stable                      **Conditions to Avoid:** Heat, spark, and open flame  
**Incompatibility:** Strong Oxidizing Agents  
**Hazardous Decomposition:** Combustion will produce –Calcium Oxide, Carbon Dioxide, Carbon Monoxide and nitrogen-oxygen compounds.  
**Hazardous Polymerization:** Will not occur

## 11. Toxicological Information

### COMPONENT INFORMATION

#### 2-aminoethanol

**Likely routes of exposure:** Eye and Skin contact, Inhalation.

**Acute toxicity data:**

LD50Oral (mg/kg)	LD50 Dermal (mg/kg)	LC50 Inhalation (mg/m3, 4 hrs.)
1 720 (rat, female)	1 000 (rabbit)	>1 210 (mouse)

**Skin corrosion / irritation:** MEA is classified as corrosive to skin based on pH and information from animal testing. Application of 0.5 mL undiluted or 45% ethanolamine in water, to intact skin under a patch for 4 hours, caused tissue damage (necrosis) in rabbits (scores at 24 hours: edema, 4/4; redness, 4/4).

**Serious eye damage / irritation:** MEA is classified as corrosive to eyes based on pH and information from animal testing. Application of in excess of a 5% solution of ethanolamine caused corrosive injury in rabbits (scored over 5 where 5 is severe injury).

**STOT (Specific Target Organ Toxicity) Single Exposure:** Corrosive damage to respiratory tract, eyes and skin. In animal studies, exposures to ethanolamine mist caused severe bronchitis, chemical pneumonitis and pulmonary edema (a life-threatening accumulation of fluid in the lungs), and injury to the liver and kidneys. Symptoms of pulmonary edema, which include shortness of breath and coughing, could be delayed for several hours after exposure and are aggravated by physical exertion.

**Aspiration hazard:** Data are not available. Due to the corrosive nature of MEA, any aspiration during ingestion or vomiting could result in severe lung injury.

**STOT (Specific Target Organ Toxicity) Repeated Exposure:** Data not available. The substance MEA may cause effects on the central nervous system. Exposure may cause drowsiness or weakness.

**Respiratory and / or skin sensitization:** Rare cases of sensitization reactions have been reported in humans. Skin contact caused an allergic skin reaction in workers who had dry, irritated skin from repeated exposures to metalworking fluids containing ethanolamine substances. Respiratory sensitization has rarely been reported in workers exposed to airborne MEA.

**Germ cell mutagenicity:** Negative results for mutagenic effects of MEA were obtained in an unconfirmed test using live mice and in most tests using cultured mammalian cells, bacteria and yeast.

**Reproductive effects:** Limited data from animal studies does not indicate that MEA is a reproductive toxin.

**Developmental effects:** Limited data from animal studies does not indicate that MEA is a developmental toxin.

**Effects on or via lactation:** Data not available.

**Carcinogenicity:** This product does not contain any component that is considered a human carcinogen by IARC (International Agency for Research on Cancer), ACGIH (American Conference of Governmental Industrial Hygienists, OSHA (Occupational Safety and Health Administration) or NTP (National Toxicology Program).

**Interactions with other chemicals:** The use of ethanolamines and nitrites together as additives in metalworking fluids can lead to the formation of N-nitrosodiethanolamine, a possible carcinogen.

## **Propylene Glycol 57-55-6**

### **Acute Toxicity - Lethal Doses**

LD50 (Oral) Rat 22,000 MG/KG BWT

LD50 (Skin) Rabbit. 20,800 MG/KG BWT

**Irritation** Skin Not a skin irritant. Repeated or prolonged contact with skin may cause dermatitis. Eye May cause minor eye irritation. Effects of eye irritation are reversible.

**Sensitization** Not expected to cause sensitization by skin contact, however skin reactions of unknown etiology have been described in some hypersensitive individuals following topical application.

**Target Organ Effects** Skin. Repeated or prolonged contact with skin may cause defatting and drying of the skin which may result in dermatitis.

**Repeated Dose Toxicity** No adverse systemic changes were reported in rats or dogs following repeated dietary exposure to high concentrations of propylene glycol. Cats responded with species-specific hematological changes (Heinz body formation) yet all other tissues were unaffected. No systemic effects, but mild eye and nasal irritation were noted in rats following sub-chronic exposure to high concentrations of propylene glycol aerosol. Overall propylene glycol is of low inherent toxicity following repeated oral or inhalation exposure.

**Reproductive Effects** No adverse effect on reproductive performance was seen in male and female mice exposed continuously to high doses of propylene glycol in drinking water for up to 3 months.

**Developmental Effects** Results from studies in pregnant rats, mice, hamsters and rabbits demonstrate that propylene glycol is not teratogenic or fetotoxic.

**Genetic Toxicity** Negative for genotoxicity both in vitro and in vivo tests.

**Carcinogenicity** No increase in tumors was noted in rats and dogs exposed to high concentrations of propylene glycol via the diet for up to 2 years. The incidence of skin tumors was unaltered in mice following dermal application over a lifetime. Not listed by IARC, NTP, or OSHA.

## **Surfactants Mix**

**Acute toxicity** LD50 Oral - Rat - > 2,000 mg/kg (OECD Test Guideline 423)

Inhalation: No data available

LD50 Dermal - Rat - > 2,000 mg/kg (OECD Test Guideline 402)

**Skin corrosion/irritation** Skin - EPISKIN Human Skin Model Test Result: No skin irritation

**Serious eye damage/eye irritation** Eyes – Rabbit Result: No eye irritation

**Respiratory or skin sensitization** in vivo assay – Mouse May cause sensitisation by skin contact. (OECD Test Guideline 429)

**Germ cell mutagenicity** No data available

**Carcinogenicity** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP or OSHA

**Reproductive toxicity** No data available

**Specific target organ toxicity - single exposure** No data available

**Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

## ***12. Ecological Information***

**Persistence and Degradability:** Will biodegrade readily

**Biotic degradability:** No data available

**Bioaccumulation potential:** Unlikely

**Water result:** Disperses in water.**Soil/Sediment Result:** No data available

### 13. Disposal Considerations

Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete. Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste.

### 14. Transport Information

Not Regulated

### 15. Regulatory Information

#### Environmental Regulations

**SARA 311:****Acute health:** Yes**Chronic health:** No**Fire:** No**Sudden release of pressure:**

No

**Reactive:**

No

**SARA 313:** Title III of the 1986 Super fund Amendments and Reauthorization Act (SARA) and 40 CFR 2-Glycol Ethers 15%; Diethanolamine 111-42-2 <0.06%

**California Prop. 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.

Ethylene oxide CAS-No. 75-21-8; 1,4-Dioxane 123-91-; Formaldehyde 50-00-0

Acetaldehyde 75-07-0 2007-09-28

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Ethylene oxide

All the chemicals used in this product are TSCA listed.

Check with your local regulators to be sure all local regulations are met.

### 16. Other Information

**Hazard ratings** This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

**NFPA:** Health: 2 Flammability: 0 Reactivity: 0

**HMIS:** Health: 2 Flammability: 0 Reactivity: 0

**RATING:** 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

**Note:**

For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Chemical Solvents Inc makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Possession of an MSDS does not indicate that the possessor of the MSDS was a purchaser or user of the subject product.