SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 02-Jul-2024 **Revision Number** 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Catalog Number:	Product Description:
40-4240-XX	3% DCA in Toluene

Product Code(s)
40-4240-XX

Product Name
Deblocking Mix

Synonyms Methyl cyanide, ACN

Pure substance/mixture Substance
Contains Toluene; Dichloroacetic acid

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use For research use only

Uses advised against Not for human diagnostic use

1.3. Details of the supplier of the safety data sheet

Manufacturer
Glen Research LLC
22825 Davis Drive
Sterling, VA 20164 USA

For further information, please contact

E-mail address support@glenresearch.com

Website www.glenresearch.com

Company Phone Number 1-703-437-6191

1.4. Emergency telephone number

Emergency Telephone CHEMTREC Customer Number (CCN): 234802 Glen Research Corporation
US: 1-800-424-9300 or Local: +1-703-527-3887
EMEA: +44 20 3885 0382
APAC: +65 3163 8374

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to
Regulation (EC) No. 1272/2008 [CLP]

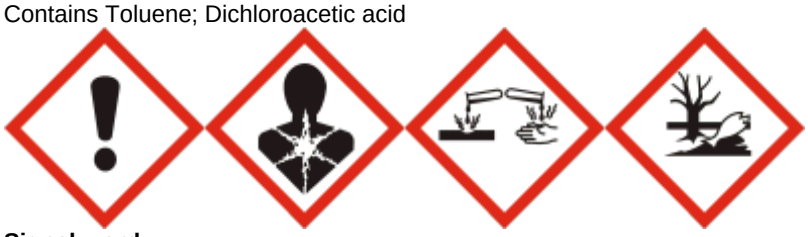
Aspiration hazard	Category 1 - (H304)
Skin corrosion/irritation	Category 2 - (H315)

Serious eye damage/eye irritation	Category 1 - (H318)
Reproductive toxicity	Category 2 - (H361)
Specific target organ toxicity (single exposure)	Category 3 - (H336)
Category 3 Narcotic effects	
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)
Chronic aquatic toxicity	Category 2 - (H411)

- (H225)

2.2. Label elements

Contains Toluene; Dichloroacetic acid



Signal word
Danger

Hazard statements
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H318 - Causes serious eye damage
H336 - May cause drowsiness or dizziness
H361d - Suspected of damaging the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor
P331 - Do NOT induce vomiting
P391 - Collect spillage

Additional information
This product requires child resistant fastenings if supplied to the general public. This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

Toxic to aquatic life.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Toluene 108-88-3	93-97	No data available	203-625-9 (601-021-00-3)	Skin Irrit. 2 (H315) Repr. 2 (H361d) STOT SE 3 (H336)	-	-	-

				STOT RE 2 (H373) Asp. Tox. 1 (H304) Flam. Liq. 2 (H225)			
Dichloroacetic acid 79-43-6	3-7	No data available	201-207-0 (607-066-00-5)	Skin Corr. 1A (H314) Aquatic Acute 1 (H400)	-	-	-

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Toluene 108-88-3	2600	12000	12.5	No data available	No data available
Dichloroacetic acid 79-43-6	2820	510	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention. Delayed pulmonary edema may occur.

Eye contact Get immediate medical attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get immediate medical attention.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

Hazardous combustion products Hydrogen chloride. Carbon oxides. Chlorine gas.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. For small spills absorb material on dry rags, cat litter or similar absorbent material and dispose of in the trash.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Ensure adequate ventilation. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store away from other materials.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Toluene 108-88-3	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 50 ppm TWA: 190 mg/m³ STEL 100 ppm STEL 380 mg/m³ Sk*	TWA: 20 ppm TWA: 77 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 50 ppm TWA: 192.0 mg/m³ STEL: 100 ppm STEL: 384.0 mg/m³ Sk*	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*
Dichloroacetic acid 79-43-6	-	-	TWA: 0.5 ppm TWA: 2.7 mg/m³ Sk*	TWA: 4.0 mg/m³	-

Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Toluene 108-88-3	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 200 mg/m³ Sk* Ceiling: 500 mg/m³	TWA: 25 ppm TWA: 94 mg/m³ STEL: 384 mg/m³ STEL: 100 ppm Sk*	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 25 ppm TWA: 81 mg/m³ STEL: 100 ppm STEL: 380 mg/m³ Sk*

Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Toluene 108-88-3	TWA: 20 ppm TWA: 76.8 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 50 ppm TWA: 190 mg/m³ Sk*	TWA: 50 ppm TWA: 190 mg/m³ Peak: 100 ppm Peak: 380 mg/m³ Sk*	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 190 mg/m³ TWA: 50 ppm STEL: 384 mg/m³ STEL: 100 ppm Sk*
Dichloroacetic acid 79-43-6	-	TWA: 0.2 ppm TWA: 1.1 mg/m³ Sk*	TWA: 0.2 ppm TWA: 1.1 mg/m³ Peak: 0.2 ppm Peak: 1.1 mg/m³ Sk*	-	-

Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Toluene 108-88-3	TWA: 192 mg/m³ TWA: 50 ppm STEL: 384 mg/m³	TWA: 50 ppm TWA: 192 mg/m³ Sk*	TWA: 20 ppm TWA: 75.4 mg/m³	TWA: 14 ppm TWA: 50 mg/m³ STEL: 40 ppm	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm

	STEL: 100 ppm Sk*			STEL: 150 mg/m³ Sk*	STEL: 384 mg/m³ Sk*
Dichloroacetic acid 79-43-6	TWA: 0.5 ppm STEL: 1.5 ppm	-	TWA: 0.5 ppm TWA: 2.6 mg/m³ Sk*	TWA: 4 mg/m³	TWA: 4 mg/m³

Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Toluene 108-88-3	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 39 ppm TWA: 150 mg/m³ STEL: 100 ppm STEL: 384 mg/m³	TWA: 25 ppm TWA: 94 mg/m³ STEL: 37.5 ppm STEL: 141 mg/m³ Sk*	TWA: 100 mg/m³ STEL: 200 mg/m³ Sk*

Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Toluene 108-88-3	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 50 ppm TWA: 192 mg/m³ Sk* Ceiling: 384 mg/m³	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*	TWA: 50 ppm TWA: 192 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*
Dichloroacetic acid 79-43-6	TWA: 0.5 ppm Sk*	-	-	-	-

Chemical name	Sweden	Switzerland	United Kingdom
Toluene 108-88-3	NGV: 50 ppm NGV: 192 mg/m³ Bindande KGV: 100 ppm Bindande KGV: 384 mg/m³ Sk*	TWA: 50 ppm TWA: 190 mg/m³ STEL: 200 ppm STEL: 760 mg/m³ Sk*	TWA: 50 ppm TWA: 191 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk*
Dichloroacetic acid 79-43-6	-	TWA: 0.4 ppm TWA: 2.2 mg/m³ STEL: 0.4 ppm STEL: 2.2 mg/m³ Sk*	-

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Toluene 108-88-3	-	Check 10 g/dL Hemoglobin (blood - by the first screening and once yearly) 12 g/dL Hemoglobin (blood - by the first screening and once yearly) 3.2 million/µL Erythrocytes (blood - by the first screening and once yearly) 3.8 million/µL Erythrocytes (blood - by the first screening and once yearly) 4000 Leukocytes/µL (blood - by the first screening and once yearly) 13000 Leukocytes/µL (blood - by the first screening and once yearly)	1.6 mmol/mmol Creatinine - urine (Hippuric acid) - at the end of exposure or end of work shift	1.0 mg/L - blood (Toluene) - at the end of the work shift 20 ppm - final exhaled air (Toluene) - during exposure 2.50 g/g Creatinine - urine (Hippuric acid) - at the end of the work shift 1.0 mg/g Creatinine - urine (o-Cresol) - at the end of the work shift	1.6 µmol/mmol Creatinine (urine - o-Cresol end of shift) 1000 µmol/mmol Creatinine (urine - Hippuric acid end of shift) 1.5 mg/g Creatinine (urine - o-Cresol end of shift) 1600 mg/g Creatinine (urine - Hippuric acid end of shift)

		130000 Thrombocytes/µL (blood - by the first screening and once yearly) 150000 Thrombocytes/µL (blood - by the first screening and once yearly) 0.8 mg/L (urine - o-Cresol after end of work day, at the end of a work week/end of the shift)			
Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
Toluene 108-88-3	-	500 nmol/L (blood - Toluene in the morning after a working day)	20 µg/L - blood (Toluene) - end of workweek - urine (Hippuric acid) - end of shift	600 µg/L (whole blood - Toluene immediately after exposure) 75 µg/L (urine - Toluene end of shift) 1.5 mg/L (urine - o-Cresol (after hydrolysis) for long-term exposures: at the end of the shift after several shifts) 1.5 mg/L (urine - o-Cresol (after hydrolysis) end of shift) 600 µg/L - BAT (immediately after exposure) blood 75 µg/L - BAT (end of exposure or end of shift) urine 1.5 mg/L - BAT (end of exposure or end of shift) urine	600 µg/L (whole blood - Toluene immediately after exposure) 75 µg/L (urine - Toluene end of shift) 1.5 mg/L (urine - o-Cresol (after hydrolysis) for long-term exposures: at the end of the shift after several shifts) 1.5 mg/L (urine - o-Cresol (after hydrolysis) end of shift)

Chemical name	Hungary	Ireland	Italy MDLPS	Italy AIDII
Toluene 108-88-3	1 mg/g Creatinine (urine - o-Cresol end of shift) 1 µmol/mmol Creatinine (urine - o-Cresol end of shift)	0.02 mg/L (blood - Toluene prior to last shift of workweek) 0.03 mg/L (urine - Toluene end of shift) 0.3 mg/g Creatinine (urine - o-Cresol end of shift)	-	0.3 mg/g Creatinine - urine (o-Cresol (with hydrolysis)) - end of shift 0.03 mg/L - urine (Toluene) - end of shift 0.02 mg/L - blood (Toluene) - prior to last shift of workweek

Chemical name	Latvia	Luxembourg	Romania	Slovakia
Toluene 108-88-3	1.6 g/g Creatinine - urine (Hippuric acid) - end of shift 0.05 mg/L - blood (Toluene) - end of shift	-	2 g/L - urine (Hippuric acid) - end of shift 3 mg/L - urine (o-Cresol) - end of shift	600 µg/L (blood - Toluene end of exposure or work shift) 1.5 mg/L (urine - o-Cresol after all work shifts) 1.5 mg/L (urine - o-Cresol end of exposure or work shift) 1600 mg/g creatinine (- Hippuric acid end of

				exposure or work shift)
Chemical name	Slovenia	Spain	Switzerland	United Kingdom
Toluene 108-88-3	600 µg/L - blood (Toluene) - immediately after exposure 1.5 mg/L - urine (o-Cresol (after hydrolysis)) - at the end of the work shift; for long-term exposure: at the end of the work shift after several consecutive workdays 75 µg/L - urine (Toluene) - at the end of the work shift	0.6 mg/L (urine - o-Cresol end of shift) 0.05 mg/L (blood - Toluene start of last shift of workweek) 0.08 mg/L (urine - Toluene end of shift)	600 µg/L (whole blood - Toluene end of shift) 6.48 µmol/L (whole blood - Toluene end of shift) 2 g/g creatinine (urine - Hippuric acid end of shift, and after several shifts (for long-term exposures)) 1.26 mmol/mmol creatinine (urine - Hippuric acid end of shift, and after several shifts (for long-term exposures)) 0.5 mg/L (urine - o-Cresol end of shift, and after several shifts (for long-term exposures)) 4.62 µmol/L (urine - o-Cresol end of shift, and after several shifts (for long-term exposures)) 75 µg/L (urine - Toluol end of shift)	-

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls
Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves. Contact glove manufacturer for recommendations. Gloves must conform to standard EN 374.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. EN ISO 6529.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear Liquid

Color	Clear
Odor	No information available
Odor threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	No data available	None known
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	Immiscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapor pressure	No data available	None known
Relative density	0.89g/mL	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Hydrogen chloride. Carbon oxides. Chlorine gas.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract. May cause drowsiness or dizziness.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Repeated exposure may cause skin dryness or cracking. Causes skin irritation. (based on components).

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. May cause redness and tearing of the eyes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Acute toxicity

Numerical measures of toxicity
No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	2,606.10 mg/kg
ATEmix (dermal)	7,160.40 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-dust/mist)	12.90 mg/l
ATEmix (inhalation-vapor)	99,999.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Toluene	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h
Dichloroacetic acid	= 2820 mg/kg (Rat)	= 510 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes burns. Causes serious eye damage.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	European Union
Toluene	Repr. 2

STOT - single exposure May cause drowsiness or dizziness.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Toluene	EC50: >433mg/L (96h, Pseudokirchneriella subcapitata) EC50: =12.5mg/L (72h, Pseudokirchneriella subcapitata)	LC50: 15.22 - 19.05mg/L (96h, Pimephales promelas) LC50: =12.6mg/L (96h, Pimephales promelas) LC50: 5.89 - 7.81mg/L (96h, Oncorhynchus	-	EC50: 5.46 - 9.83mg/L (48h, Daphnia magna) EC50: =11.5mg/L (48h, Daphnia magna)

		mykiss) LC50: 14.1 - 17.16mg/L (96h, Oncorhynchus mykiss) LC50: =5.8mg/L (96h, Oncorhynchus mykiss) LC50: 11.0 - 15.0mg/L (96h, Lepomis macrochirus) LC50: =54mg/L (96h, Oryzias latipes) LC50: =28.2mg/L (96h, Poecilia reticulata) LC50: 50.87 - 70.34mg/L (96h, Poecilia reticulata)		

12.2. Persistence and degradability

Persistence and degradability Not Likely.

12.3. Bioaccumulative potential

Bioaccumulation

Bioconcentration factor (BCF) log Pow <= 4

Component Information

Chemical name	Partition coefficient
Toluene	2.73

12.4. Mobility in soil

Mobility in soil Not expected to adsorb on soil.

Mobility Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
Toluene	The substance is not PBT / vPvB
Dichloroacetic acid	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Dispose of in accordance with federal, state and local regulations. Do not reuse empty

containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN2924
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Class 3, (8)
14.4 Packing group	Packing Group II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	UN2924
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Class 3, (8)
14.4 Packing group	Packing Group II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
EmS-No.	F-E, S-C
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Toluene 108-88-3	RG 4bis,RG 84	-

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
Toluene	-	-	Development Category 2

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Toluene - 108-88-3	48. 75.	-
Dichloroacetic acid - 79-43-6	75.	-

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA	All of the components of this product are listed in the TSCA Inventory or exempt.
DSL/NDSL	Listed or exempt
EINECS/ELINCS	Listed or exempt
ENCS	Listed or exempt
IECSC	Listed or exempt
KECI	Listed or exempt
PICCS	Listed or exempt
AIIC	Listed or exempt

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H361d - Suspected of damaging the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life

Legend
SVHC: Substances of Very High Concern for Authorization:

Legend	**Section 8: Exposure controls/personal protection**		
TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation

Revision date 02-Jul-2024

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
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End of Safety Data Sheet