SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Detritylation
MSDS Number	:	000000011350
Product Use Description	:	Laboratory Use
Manufacturer or supplier's details	:	Honeywell International Inc. 115 Tabor Road Morris Plains, NJ 07950-2546
For more information call	:	1-800-368-0050 +1-231-726-3171 (Monday-Friday, 9:00am-5:00pm)
In case of emergency call	:	**Medical: 1-800-498-5701 or +1-303-389-1414**
	:	**Transportation (CHEMTREC): 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

Classification of the substance or mixture

Classification of the substance or mixture	:	Skin corrosion, Category 1A Serious eye damage, Category 1 Carcinogenicity, Category 2 Reproductive toxicity, Category 2

GHS Label elements, including precautionary statements

Symbol(s) :

Signal word : Danger

Hazard statements : Causes severe skin burns and eye damage.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash skin thoroughly after handling.
Wear protective gloves/ eye protection/ face protection.

Response:
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/ physician.
Wash contaminated clothing before reuse.

Storage:
Store locked up.

Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity

NTP:	Dichloromethane	75-09-2
	Reasonably Anticipated to be a Human Carcinogen.	

IARC:	Dichloromethane	75-09-2
	Group 2B: Possibly carcinogenic to humans	
	Dichloroacetic acid	79-43-6
	Group 2B: Possibly carcinogenic to humans	
OSHA:	Dichloromethane	75-09-2
ACGIH:	Dichloromethane	75-09-2
	A3: Confirmed animal carcinogen	
	Dichloroacetic acid	79-43-6
	A3: Confirmed animal carcinogen	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Chemical Name	CAS-No.	Concentration
Dichloromethane	75-09-2	96.50 - 97.10 %
Dichloroacetic acid	79-43-6	2.90 - 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. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical Carbon dioxide (CO2) Foam Cool closed containers exposed to fire with water spray.
Specific hazards during firefighting	:	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 (Cl2) Carbon monoxide Carbon dioxide (CO2)
Special protective equipment for firefighters	:	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. Do not let product enter drains. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.
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.

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 vapour 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.
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/insideaiha/GuidelineDevelopment/ERPG/Documents/2011erpgweelhandbook_table-only.pdf.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Dichloromethane	75-09-2	TWA : time weighted average	(50 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Dichloromethane	75-09-2	REF : Reference:	29 CFR 1910.1052	03 2012	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Dichloromethane	75-09-2	TWA : time weighted average	(25 ppm)	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Dichloromethane	75-09-2	OSHA_ACT : OSHA Action level:	(12.5 ppm)	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Dichloromethane	75-09-2	STEL : Short term exposure limit	(125 ppm)	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Dichloroacetic acid	79-43-6	SKIN_DES : Skin designation:	Can be absorbed through the skin.	2008	ACGIH:US. ACGIH Threshold Limit Values

Dichloroacetic acid	79-43-6	TWA : time weighted average	(0.5 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid, clear

Color : colourless

Odor : mild sweet

pH : 2 at 10.00 g/l
Note: (as aqueous solution)

Melting point/freezing point : -95 °C
Note: The physical data is that of the main component.

Boiling point/boiling range : 40 °C
Note: The physical data is that of the main component.

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

Lower explosion limit : 12 %(V)
Note: The physical data is that of the main component.

Upper explosion limit : 19 %(V)
Note: The physical data is that of the main component.

Vapor pressure : 466 hPa
at 20 °C(68 °F)

Vapor density : 2.9 Note: (Air = 1.0)

Density	:	1.33 g/cm3 at 20 °C
Water solubility	:	Note: partly soluble
Ignition temperature	:	556 °C Method: The physical data is that of the main component.

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Conditions to avoid	:	Heat, flames and sparks. Protect from extreme heat and cold. Keep away from direct sunlight.
Incompatible 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 (CO2) Chlorine

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

Dichloroacetic acid	:	LD50: 2,820 mg/kg Species: rat

Acute dermal toxicity

Dichloromethane	:	LD50: > 2,000 mg/kg Species: rat
Dichloroacetic acid	:	LD50: 510 mg/kg Species: rabbit

Skin irritation

Dichloromethane	:	Species: rabbit Result: Moderate skin irritation
Dichloroacetic acid	:	Species: rabbit Result: Severe skin irritation Classification: Corrosive

Eye irritation

Dichloromethane	:	Species: rabbit Result: Moderate eye irritation
Dichloroacetic acid	:	Species: rabbit Result: Severe eye irritation Classification: Corrosive
Dichloromethane	:	Test Method: Ames test Result: positive
	:	Test Method: In vitro gene mutation study in mammalian cells Cell type: Chinese Hamster Ovary Cells Result: positive
	:	Test Method: Unscheduled DNA synthesis Result: positive Note: Liver cells mouse

Further information

Dichloromethane : Note:
Confirmed animal carcinogen with unknown relevance to humans.

Dichloroacetic acid : Note:
Contains material which may cause cancer based on animal data.
Based on Animal Evidence
This product may cause adverse reproductive effects.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish

Dichloromethane : static test
LC50: 310 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

flow-through test
LC50: 193 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

flow-through test
LC50: 10.95 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

static test
LC50: 220 mg/l
Exposure time: 96 h
Species: Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia and other aquatic invertebrates

Dichloromethane : static test
EC50: 140 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to bacteria
Dichloromethane : EC50: 1,000 mg/l
Exposure time: 15 min
Species: Photobacterium phosphoreum

Further information on ecology

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	UN/ID No.	:	UN 2922
	Proper shipping name	:	CORROSIVE LIQUID, TOXIC, N.O.S. (Dichloroacetic acid, Dichloromethane)
	Class		8
	Packing group		II
	Hazard Labels		8 (6.1)
IATA	UN/ID No.	:	UN 2922
	Description of the goods	:	CORROSIVE LIQUID, TOXIC, N.O.S. (Dichloroacetic acid, Dichloromethane)
	Class	:	8
	Packaging group	:	II
	Hazard Labels	:	8 (6.1)
	Packing instruction (cargo aircraft)	:	855
	Packing instruction (passenger aircraft)	:	851
	Packing instruction (passenger aircraft)	:	Y840
IMDG	UN/ID No.	:	UN 2922
	Description of the goods	:	CORROSIVE LIQUID, TOXIC, N.O.S. (DICHLOROACETIC ACID, DICHLOROMETHANE)
	Class	:	8
	Packaging group	:	II

Hazard Labels	:	8 (6.1)
EmS Number	:	F-A, S-B
Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

Inventories

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)	:	All components of this product are on the Canadian DSL.
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
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	:	On the inventory, or in compliance with the inventory

National regulatory information

US. EPA CERCLA Hazardous Substances (40 CFR 302)	:	The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

		Reportable quantity: 1000 lbs
	: Dichloromethane	75-09-2
SARA 302 Components	: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.	
SARA 313 Components	: The following components are subject to reporting levels established by SARA Title III, Section 313:	
	: Dichloromethane	75-09-2
SARA 311/312 Hazards	: Acute Health Hazard Chronic Health Hazard	
CERCLA Reportable Quantity	: 1031 lbs	
California Prop. 65	: WARNING! This product contains a chemical known to the State of California to cause cancer.	
	Dichloromethane	75-09-2
	Dichloroacetic acid	79-43-6
	: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.	
	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: Toxic Material Causing Immediate and Serious Toxic	

Effects
D2A: Very Toxic Material Causing Other Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects
E: Corrosive Material
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

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

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

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