

1. Product and Company Identification

Product Codes: 40-4240-XX
Product Name: Detritylation
Product Use: For Research Use Only
Manufacturer Information
Company Name: Glen Research LLC
22825 Davis Drive, #100
Sterling, VA 20164 USA
Phone Number: +1-703-437-6191
Web Site Address: www.glenresearch.com
Email Address: msds@glenres.com
Information in case of emergency: Chemtrec, 800-424-9300; Outside USA +1-703-527-3887

2. Hazards Identification



Pictograms:

Signal Words: Danger

GHS Hazard Statements

H225: Highly Flammable Liquid and Vapor.
H304: May be fatal if swallowed and enters airways.
H314: Causes severe skin burns and eye damage.
H336: May cause drowsiness or dizziness.
H361: Suspected of damaging fertility or the unborn child.
H371: May cause damage to organs.
H401: Toxic to aquatic life.

GHS Precautionary Statements

P103: Read label before use.
P210: Keep away from heat/sparks/open flames/hot surfaces – No Smoking.
P233: Keep container tightly closed.
P260: Avoid breathing fumes or vapors.
P270: Do not eat, drink or smoke when using this product
P271: Use only in a well ventilated area.
P280: Wear protective gloves / protective clothing / eye protection / face protection.

GHS Response Statements

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+350: IF ON SKIN: Gently wash with soap and water.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so - continue rinsing.
P306+360: IF ON CLOTHING: Rinse contaminated clothing and skin immediately with plenty of water before removing clothes.
P331: Do NOT induce vomiting.

GHS Storage and Disposal Phrases

P403+233: Store in a well-ventilated place. Keep container tightly closed.
P501: Dispose of contents / container in a safe way in accordance with all federal, state and local regulations.

Emergency Overview

Flammable Liquid, Target organ effect, Teratogen, Reproductive hazard, Irritant.

Target Organs

Kidney, Bladder, Liver, Brain, Central Nervous System

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Product 40-4240-XX

3. Composition/Information on Ingredients

Product Name	CAS #	EC-No	Concentration	M.W.	Formula
Toluene	108-88-3	203-625-9	97%	92.14 g/mol	C ₇ H ₈
Dichloroacetic acid	79-43-6	200-927-2	3%	163.39 g/mol	CHCl ₃ O ₂

4. First Aid Measures

Emergency and First Aid Procedures

If inhaled:

Remove to fresh air. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness. If not breathing, give artificial respiration. Get medical attention.

In case of skin contact:

Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Wash clothing before reuse. Get medical attention.

If swallowed:

Rinse mouth with water. Do NOT induce vomiting. Aspiration Hazard – can enter lungs and cause damage. Get medical attention.

If in contact with eyes:

Rinse cautiously with water for several minutes. Remove contact lenses if present and safe to do so. Continue rinsing. Get medical attention.

Signs and Symptoms of Exposure

Lung irritation, chest pain, and pulmonary edema. Inhalation studies on toluene have demonstrated the development of inflammatory and ulcerous lesions of the penis, prepuce and scrotum in animals.

Treatment

Treat symptomatically.

5. Fire Fighting Measures

Suitable Extinguishing Media

Use a Class A Extinguisher (Dry chemical, carbon dioxide, water or foam). For large fires, apply water from as far away as possible. Use very large quantities of water applied as mist or spray. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire fighters

Wear self-contained breathing apparatus (SCBA) for fire fighting if necessary.
Wear protective clothing to prevent contact with skin and eyes.

Flammable Properties and Hazards

Highly flammable liquid and vapor. Vapor may travel distances to sources of ignition.

6. Accidental Release Measures

Personal Precautions

Avoid breathing vapors. Evacuate personnel to safe areas.

Protective equipment

Use personal protective equipment. Avoid contact with skin, eyes, and clothing.

Emergency procedures

Remove all sources of ignition. Vapors may travel distances to sources of ignition. Ensure adequate ventilation.

Methods and Material for containment and cleaning up.

Absorb spillage with sand, absorbent pads. Do not let product enter the drain. Wear impermeable gloves, safety glasses and a lab coat when cleaning up the spill. Dispose of absorbent and spillage in compliance with local and state regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Handle using safe laboratory practices. Avoid all direct contact. Use explosion proof equipment. Keep away from sources of ignition – No Smoking. Take measures to prevent the build up of electrostatic charges.

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Recommended Storage

Controlled room temperature.

Precautions To Be Taken in Storing

Keep container tightly closed. Store in well-ventilated place.

Other Precautions

Protect from sunlight.

8. Exposure Controls/Personal Protection

Product Name	CAS #	OSHA PEL (TWA)	ACGIH TLV	OSHA (STEL)
Toluene	108-88-3	100 ppm	20 ppm	150 ppm
Dichloroacetic acid	79-43-6	N/A	1 ppm	N/A

Engineering Controls (Ventilation etc.)

Local exhaust ventilation is usually sufficient.

Respiratory Equipment (Specify Type)

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye Protection

Safety glasses with side shields. Wear splash resistant goggles or face shield if splashes are likely to occur.

Protective Gloves

Impermeable, chemically resistant gloves.

Other Protective Clothing

Lab coat, chemical resistant lab coat, protective chemical suit, based on risk assessment of activities.

Work/Hygienic/Maintenance Practices

Wash hands after handling. Do not eat, drink, or smoke when using this product.

9. Physical and Chemical Properties

Physical State:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Appearance:	Liquid, clear.
Odor:	No data
Odor Threshold:	No data
pH:	No data
Melting Point:	No data
Initial Boiling Point and Boiling Range:	No data
Flash Point:	No data
Specific Gravity:	0.89g/mL
Evaporation Rate:	No data
Flammability:	Highly flammable
Explosive Limits:	LEL: No data UEL: No data
Vapor Pressure (vs. Air or mm Hg):	No data
Vapor Density (vs. Air = 1):	No data
Solubility in Water:	Not miscible
Partition Coefficient (n-octanol/water):	Log Pow: N/A
Auto-ignition Temperature:	No data
Decomposition Temperature:	No data
Viscosity:	No data
Percent Volatile:	No data

10. Stability and Reactivity

Reactivity

Stable material, hazardous polymerization will not occur.

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Chemical Stability: Unstable [] Stable [X]

Possibility of Hazardous Reactions:

Vapors may form explosive mixture with air.

Conditions To Avoid - Instability

Heat, flames, and sparks. Extremes of temperature and direct sunlight.

Incompatibility - Materials To Avoid

Oxidizing agents, Oxygen. May attack plastics, rubber, and coatings.

Hazardous Decomposition or Byproducts

Oxides of carbon, Hydrogen chloride, Chlorine gas

11. Toxicological Information

Route(s) of Entry:

Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes

Acute Toxicity

No data

Skin corrosion/irritation

Causes severe skin burns

Serious eye damage/ eye irritation

Serious Eye Damage

Respiratory or skin sensitization

No data available

Germ Cell mutagenicity

Genotoxicity in vitro – rat – liver; DNA damage

Carcinogenicity

Product Name	CAS #	NTP	IARC	OSHA
Toluene	108-88-3	Not listed	Group 3	Not listed
Dichloroacetic acid	79-43-6	Not listed	Not listed	Not listed

Group 3: Not classifiable as to its carcinogenicity to humans (Toluene).

Reproductive toxicity

No data available

Specific target organ toxicity – single exposure (GHS)

May cause respiratory irritation

Specific target organ toxicity – repeated exposure (GHS)

DNA damage

Aspiration hazard

Yes

Medical Conditions Generally Aggravated By Exposure

No data available.

To the best of our knowledge, the toxicological properties of this substance have not been investigated.

This product should be handled with the usual care when dealing with chemicals.

12. Ecological Information

Ecotoxicity

Lepomis macrochirus (Bluegill) LC50 96 hour 74,340 mg/L

Oncorhynchus mykiss (Rainbow Trout) 96 hour 8 mg/L

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

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13. Disposal Considerations

Waste Disposal Method

Observe all federal, state and local regulations. For Contaminated Packaging - dispose of in compliance with regulations. Contact a licensed professional waste disposal service for proper disposal. Burn in a chemical incinerator equipped with afterburner and scrubber.

14. Transport Information

LAND TRANSPORT (49CFR)

UN Number – UN2924, Class 3, (8) Packing Group II
Proper Shipping Name: Flammable Liquid, Corrosive N.O.S. (Toluene, Dichloroacetic acid Solution)
Reportable Quantity (RQ) 1000 lbs
Marine Pollutant: No
Poison Inhalation Hazard (PIH): No

AIR TRANSPORT (ICAO/IATA)

UN Number – UN2924, Class 3, (8) Packing Group II
Proper Shipping Name: Flammable Liquid, Corrosive N.O.S. (Toluene, Dichloroacetic acid Solution)

MARINE TRANSPORT (IMDG/IMO)

UN Number – UN2924, Class 3, (8) Packing Group II, EMS-No F-E, S-C
Proper Shipping Name: Flammable Liquid, Corrosive N.O.S. (Toluene, Dichloroacetic acid Solution)
Marine Pollutant: No

15. Regulatory Information

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

Toluene 108-88-3

SARA 311/312

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right to Know Components

Toluene 108-88-3
Dichloroacetic acid 79-43-6

Pennsylvania Right to Know Components

Toluene 108-88-3
Dichloroacetic acid 79-43-6

New Jersey Right to Know Components

Toluene 108-88-3
Dichloroacetic acid 79-43-6

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Toluene 108-88-3
Dichloroacetic acid 79-43-6

16. Other Information

For all other inquiries about this product contact Glen Research at 1-800-327-GLEN or 1-703-437-6191.

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