



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: 5/29/2018

Address: 1725 NW 97th Avenue,
Doral, FL 33172 USA

Emergency: Chemtrec (800)424-9300
Phone: (800) 362-0693

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.

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 clean up 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 amber colored liquid | Odor: Mild fish odor |
| Odor Threshold: N/A | PH: 10-12 |
| Melting Point/Freezing Point: 32 F | Initial Boiling Point and Boiling: 212 F |
| Flash Point: None | Evaporation Rate: N/A |
| Flammability (solid, gas): Non flammable | |
| Upper/Lower flammability or explosive limits: N/A | |
| Vapor Pressure: N/A | Vapor Density: N/A |
| Relative Density: 0.96 | Solubility (ies): Complete in water |
| Partition Coefficient n-octanol/water: N/A | Viscosity: N/A |
| Auto-ignition Temperature: 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:

| | | |
|--------------------------|----------------------------|--|
| LD50 Oral (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

| | DOT Classification | IMDG | IATA |
|-----------------------------------|--------------------|----------------|----------------|
| UN number | Not regulated. | Not regulated. | Not regulated. |
| UN proper shipping name | - | - | - |
| Transport hazard class(es) | - | - | - |
| Packing group | - | - | - |
| Environmental hazards | No. | No. | No. |

AERG: N/A



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:

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