

***MATERIAL SAFETY DATA SHEET*****Product Name** DCT DELIMER LIQUID**MSDS Date** June 21, 2012**Revision No.** 04

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**SECTION 1** **PRODUCT AND COMPANY IDENTIFICATION**

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**PRODUCT**

**Product Name** DCT Delimer Liquid  
**Product ID Number** DCT130410  
**Product Description** Descaler

**COMPANY IDENTIFICATION**

**Supplier** Diversified Chemical Technologies, Inc.  
15477 Woodrow Wilson  
Detroit, MI 48238  
(313) 867-5444

**Product Technical Information** (313) 867-5444**24 Hour Emergency Phone Number (Health & Safety; Transportation)** CHEMTREC - (800) 424-9300

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**SECTION 2** **COMPOSITION / INFORMATION ON INGREDIENTS**

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<b>Hazardous Ingredients</b>	<b>CAS Number</b>	<b>OSHA PEL</b>	<b>ACGIH TLV</b>	<b>OTHER</b>	<b>% WT</b>
Sulfamic acid	5329-14-6		not established		5 – 15
Citric acid, anhydrous	77-92-9		not established		1 – 10
Ammonium Citrate	3012-65-5		not established		1 – 3

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**SECTION 3** **HAZARDS IDENTIFICATION**

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**EMERGENCY OVERVIEW** May cause skin, eye and respiratory irritation. Avoid direct contact with skin and eyes. Wash thoroughly after handling. Harmful if swallowed.

**POTENTIAL HEALTH EFFECTS****Acute Effects**

**Inhalation** Moderate to severe irritation to respiratory tract.  
**Eye** Moderate to severe irritation to the eyes in full concentration.  
**Skin** Moderate to severe skin irritation and potential chemical burns in full concentration.  
**Ingestion** May be harmful if swallowed

**Chronic Effects** Product has not been tested as a whole to determine its long-term effects.

**Carcinogenicity** None **IARC:** N/A **NTP:** N/A **OSHA:** N/A

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**SECTION 4 FIRST AID MEASURES**

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**INHALATION** Remove to fresh air. Get medical attention if chemical burns exist or irritation persists.

**EYE CONTACT** Remove contact lenses. Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention if chemical burns exist or irritation persists.

**SKIN CONTACT** Remove contaminated clothing. Flush skin with plenty of water for at least 15 minutes. Get immediate medical attention if chemical burns exist or irritation persists.

**INGESTION** Do not induce vomiting. Wash out mouth with water and obtain medical attention. Treat symptomatically. Get immediate medical attention. Never give anything by mouth to an unconscious person.

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**SECTION 5 FIRE FIGHTING MEASURES**

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**Flash Point** >200 F  
**Flash Point Method** PMCC  
**Auto Ignition Temperature** N/D  
**Flammable Limits:** **LEL** - N/D **UEL** - N/D

**Appropriate Extinguishing Media** Dry Chemical, Foam, CO2

**Fire Fighting Instructions** Firefighters should wear self-contained breathing apparatus (SCBA) and protection for skin. Do not spray water directly into storage containers due to boil over danger. Water may be used to cool nearby containers and surfaces.

**Hazardous Combustion Products** Irritating fumes, toxic gases and acrid smoke. Combustion can produce a variety of compounds including oxides of carbon; water vapor; unburned hydrocarbons; and other unidentified organic and inorganic compounds.

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**SECTION 6 ACCIDENTAL RELEASE MEASURES**

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**NOTIFICATION PROCEDURES** In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**GENERAL** Stop leak if you can do so without risk. Contain spill / release and prevent entry into sewer drains and waterways. Retain all contaminated water for removal and treatment.

**SAFETY PRECAUTIONS** Use suitable protective clothing appropriate to spill size and risk of exposure. Refer to Section 8 for further details. Use extreme caution because affected area(s) may be slippery.

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SECTION 6	ACCIDENTAL RELEASE MEASURES	continued
<b>SPILL OR LEAK PROCEDURES</b>	Confine spill / release and absorb spilled material with noncombustible, inert absorbent such as sand, clay, or vermiculite and place into DOT-approved containers for later disposal or flush to wastewater treatment system for further treatment before discharging to POTW.	

SECTION 7	HANDLING AND STORAGE
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**HANDLING** Avoid contact with skin, eyes, and clothing. Handle with care in full concentration.  
Use in well ventilated areas.  
Wash skin thoroughly after handling.

**STORAGE** Keep containers closed when not in use.  
Keep out of children's reach.  
Do not store above 120°F.  
Store away from incompatible materials (see Section 10).  
Do not mix with oxidizing materials.

SECTION 8	EXPOSURE CONTROLS / PERSONAL PROTECTION
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**ENGINEERING CONTROLS** General ventilation should be provided so that exposure to airborne contaminants are not exceeded

**PERSONAL PROTECTIVE EQUIPMENT**

**Respiratory Protection** No protective equipment is needed under normal use conditions. Avoid breathing mists and dusts.

**Hand Protection** No protective equipment is needed under normal use conditions. If there is a potential for exposure, gloves should be worn.

**Skin Protection** No protective equipment is needed under normal use conditions.

**Eye Protection** Safety glasses should be used if there is a potential for exposure.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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<b>Appearance</b>	Clear green
<b>Physical State</b>	Liquid
<b>Odor</b>	mild fragrance
<b>pH</b>	1.1 – 1.5
<b>Melting/Freezing Point</b>	N/P
<b>Boiling Point</b>	N/AV
<b>Flash Point</b>	>200 F
<b>Evaporation Rate (water = 1)</b>	N/AV

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SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES	continued
Vapor Pressure	N/AV	
Vapor Density	N/AV	
Density (lb/gal)	N/AV	
Specific Gravity (water = 1)	1.22	
Solubility	Complete	
Volatile Organic Compounds (%)	N/D	
Viscosity (cps)	N/D	

SECTION 10	STABILITY / REACTIVITY
<b>Chemical Stability</b>	Material is stable and unlikely to react in a hazardous manner during recommended storage conditions and normal conditions of use.
<b>Reactivity / Incompatibility</b>	Strong oxidizing agents, strong acids, strong bases
<b>Hazardous Decomposition</b>	Material does not decompose at ambient temperature.
<b>Hazardous Polymerization</b>	Will not occur.

SECTION 11	TOXICOLOGICAL INFORMATION
<b>Product Toxicological Data</b>	
LD50 (Oral)	N/D
LC50 (Inhalation)	N/D
Dermal Toxicity Data (Skin)	N/D
Skin and Eye Irritation Data	N/D
Mutation Data	N/D
Reproductive Effects Data	N/D
<b>Ingredient Toxicological Data</b>	
LD50 (Oral)	N/AV
LC50 (Inhalation)	N/AV
Dermal Toxicity Data (Skin)	N/AV
Skin and Eye Irritation Data	N/AV
Mutation Data	N/AV
Reproductive Effects Data	N/AV

SECTION 12	ECOLOGICAL INFORMATION
<b>Product Ecological Information</b>	N/AV
<b>Ingredient Ecological Information</b>	N/AV

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**SECTION 13 DISPOSAL CONSIDERATIONS**

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**Waste Disposal** Follow all applicable federal, state, local and provincial regulations. It is the end-user's responsibility to determine the regulatory status of waste at the time of disposal.

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**SECTION 14 TRANSPORT INFORMATION**

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**LAND (DOT)**

<b>DOT Proper Shipping Name</b>	Corrosive Liquid, N.O.S. (contains sulfamic acid and citric acid), 8, UN 1760, PG II
<b>DOT Hazard Class</b>	8
<b>DOT Subsidiary Risk</b>	N/A
<b>DOT ID Number</b>	UN 1760
<b>DOT Packaging Group</b>	PG II

**SEA (IMDG)**

<b>IMDG Proper Shipping Name</b>	Corrosive Liquid, N.O.S. (contains sulfamic acid and citric), 8, UN 1760, PG II
<b>IMDG Hazard Class</b>	8
<b>IMDG Subsidiary Risk</b>	N/A
<b>IMDG ID Number</b>	UN 1760
<b>IMDG Packaging Group</b>	PG II

**AIR (IATA)**

<b>IATA Proper Shipping Name</b>	Corrosive Liquid, N.O.S. (contains sulfamic acid and citric), 8, UN 1760, PG II
<b>IATA Hazard Class</b>	8
<b>IATA Subsidiary Risk</b>	N/A
<b>IATA ID Number</b>	UN 1760
<b>IATA Packaging Group</b>	II

**Additional Information**

**DOT Shipping Description if quantities are equal to or less than 1.0 quart:** Corrosive Liquid, N.O.S. (contains sulfamic acid and citric acid), 8, UN 1760, PG II, Ltd Qty

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**SECTION 15 REGULATORY INFORMATION**

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**U.S. Federal Regulations**

<b>SARA Title III Section 311/312 Categorization (40 CFR 370)</b>	Acute – Immediate Hazard
<b>SARA Title III Section 313 Categorization (40 CFR 372)</b>	<i>This product contains a chemical(s)</i>
<b>subject to the reporting requirements of Section 313 of Title III of SARA:</b>	None
<b>302 (EHS) TPQ (40 CFR 355)</b>	None

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<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>	<b>continued</b>
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304 CERCLA RQ (302.4) None

304 EHS RQ (40 CFR 116.4) None

**State Regulations**

California Prop. 65 N/A

Identification of Prop. 65 Ingredient(s) N/A

**OSHA CLASSIFICATION** DANGER

**WHMIS CLASSIFICATION** D2B (Stylized T) and E (Corrosive Material)

*This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.*

**National Inventories**

TSCA	Yes	EINECS	N /AV
CEPA (DSL/NDSL)	Yes	ENCS	N /AV
AICS	N /AV	KECI	N /AV
IECSC	N /AV	PICCS	N /AV

<b>SECTION 16</b>	<b>OTHER INFORMATION</b>
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**N/D = Not Determined**      **N/A = Not Applicable**      **N/AV = Not Available**
**NFPA RATING**      Health (Blue): 2\*      Flammability (Red): 0      Reactivity (Yellow): 0  
\* In full concentration

**HMIS RATING**      Health (Blue): 2\*      Flammability (Red): 0      Reactivity (Yellow): 0  
\* In full concentration

**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS**
**Revision Changes**      Format changes and updated MSDS to reflect conditions at use (Sections 2,3,4,5,7, 9.10 and 13 were updated)

**USER RESPONSIBILITY**      Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations. Users need to determine hazards based on the concentrations being used.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE AND ON FULL CONCENTRATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

**Prepared By:** Corporate EHS Department of Diversified Chemical Technologies, Inc. and Subsidiaries