

Detritylation DCA in DCM (622)

Version 1

Revision Date 07/03/2008

Print Date 07/03/2008

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Detritylation DCA in DCM (622)
MSDS Number : 000000011350
Product Use Description : Laboratory Use

Company : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701**
: **Transportation: 1-800-424-9300 or +1-703-527-3887**
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid, clear

Color : colourless

Odor : mild sweet

Hazard Summary : Corrosive. Causes burns. May be harmful if swallowed. May be harmful if inhaled. May be harmful if absorbed through skin. Irritating to eyes, respiratory system and skin. Repeated exposure may cause skin dryness or cracking. Potential cancer hazard. Possible risk of harm to the unborn child.

Potential Health Effects

Skin : Causes skin burns.
May be harmful if absorbed through skin.
May cause systemic poisoning with symptoms paralleling those of inhalation.
Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.

Eyes : Causes eye burns.
May cause corneal injury.

Ingestion : Causes digestive tract burns.
May cause systemic poisoning with symptoms paralleling those

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- of inhalation.
- Inhalation** : May be fatal if inhaled in large quantities.
 Inhaled corrosive substances can lead to a toxic oedema of the lungs.
 Causes headache, drowsiness or other effects to the central nervous system.
 Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
 Exposure to high concentrations can lead to increased carboxyhemoglobin levels in the blood. Carboxyhemoglobin can lead to central nervous system depression, respiratory failure and death by decreasing the oxygen carrying capacity of blood.
 Persons who smoke tobacco products will experience an intensified elevation of carboxyhemoglobin levels.
- Chronic Exposure** : Causes damage to the following organs: liver, kidneys.
 Repeated and prolonged exposure to solvents may cause brain and nervous system damage.
 Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.
 Potential cancer hazard.
- Aggravated Medical Condition** : Respiratory disorders
 Eye disorders
 Skin disorders
 Blood disorders
 Kidney disorders
 Liver disorders
 Neurological disorders
 Heart disease
 Do not use if pregnant.
- Target Organs** : Eyes
 Skin
 Cardiovascular system
 Central nervous system
 Respiratory system
 Gastrointestinal tract

Carcinogenicity

NTP:	Dichloromethane	75-09-2
IARC:	Dichloromethane	75-09-2
	Dichloroacetic acid	79-43-6
OSHA:	Dichloromethane	75-09-2

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ACGIH:	Dichloromethane	75-09-2
	Dichloroacetic acid	79-43-6

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Dichloromethane	75-09-2	96.50
Dichloroacetic acid	79-43-6	3.50

SECTION 4. FIRST AID MEASURES

Inhalation : Call a physician immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician immediately.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician immediately.

Notes to physician

Treatment : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Flash point : >98.9 °C (210.0 °F)
closed cup
The physical data is that of the main component.

Ignition temperature : 556 °C (1,033 °F)
The physical data is that of the main component.

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Lower explosion limit	:	12 %(V) The physical data is that of the main component.
Upper explosion limit	:	19 %(V) The physical data is that of the main component.
Suitable extinguishing media	:	Dry chemical Carbon dioxide (CO ₂) Foam Cool closed containers exposed to fire with water spray.
Specific hazards during fire fighting	:	This product is not flammable at ambient temperatures and atmospheric pressure. In case of fire hazardous decomposition products may be produced such as: Gaseous hydrogen chloride (HCl). Phosgene Chlorine (Cl ₂) Carbon monoxide Carbon dioxide (CO ₂)
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Wear personal protective equipment. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Isolate the affected area. Confine entry into the affected area to those persons properly protected (see Section 8 of MSDS). Do not swallow. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Methods for cleaning up	:	Ventilate the area. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Shovel into suitable container for disposal. Dispose of absorbed material in accordance with the regulations.

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SECTION 7. HANDLING AND STORAGE**Handling**

Handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.
Keep product and empty container away from heat and sources of ignition.
Fire or intense heat may cause violent rupture of packages.

Storage

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.
Store away from incompatible substances.
Container hazardous when empty.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Engineering measures : Use with local exhaust ventilation.
Prevent vapor buildup by providing adequate ventilation during and after use.

Eye protection : Do not wear contact lenses.
Wear as appropriate:
Safety glasses with side-shields
If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes

Hand protection : Solvent-resistant gloves
Gloves must be inspected prior to use.
Replace when worn.

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- Skin and body protection** : Wear as appropriate:
 Solvent-resistant apron
 Solvent-resistant gloves
 If splashes are likely to occur, wear:
 Protective suit
- Respiratory protection** : In case of insufficient ventilation wear suitable respiratory equipment.
 For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
 Use NIOSH approved respiratory protection.
- Hygiene measures** : When using, do not eat, drink or smoke.
 Wash hands before breaks and immediately after handling the product.
 Keep working clothes separately.
 Remove and wash contaminated clothing before re-use.
 Do not swallow.
 Do not breathe vapours or spray mist.
 Do not get in eyes, on skin, or on clothing.
 This material has an established AIHA ERPG exposure limit.
 The current list of ERPG exposure limits can be found at <http://www.aiha.org/1documents/Committees/ERP-erpglevels.pdf>.

Exposure Guidelines

Dichloromethane	75-09-2	ACGIH	TWA	50 ppm
		OSHA	TWA	25 ppm
		OSHA	STEL	125 ppm
		OSHA	OSHA_ACT	12.5 ppm

Skin designation:
 Can be absorbed through the skin.

US CA OEL	TWA PEL	25 ppm	87 mg/m ³
US CA OEL	STEL	125 ppm	435 mg/m ³
US CA OEL	TWA A LV		12.5 ppm

Dichloroacetic acid	79-43-6	ACGIH	TWA	0.5 ppm
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Skin designation:
 Can be absorbed through the skin.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid, clear
Color	: colourless
Odor	: mild sweet
pH	: 2 at 10 g/l(as aqueous solution)
Melting point/range	: -95 °C (-139 °F) The physical data is that of the main component.
Boiling point/boiling range	: 40 °C (104 °F) The physical data is that of the main component.
Vapor pressure	: 466 hPa at 20 °C (68 °F)
Relative vapour density	: 2.9 (Air = 1.0)
Density	: 1.33 g/cm ³ at 20 °C (68 °F)
Water solubility	: partly soluble

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Heat, flames and sparks. Protect from extreme heat and cold. Keep away from direct sunlight.
Materials to avoid	: Oxidizing agents Strong acids and strong bases Metals May attack many plastics, rubbers and coatings.
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Phosgene Hydrogen chloride gas Carbon monoxide Carbon dioxide (CO ₂) Chlorine
Hazardous reactions	: Hazardous polymerisation does not occur.

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Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50 rat Dose: 1,600 mg/kg Test substance: Dichloromethane
Acute oral toxicity	: LD50 rat Dose: 2,820 mg/kg Test substance: Dichloroacetic acid
Acute dermal toxicity	: LD50 rabbit Dose: > 2,000 mg/kg Test substance: Dichloromethane
Acute dermal toxicity	: LD50 rabbit Dose: 510 mg/kg Test substance: Dichloroacetic acid
Acute inhalation toxicity	: LC50 mouse Dose: 14400 ppm Exposure time: 7 h Test substance: Dichloromethane
Skin irritation (Component)	Component: 75-09-2 Dichloromethane rabbit Moderate skin irritation
Skin irritation (Component)	Component: 79-43-6 Dichloroacetic acid rabbit Corrosive
Eye irritation (Component)	Component: 75-09-2 Dichloromethane rabbit Moderate eye irritation
Eye irritation (Component)	Component: 79-43-6 Dichloroacetic acid rabbit Corrosive
Repeated dose toxicity	: rat Carcinogenicity, Liver tumors Exposure time: 2 Years Test substance: Dichloromethane
Genotoxicity in vitro	: Ames test positive
Genotoxicity in vitro	: In vitro gene mutation study in mammalian cells

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	Chinese Hamster Ovary Cells positive
Genotoxicity in vitro	: Unscheduled DNA synthesis positive Liver cells, mouse
Additional advice	: Contains material which may cause cancer based on animal data. Based on Animal Evidence Potential embryo-foetal toxicity and teratogenicity.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish	: flow-through test LC50 Species: Pimephales promelas (fathead minnow) Dose: 193 mg/l Exposure time: 96 h Test substance: Dichloromethane
Toxicity to fish	: static test LC50 Species: Pimephales promelas (fathead minnow) Dose: 310 mg/l Exposure time: 96 h Test substance: Dichloromethane
Toxicity to fish	: flow-through test LC50 Species: Oncorhynchus mykiss (rainbow trout) Dose: 10.95 mg/l Exposure time: 96 h Test substance: Dichloromethane
Toxicity to fish	: static test LC50 Species: Bluegill sunfish Dose: 220 mg/l Exposure time: 96 h Test substance: Dichloromethane
Toxicity to daphnia and other aquatic invertebrates.	: LC50 Species: Daphnia magna (Water flea) Dose: 224 mg/l Exposure time: 48 h Test substance: Dichloromethane
Toxicity to bacteria	: EC50 Species: Photobacterium phosphoreum Dose: 1,000 mg/l Exposure time: 15 min

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Test substance: Dichloromethane

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Information: Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	UN-Number	:	2922
	Proper shipping name	:	Corrosive liquid, toxic, n.o.s. (Dichloroacetic acid , Dichloromethane)
	Class	:	8
	Packing group	:	II
	Hazard Label	:	8 (6.1)
IATA	UN Number	:	2922
	Description of the goods	:	Corrosive liquid, toxic, n.o.s. (Dichloroacetic acid, Dichloromethane)
	Class	:	8
	Packaging group	:	II
	Hazard Label	:	8 (6.1)
	Packing instruction (cargo aircraft)	:	812
	Packing instruction (passenger aircraft)	:	808
	Packing instruction (passenger aircraft)	:	Y808
IMDG	Substance No.	:	UN 2922
	Description of the goods	:	Corrosive liquid, toxic, n.o.s. (DICHLOROACETIC ACID , DICHLOROMETHANE)
	Class	:	8
	Packaging group	:	II
	Hazard Label	:	8 (6.1)
	EmS Number	:	F-A
	Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

Inventories

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EU. EINECS	:	On the inventory, or in compliance with the inventory
US. Toxic Substances Control Act	:	On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	:	On the inventory, or in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	:	All components of this product are on the Canadian DSL list.
Japan. Kashin-Hou Law List	:	On the inventory, or in compliance with the inventory
Korea. Toxic Chemical Control Law (TCCL) List	:	On the inventory, or in compliance with the inventory
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	:	On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances	:	On the inventory, or in compliance with the inventory
Switzerland. Consolidated Inventory	:	On the inventory, or in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	:	On the inventory, or in compliance with the inventory

National regulatory information

SARA 313 Components	:	Dichloromethane	75-09-2
SARA 311/312 Hazards	:	Acute Health Hazard Chronic Health Hazard	
CERCLA Reportable Quantity	:	1031 lbs	

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California Prop. 65	:	WARNING! This product contains a chemical known in the State of California to cause cancer.	
		Dichloromethane	75-09-2
		Dichloroacetic acid	79-43-6
Massachusetts RTK	:	Dichloromethane	75-09-2
New Jersey RTK	:	Dichloromethane	75-09-2
	:	Dichloroacetic acid	79-43-6
Pennsylvania RTK	:	Dichloromethane	75-09-2
WHMIS Classification	:	D1B	
		D2A	
		D2B	
		E	

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health Hazard	: 3*	3
Flammability	: 1	1
Physical Hazard	: 0	
Instability	:	0

Further information

* - Chronic health hazard