

MATERIAL SAFETY DATA SHEET**Product Name** DCT Liquid Auto-Dish Wash**MSDS Date** March 30, 2011**Revision No.** 12

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SECTION 1 **PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT

Product Name DCT Auto-Dish Wash
Product ID Number 130340
Product Description Detergent for automatic dishwashers

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**

SECTION 2 **COMPOSITION / INFORMATION ON INGREDIENTS**

Hazardous Ingredients	CAS Number	OSHA PEL	ACGIH TLV	OTHER	% WT
Sodium metasilicate	6834-92-0	15 mg/m3	10 mg/m3		1 - 5
TS 1012 – Trade Secret		2 mg/m3 C	2 mg/m3		5 – 15
Citric acid	77-92-9				1 – 10
TS 1068 – Trade Secret		2 mg/m3			15 – 25
TS 1086 – Trade Secret					1 – 10

SECTION 3 **HAZARDS IDENTIFICATION**

*****EMERGENCY OVERVIEW*******CORROSIVE****Harmful if swallowed.****Can cause chemical burns to eyes and/or skin upon direct contact.****Can be irritating to eyes, skin and/or respiratory tract if contact is frequent or prolonged.****PRIMARY ROUTES OF EXPOSURE** Eyes, Skin, Inhalation, Ingestion**TARGET ORGANS** Eyes, Skin, Respiratory System, Ingestion**POTENTIAL HEALTH EFFECTS****Acute Effects**

Inhalation May cause moderate to severe irritation to respiratory tract upon prolonged, repeated exposures.
Eye Can cause chemical burns upon direct contact. May cause moderate to severe irritation upon prolonged, repeated exposures.

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

Skin Can cause chemical burns upon direct contact. May cause moderate to severe skin irritation upon prolonged, repeated exposure.

Ingestion Harmful if swallowed.

Chronic Effects Product has not been tested as a whole to determine its long-term effects. The product does contain ingredients that potentially may affect the following target organs as a result from repeated excessive exposures: Eyes, Skin

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

Medical Conditions Aggravated by Long-Term Exposure Possible pre-existing dermatitis; dry skin conditions; Overexposure to mist may aggravate existing respiratory conditions

SECTION 4 **FIRST AID MEASURES**

INHALATION Remove to fresh air. Rest in half-upright position. 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. If conscious, milk or water to drink may be beneficial. Treat symptomatically. Get immediate medical attention. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN Treat symptomatically. It is advisable not to induce vomiting due to the risk of aspiration and it is not usually necessary unless a large amount has been ingested or it has been contaminated with another product. Gastric lavage under supervised medical conditions can be carried out if necessary.

SECTION 5 **FIRE FIGHTING MEASURES**

Flash Point none

Flash Point Method PMCC

Auto Ignition Temperature N/D

Flammable Limits

LEL N/D

UEL N/D

Appropriate Extinguishing Media Dry Chemical, Foam, CO2

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SECTION 5 FIRE FIGHTING MEASURES continued

Unusual Fire or Explosion Hazards Contaminated water runoff may cause environmental damage. Dike and collect water used to fight fire.

Fire Fighting Instructions Firefighters should wear self-contained breathing apparatus (SCBA) and protection for skin. Stay away from ends of containers during a fire; containers may explode due to pressure build-up inside if heated. 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.

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. National Response Center [Reporting – 24 HR (800) 424-8802]

GENERAL Stop leak if you can do so without risk. Contain spillage and prevent entry into sewer drains and watercourses. 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. For industrial use only. Keep out of reach of children.

SPILL OR LEAK PROCEDURES Confine spillage 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

HANDLING Avoid contact with skin, eyes, and clothing. Wear suitable protective equipment (see Section 8).
Avoid breathing mist or vapor – use only in a well-ventilated area.
Unvented containers may develop pressure – use with caution.
Wash skin thoroughly after handling.
Eyewash stations and safety showers should be easily accessible to area where product is used.

Loading/Unloading Temperature	[Ambient]
Transport Temperature	[Ambient]
Transport Pressure	[Ambient]
Static Accumulator	N/D

STORAGE Store in dry conditions protected from frost and elevated temperatures – covered storage is recommended.
Keep containers closed when not in use.
Store away from incompatible materials (see Section 10).
Long-term storage temperatures should not exceed 120° F.

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SECTION 7**HANDLING AND STORAGE****continued**

Keep away from sparks, heat and flame.
Do not mix with oxidizing materials.

SECTION 8**EXPOSURE CONTROLS / PERSONAL PROTECTION**

ENGINEERING CONTROLS

The level of ventilation necessary will vary depending upon potential exposure conditions. Control measures to consider:

Ventilation

Adequate ventilation should be provided so that exposure limits are not exceeded (see Section 2 for exposure limits). If heavy misting is present, local exhaust ventilation should be considered in addition to general mechanical ventilation.

ADMINISTRATIVE CONTROLS

The level of protection necessary will vary depending upon potential exposure conditions. Control measures to consider:

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal use.

Respiratory Protection

If vapors or mists are present and if engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, a NIOSH/MSHA approved respirator may be appropriate. Respirator selection, use and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: **Air-Purifying Half-Face Respirator with Organic Vapor /Mists and HEPA Filter Cartridges**

Hand Protection

Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: **Chemical-resistant Neoprene or PVC**

Eye Protection

If contact is likely, safety glasses with side shields are recommended. If splashing is likely, safety goggles or safety glasses with splash shield are required.

Skin and Body Protection

Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: Long-sleeved shirt and pants, at a minimum. If prolonged or repeated contact is likely, chemical-resistant clothing is recommended.

Other Protective Equipment

Emergency eyewash/safety shower in immediate area(s).

Specific Hygiene Measures

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SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION continued

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing separate from home laundry and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Do not store work clothing and protective equipment in the same locker as personal clothing.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear red
Physical State	Liquid
Odor	mild
pH	12.3 – 12.8
Vapor Pressure	N/AV
Vapor Density	N/AV
Boiling Point	N/AV
Melting Point	N/P
Specific Gravity (water = 1)	1.20 – 1.22
Evaporation Rate (water = 1)	N/AV
Volatile Organic Compounds (%)	N/D
Solubility	Complete
Viscosity (cps)	N/D

SECTION 10 STABILITY / REACTIVITY

Chemical Stability

Material is stable and unlikely to react in a hazardous manner during recommended storage conditions and normal conditions of use.

Conditions to Avoid Reactive metals such as aluminum, tin, zinc, and alloys containing these metals; High temperatures and extremely low temperatures

Reactivity / Incompatibility Strong oxidizing agents, acids

Hazardous Decomposition

Material does not decompose at ambient temperature. Thermal decomposition can produce a variety of compounds, the nature of which will largely depend on the conditions bringing about decomposition. Incomplete combustion or thermal decomposition may be expected to generate such materials as: particulate matter and unburned, hydrocarbons; oxides of carbon; water vapor; and other unidentified organic and inorganic compounds.

Hazardous Polymerization Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Product Toxicological Data

LD50 (Oral)	N/D
LC50 (Inhalation)	N/D

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SECTION 11	TOXICOLOGICAL INFORMATION	continued
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Dermal Toxicity Data (Skin)	N/D
Skin and Eye Irritation Data	N/D
Mutation Data	N/D
Reproductive Effects Data	N/D

Ingredient Toxicological Data

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
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Product Ecological Information N/AV

Ingredient Ecological Information N/AV

SECTION 13	DISPOSAL CONSIDERATIONS
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EPA Waste ID Number

Check pH before disposal. If pH is equal to, or greater than, 12.5, the material exhibits the corrosive characteristic (D002) and is considered RCRA-hazardous. If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.

Waste Disposal

Recycling or incineration is preferred method of disposal. Dispose of contaminated water in a contained waste treatment system. 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.

Empty Containers

Empty containers may still contain RCRA-regulated residuals; therefore, clean empty containers of any residue per 40CFR261.7 guidelines and either recycle containers or dispose of according to applicable regulations.

SECTION 14	TRANSPORT INFORMATION
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LAND (DOT)

DOT Proper Shipping Name	Corrosive Liquid, N.O.S. (contains sodium metasilicate and other proprietary alkaline ingredients), 8, UN 1760, PG III, RQ = 1000-lb
DOT Hazard Class	8

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SECTION 14	TRANSPORT INFORMATION	continued
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DOT Subsidiary Risk	N/AP
DOT ID Number	UN 1760
DOT Packaging Group	PG III

SEA (IMDG)

IMDG Proper Shipping Name	Corrosive Liquid, N.O.S. (contains sodium metasilicate and other proprietary alkaline ingredients), 8, UN 1760, PG III, RQ = 1000-lb
IMDG Hazard Class	8
IMDG Subsidiary Risk	N/AP
IMDG ID Number	UN 1760
IMDG Packaging Group	PG III

AIR (IATA)

IATA Proper Shipping Name	Corrosive Liquid, N.O.S. (contains sodium metasilicate and other proprietary alkaline ingredients), 8, UN 1760, PG III, RQ = 1000-lb
IATA Hazard Class	8
IATA Subsidiary Risk	N/AP
IATA ID Number	UN 1760
IATA Packaging Group	PG III

Additional Information	DOT Shipping Description if quantities are equal to or less than 1 gallon: Corrosive Liquid, N.O.S. (contains sodium metasilicate and other proprietary alkaline ingredients), 8, UN 1760, PG III, Ltd Qty DOT Label/Placard if quantities are equal to or less than 1 gallon: none required
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SECTION 15	REGULATORY INFORMATION	
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U.S. Federal Regulations

SARA Title III Section 311/312 Categorization (40 CFR 370)	Acute – Immediate Hazard
SARA Title III Section 313 Categorization (40 CFR 372)	<i>This product contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA:</i> None
302 (EHS) TPQ (40 CFR 355)	None
304 CERCLA RQ (302.4)	None
304 EHS RQ (40 CFR 116.4)	None

State Regulations

California Prop. 65	N/AP
Identification of Prop. 65 Ingredient(s)	N/AP

OSHA CLASSIFICATION	DANGER
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SECTION 15**REGULATORY INFORMATION**

continued

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

Additional Information NONE**SECTION 16****OTHER INFORMATION**

N/D = Not Determined

N/A = Not Applicable

N/AV = Not Available

NFPA RATING Health (Blue): 2 Flammability (Red): 0 Reactivity (Yellow): 0
Specific Hazard(s) (White): COR/ALK

HMIS RATING Health (Blue): 2 Flammability (Red): 0 Reactivity (Yellow): 0
Personal Protective Equipment: C or D

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS**Revision Changes** Transposed to 16-Section (EU) format; formula changes

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.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. 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 Environment/Health and Safety Department of Diversified Chemical Technologies, Inc. and Subsidiaries