


Product name:  Multiple Heart-Cutting Starter Kit
Part no.:  G4242-68000

This product is composed of the following:

Kit Components, Reagents

Box/Module Part number	Box/Module Name	Kit Component Part Number	Kit Component Name	Qty Units	GHS
 -	-	5190-6895	2D-LC Solution	1	Yes
-	-	G2453-85060	Formic Acid	1	Yes

Article SDSs, if maintained, are available on www.agilent.com. We recommend using the article product code when searching. SDSs are only available for a limited set of countries.

Transport Information for the Kit:

Dangerous Goods classification for:  G4242-68000

DOT	IMDG	IATA
 N3316, Chemical kit, 9, II	 N3316, CHEMICAL KIT, 9, II	 N3316, Chemical kit, 9, II

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2D-LC Solution.....	15

SDSs for each individual Kit component follow this cover sheet.

SAFETY DATA SHEET

Formic Acid

Section 1. Identification

GHS product identifier : Formic Acid
Part no. : G2453-85060

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

Identified uses : Analytical chemistry.
5 ml ampoule

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H226 FLAMMABLE LIQUIDS - Category 3
H290 CORROSIVE TO METALS - Category 1
H302 ACUTE TOXICITY (oral) - Category 4
H331 ACUTE TOXICITY (inhalation) - Category 3
H314 SKIN CORROSION - Category 1A
H318 SERIOUS EYE DAMAGE - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : **H226** - Flammable liquid and vapor.
H290 - May be corrosive to metals.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H331 - Toxic if inhaled.
 Corrosive to the respiratory tract.

Precautionary statements

Prevention : **P280** - Wear protective gloves, protective clothing and eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234 - Keep only in original packaging.
P261 - Avoid breathing vapor.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash thoroughly after handling.

Section 2. Hazards identification

- Response** : P390 - Absorb spillage to prevent material damage.
 P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
 P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.
 P363 - Wash contaminated clothing before reuse.
 P305 + P351 + P338, P310 - 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.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Keep container tightly closed. Do not breathe vapor or spray. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.
- Other hazards**
- Hazards not otherwise classified** : Causes digestive tract burns.
- Hazards identified when used** : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Ingredient name	Synonyms	%	Identifiers
Formic acid	Formic acid	100	CAS: 64-18-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Toxic if inhaled. Corrosive to the respiratory tract. Causes burns.
- Skin contact** : Causes severe burns.
- Ingestion** : May cause burns to mouth, throat and stomach. Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Section 5. Fire-fighting measures

- Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

Section 7. Handling and storage

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep away from metals. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Formic acid	<p>NIOSH REL (United States, 10/2020) TWA 10 hours: 5 ppm. TWA 10 hours: 9 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) STEL 15 minutes: 19 mg/m³. STEL 15 minutes: 10 ppm. TWA 8 hours: 9 mg/m³. TWA 8 hours: 5 ppm.</p> <p>OSHA PEL (United States, 5/2018) TWA 8 hours: 5 ppm. TWA 8 hours: 9 mg/m³.</p> <p>OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 5 ppm. TWA 8 hours: 9 mg/m³.</p> <p>ACGIH TLV (United States, 1/2025) TWA 8 hours: 5 ppm.</p>

Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid. [Clear.]
- Color** : Colorless.
- Odor** : Pungent.
- Odor threshold** : 0.52 ppm
- pH** : Not available.
- Melting point/freezing point** : 4°C (39.2°F) [OECD 102]
- Boiling point or initial boiling point and boiling range** : 100.23°C (212.4°F) [OECD 103]
- Flash point** : Closed cup: 49.5°C (121.1°F) [DIN EN ISO 13736]
- Evaporation rate** : 1.14 (butyl acetate = 1)
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Lower: 18%
Upper: 51%
- Vapor pressure** : 4.3 kPa (32.03522 mm Hg) [room temperature] [EU A.4]
17.4 kPa (130.51 mm Hg) [50°C (122°F)]
- Relative vapor density** : 1.6 [Air = 1]
- Relative density** : 1.2

Section 9. Physical and chemical properties

Density	: 1.22 g/cm ³				
Solubility(ies)	: <table border="1"> <thead> <tr> <th>Media</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>water</td> <td>Soluble</td> </tr> </tbody> </table>	Media	Result	water	Soluble
Media	Result				
water	Soluble				
Miscible with water	: Yes.				
Partition coefficient: n-octanol/water	: -2.3 [OECD 107]				
Auto-ignition temperature	: 434°C (813.2°F)				
Decomposition temperature	: <input checked="" type="checkbox"/> Not available.				
Heat of combustion	: -4756670 J/kg				
Viscosity	: Dynamic (room temperature): 1.8 mPa·s (1.8 cP) [OECD 114] Kinematic (room temperature): 1.47 mm ² /s (1.47 cSt) [OECD 114] Kinematic (40°C (104°F)): 1.02 mm ² /s (1.02 cSt) [OECD 114]				

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	: <input checked="" type="checkbox"/> Reactive or incompatible with the following materials: oxidizing materials metals <input checked="" type="checkbox"/> Reactive or incompatible with the following materials: alkalis. Slightly reactive or incompatible with the following materials: acids.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
<input checked="" type="checkbox"/> Formic acid	Rat - Oral - LD50 730 mg/kg Rat - Inhalation - LC50 Vapor 7400 mg/m ³ [4 hours]
Conclusion/Summary [Product]	: Not available.

Skin corrosion/irritation

Conclusion/Summary [Product]	: Not available.
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Section 11. Toxicological information

Serious eye damage/eye irritation

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Toxic if inhaled. Corrosive to the respiratory tract. Causes burns.

Skin contact : Causes severe burns.

Ingestion : May cause burns to mouth, throat and stomach. Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

Section 11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- Conclusion/Summary [Product]** : Not available.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Formic acid	500	N/A	N/A	7.4	N/A

Section 12. Ecological information

Toxicity

- | Product/ingredient name | Result | |
|-------------------------|----------------------------|-----------------------|
| Formic acid | Acute - NOEC - Fresh water | ≥100 mg/l [21 days] |
| | Acute - EC50 - Fresh water | 151.2 mg/l [48 hours] |
- Conclusion/Summary [Product]** : Not available.

Section 12. Ecological information

Persistence and degradability

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Formic acid	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Formic acid	-2.3	-	Low

Mobility in soil






Soil/Water partition coefficient : 5.39642 Koc

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1779	UN1779	UN1779	UN1779	UN1779
UN proper shipping name	Formic acid	FORMIC ACID	ÁCIDO FÓRMICO	FORMIC ACID	Formic acid
Transport hazard class(es)	8 (3) 	8 (3) 	8 (3) 	8 (3) 	8 (3) 
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Additional information

Section 14. Transport information

Remarks: Excepted Quantity

- DOT Classification** : **Reportable quantity** 5000 lbs / 2270 kg [491.53 gal / 1860.7 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 154. Non-bulk: 202. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L.
Special provisions B2, B28, IB2, T7, TP2
- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8), 2.18-2.19 (Class 3).
Explosive Limit and Limited Quantity Index 1
Passenger Carrying Road or Rail Index 1
- IMDG** : **Emergency schedules** F-E, S-C
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 851. Cargo Aircraft Only: 30 L. Packaging instructions: 855. Limited Quantities - Passenger Aircraft: 0.5 L. Packaging instructions: Y840.
- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Section 15. Regulatory information

Classification : FLAMMABLE LIQUIDS - Category 3
 CORROSIVE TO METALS - Category 1
 ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (inhalation) - Category 3
 SKIN CORROSION - Category 1A
 SERIOUS EYE DAMAGE - Category 1
 HNOC - Corrosive to digestive tract

Composition/information on ingredients

Name	%	Classification
<input checked="" type="checkbox"/> Formic acid	100	FLAMMABLE LIQUIDS - Category 3 CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1 HNOC - Corrosive to digestive tract

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	<input checked="" type="checkbox"/> Formic acid	64-18-6	100
Supplier notification	<input checked="" type="checkbox"/> Formic acid	64-18-6	100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : This material is not listed.
New York : This material is not listed.
New Jersey : This material is not listed.
Pennsylvania : This material is not listed.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : This material is listed or exempted.
Canada : This material is listed or exempted.
China : This material is listed or exempted.
Japan : **Japan inventory (CSCL)**: This material is listed or exempted.
Japan inventory (ISHL): This material is listed or exempted.

Section 15. Regulatory information

New Zealand	: This material is listed or exempted.
Philippines	: This material is listed or exempted.
Republic of Korea	: This material is listed or exempted.
Taiwan	: This material is listed or exempted.
Thailand	: This material is listed or exempted.
Turkey	: This material is listed or exempted.
United States	: This material is active or exempted.
Viet Nam	: This material is listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> FLAMMABLE LIQUIDS - Category 3 CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1	Expert judgment Expert judgment Regulatory data Regulatory data Expert judgment Expert judgment

History

Date of issue/Date of revision : 04/29/2026

Date of previous issue : 11/13/2025

Version : 9

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 DOT = Department of Transportation
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 IMO = International Maritime Organization
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SGG = Segregation Group
 TDG = Transportation of Dangerous Goods
 UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

SAFETY DATA SHEET

2D-LC Solution

Section 1. Identification

GHS product identifier : 2D-LC Solution
Part no. : 5190-6895

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

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 2 ml

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
 H302 ACUTE TOXICITY (oral) - Category 4
 H312 ACUTE TOXICITY (dermal) - Category 4
 H332 ACUTE TOXICITY (inhalation) - Category 4
 H319 EYE IRRITATION - Category 2A
 H317 SKIN SENSITIZATION - Category 1
 H350 CARCINOGENICITY - Category 1B
 H360 TOXIC TO REPRODUCTION - Category 1B
 H400 AQUATIC HAZARD (ACUTE) - Category 1
 H410 AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapor.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H317 - May cause an allergic skin reaction.
 H319 - Causes serious eye irritation.
 H350 - May cause cancer.
 H360 - May damage fertility or the unborn child.
 H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

- Prevention** : P201 - Obtain special instructions before use.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P273 - Avoid release to the environment.
 P261 - Avoid breathing vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash thoroughly after handling.
- Response** : P391 - Collect spillage.
 P308 + P313 - IF exposed or concerned: Get medical advice or attention.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell.
 Wash with plenty of water.
 P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
 P362 + P364 - Take off contaminated clothing and wash it before reuse.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical advice or attention.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards

Hazards not otherwise classified : None known.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
Acetonitrile	-	≥65 - ≤85	CAS: 75-05-8
Acetone	-	≥10 - ≤30	CAS: 67-64-1
Atrazine (ISO)	-	≥0.1 - ≤1	CAS: 1912-24-9
1,3,5-Triazine-2,4-diamine, 6-chloro-N (sup 2)-(1-methylethyl)-	-	≥0.1 - ≤1	CAS: 6190-65-4
Chlorotoluron (ISO)	-	≥0.1 - ≤1	CAS: 15545-48-9
Diuron (ISO)	-	≥0.1 - ≤1	CAS: 330-54-1
3-Cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione	-	≥0.1 - ≤1	CAS: 51235-04-2
Linuron (ISO)	-	≥0.1 - ≤1	CAS: 330-55-2
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	-	≥0.1 - ≤1	CAS: 67129-08-2
Methabenzthiazuron (ISO)	-	≥0.1 - ≤1	CAS: 18691-97-9
Metoxuron (ISO)	-	≥0.1 - ≤1	CAS: 19937-59-8
prometryn	-	≥0.1 - ≤1	CAS: 7287-19-6

Section 3. Composition/information on ingredients

Terbutylazine	-	≥0.1 - ≤1	CAS: 5915-41-3
desethylterbutylazine	-	≥0.1 - ≤1	CAS: 30125-63-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Harmful in contact with skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
cyanides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
Acetonitrile	<p>NIOSH REL (United States, 10/2020) TWA 10 hours: 20 ppm. TWA 10 hours: 34 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) Absorbed through skin. STEL 15 minutes: 105 mg/m³. STEL 15 minutes: 60 ppm. TWA 8 hours: 70 mg/m³. TWA 8 hours: 40 ppm.</p> <p>OSHA PEL (United States, 5/2018) TWA 8 hours: 40 ppm. TWA 8 hours: 70 mg/m³.</p> <p>OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 40 ppm. TWA 8 hours: 70 mg/m³. STEL 15 minutes: 60 ppm. STEL 15 minutes: 105 mg/m³.</p> <p>ACGIH TLV (United States, 1/2025) A4. Absorbed through skin. TWA 8 hours: 20 ppm.</p>
Acetone	<p>NIOSH REL (United States, 10/2020) TWA 10 hours: 250 ppm. TWA 10 hours: 590 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) STEL 15 minutes: 1780 mg/m³. STEL 15 minutes: 750 ppm. C: 3000 ppm. TWA 8 hours: 1200 mg/m³. TWA 8 hours: 500 ppm.</p> <p>OSHA PEL (United States, 5/2018) TWA 8 hours: 1000 ppm. TWA 8 hours: 2400 mg/m³.</p> <p>OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 750 ppm. TWA 8 hours: 1800 mg/m³. STEL 15 minutes: 1000 ppm. STEL 15 minutes: 2400 mg/m³.</p> <p>ACGIH TLV (United States, 1/2025) A4. TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm.</p>
Atrazine (ISO) 1,3,5-Triazine-2,4-diamine, 6-chloro-N(sup 2)-(1-methylethyl)- Chlorotoluron (ISO)	<p>NIOSH REL (United States, 10/2020) TWA 10 hours: 5 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 5 mg/m³.</p> <p>OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 5 mg/m³.</p> <p>ACGIH TLV (United States, 1/2025) [Atrazine (and related symmetrical triazines)] A3. TWA 8 hours: 2 mg/m³. Form: Inhalable fraction.</p> <p>None. None.</p>

Section 8. Exposure controls/personal protection

Diuron (ISO)	NIOSH REL (United States, 10/2020) TWA 10 hours: 10 mg/m ³ .
	CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 10 mg/m ³ .
	OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 10 mg/m ³ .
	ACGIH TLV (United States, 1/2025) A4. TWA 8 hours: 10 mg/m ³ .
3-Cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione	ACGIH TLV (United States, 1/2025) A4. TWA 8 hours: 3 mg/m ³ . Form: Inhalable fraction.
Linuron (ISO)	None.
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	None.
Methabenzthiazuron (ISO)	None.
Metoxuron (ISO)	None.
prometryn	ACGIH TLV (United States, 1/2025) A4. TWA 8 hours: 1 mg/m ³ . Form: Inhalable fraction.
Terbutylazine	None.
desethylterbutylazine	None.

Biological exposure indices

Ingredient name	Exposure indices
Acetone	ACGIH BEI (United States, 1/2025) BEI: 25 mg/l, acetone [in urine]. Sampling time: end of shift.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: -18 to 23°C (-0.4 to 73.4°F)
- Evaporation rate** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Acetone	180.01463	24	-	-	-	-
Acetonitrile	70.88853	9.5	-	-	-	-

- Relative vapor density** : Not available.
- Relative density** : Not available.

Media	Result
water	Soluble

- Miscible with water** : Yes.
- Partition coefficient: n-octanol/water** : Not applicable.

Ingredient name	°C	°F	Method
Acetone	465	869	-
Acetonitrile	524	975.2	-

- Decomposition temperature** : Not available.

Section 9. Physical and chemical properties

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

Result

Acetonitrile	Rat - Oral - LD50	2460 mg/kg
	Rat - Inhalation - LC50 Vapor	17100 ppm [4 hours]
Acetone	Rat - Oral - LD50	5800 mg/kg
Atrazine (ISO)	Rabbit - Dermal - LD50	7500 mg/kg
	Rat - Oral - LD50	672 mg/kg
	Rat - Dermal - LD50	3 g/kg
	Rat - Inhalation - LC50 Dusts and mists	5200 mg/m ³ [4 hours]
Chlorotoluron (ISO)	Rat - Oral - LD50	5800 mg/kg
Diuron (ISO)	Rat - Dermal - LD50	>5 g/kg
	Rat - Oral - LD50	1 g/kg
	Rat - Male, Female - Inhalation - LC50 Dusts and mists	>5.05 mg/l [4 hours]
3-Cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione	Rat - Oral - LD50	1690 mg/kg
	Rat - Dermal - LD50	5278 mg/kg
	Rabbit - Dermal - LD50	>5278 mg/kg
Linuron (ISO)	Rat - Oral - LD50	1146 mg/kg
	Rabbit - Dermal - LD50	>5 g/kg
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	Rat - Oral - LD50	1 g/kg
	Rat - Dermal - LD50	>6810 mg/kg
Metoxuron (ISO)	Rat - Oral - LD50	1600 mg/kg
prometryn	Rat - Oral - LD50	1802 mg/kg
Terbutylazine	Rat - Oral - LD50	1845 mg/kg
	Rat - Dermal - LD50	>2000 mg/kg
	Rat - Inhalation - LC50 Dusts and mists	>5.3 mg/l [4 hours]

Section 11. Toxicological information

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name

Result

Acetone

Rabbit - Skin - Mild irritant

Duration of treatment/
exposure: 24 hours

Atrazine (ISO)

Rabbit - Skin - Mild irritant

-

Rabbit - Skin - Mild irritant

-

Conclusion/Summary [Product] : Repeated exposure may cause skin dryness or cracking.

Ingredient name

Conclusion/Summary

Acetone

Repeated exposure may cause skin dryness or cracking.
Causes mild skin irritation.

Serious eye damage/eye irritation

Result

Acetonitrile

Rabbit - Eyes - Moderate irritant

Duration of treatment/
exposure: 24 hours

Acetone

Rabbit - Eyes - Mild irritant

-

Rabbit - Eyes - Moderate irritant

Duration of treatment/
exposure: 24 hours

Atrazine (ISO)

Rabbit - Eyes - Severe irritant

-

3-Cyclohexyl-6-dimethylamino-1-methyl-
1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione
prometryn

Rabbit - Eyes - Moderate irritant

-

Rabbit - Eyes - Mild irritant

-

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary [Product] : Not available.

Ingredient name

Conclusion/Summary

Acetonitrile

May cause respiratory irritation.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Section 11. Toxicological information

Conclusion/Summary : Not available.

[Product]

Classification

Product/ingredient name	OSHA	IARC	NTP
Atrazine (ISO)	-	3	-

Reproductive toxicity

Conclusion/Summary : Not available.

[Product]

Specific target organ toxicity (single exposure)

Product/ingredient name

Result

Acetone

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name

Result

Atrazine (ISO)

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (heart) (oral) - Category 2

Diuron (ISO)

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system) - Category 2

Linuron (ISO)

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide
Terbuthylazine

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), endocrine) - Category 1
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

: Causes serious eye irritation.

Inhalation

: Harmful if inhaled.

Skin contact

: Harmful in contact with skin. May cause an allergic skin reaction.

Ingestion

: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

: Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation

: Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- Conclusion/Summary [Product]** : Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : May damage fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
2D-LC Solution	638.8	1405.3	N/A	14.1	N/A
Acetonitrile	500	1100	N/A	11	N/A
Acetone	5800	20000	N/A	76	N/A
Atrazine (ISO)	672	3000	N/A	N/A	5.2
1,3,5-Triazine-2,4-diamine, 6-chloro-N(sup 2)-(1-methylethyl)-	500	N/A	N/A	N/A	1.5
Chlorotoluron (ISO)	5800	N/A	N/A	N/A	N/A
Diuron (ISO)	1000	N/A	N/A	N/A	N/A
3-Cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione	1690	5278	N/A	N/A	N/A
Linuron (ISO)	1146	N/A	N/A	N/A	N/A
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	1000	N/A	N/A	N/A	N/A
Metoxuron (ISO)	1600	N/A	N/A	N/A	N/A
prometryn	1802	N/A	N/A	N/A	N/A
Terbutylazine	1845	2500	N/A	N/A	N/A

Section 11. Toxicological information

Other information : Adverse symptoms may include the following: May cause skin sensitization.

Section 12. Ecological information

Toxicity

Product/ingredient name

Result

Acetonitrile	Acute - LC50 - Fresh water	3600 mg/l [48 hours]
	Acute - IC50 - Fresh water	3685 mg/l [96 hours]
	Chronic - NOEC - Fresh water	160 mg/l [21 days]
	Chronic - NOEC - Fresh water	1000 mg/l [96 hours]
Acetone	Acute - LC50 - Fresh water	1000 mg/l [96 hours]
	Acute - EC50 - Fresh water	7200 mg/l [96 hours]
	Chronic - NOEC - Marine water	4.95 mg/l [96 hours]
	Chronic - NOEC - Fresh water	0.016 ml/l [21 days]
	Acute - LC50 - Marine water	4.42589 ml/l [48 hours]
Atrazine (ISO)	Acute - LC50 - Fresh water	5600 ppm [96 hours]
	Acute - EC50 - Fresh water	240 µg/l [48 hours]
	Chronic - NOEC - Fresh water	0.26 ppb [16 weeks]
	Acute - LC50 - Fresh water	1.25 ppm [96 hours]
	Chronic - NOEC - Fresh water	25 µg/l [21 days]
	Acute - EC50 - Fresh water	0.004 mg/l [96 hours]
	Chronic - NOEC - Fresh water	0.0005 mg/l [96 hours]
1,3,5-Triazine-2,4-diamine, 6-chloro-N (sup 2)-(1-methylethyl)- Chlorotoluron (ISO)	Acute - EC50 - Fresh water	821 µg/l [96 hours]
	Chronic - NOEC - Fresh water	10 µg/l [96 hours]
	Acute - LC50 - Fresh water	35 ppm [96 hours]
	Acute - EC50 - Fresh water	0.0085 mg/l [96 hours]
Diuron (ISO)	Acute - LC50 - Fresh water	500 µg/l [96 hours]
	Acute - LC50 - Fresh water	380 µg/l [48 hours]
	Chronic - NOEC	26.4 ppb [60 days]
	Chronic - EC10 - Fresh water	0.11 µg/l [96 hours]
	Acute - EC50 - Fresh water	0.0007 mg/l [96 hours]
3-Cyclohexyl-6-dimethylamino-1-methyl- 1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione	Chronic - NOEC - Fresh water	85.5 µg/l [396 days]
	Chronic - NOEC - Fresh water	0.1 mg/l [21 days]
	Acute - LC50 - Fresh water	146.7 ppm [96 hours]
	Acute - LC50 - Fresh water	71.6 mg/l [48 hours]
	Acute - IC50 - Marine water	4.4 µg/l [72 hours]
	Chronic - NOEC - Marine water	0.37 µg/l [72 hours]
Linuron (ISO)	Chronic - EC10 - Fresh water	1.2 µg/l [3 days]
	Acute - EC50 - Fresh water	6 µg/l [3 days]
	Chronic - NOEC - Fresh water	0.13 ppm [21 days]
	Acute - LC50 - Marine water	0.89 ppm [96 hours]
	Acute - EC50 - Fresh water	0.12 ppm [48 hours]
	Chronic - NOEC - Fresh water	1 µg/l [28 days]
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H- pyrazol-1-ylmethyl)acetamide	Chronic - NOEC	0.01 mg/l [72 hours]
	Acute - EC50	245 µg/l [96 hours]
Methabenzthiazuron (ISO)	Acute - EC50 - Fresh water	0.0209 mg/l [96 hours]
Metoxuron (ISO)	Acute - LC50 - Fresh water	122 mg/l [48 hours]
	Acute - LC50 - Fresh water	40 mg/l [96 hours]
prometryn	Acute - EC50 - Fresh water	9700 µg/l [48 hours]
	Acute - LC50 - Fresh water	2300 µg/l [96 hours]
	Acute - EC50 - Fresh water	0.00165 mg/l [96 hours]
	Chronic - NOEC - Fresh water	1 ppm [21 days]
	Chronic - NOEC - Fresh water	0.51 µg/l [60 days]
	Chronic - NOEC - Fresh water	2.5 µg/l [4 days]
Terbutylazine	Acute - EC50 - Fresh water	21.2 ppm [48 hours]
	Chronic - NOEC - Fresh water	820 µg/l [30 days]
	Acute - LC50 - Fresh water	1.6 ppm [96 hours]

Section 12. Ecological information

	Acute - EC50 - Fresh water	9 µg/l [72 hours]
	Chronic - NOEC - Fresh water	2 µg/l [72 hours]
desethylterbutylazine	Chronic - NOEC - Fresh water	1.8 µg/l [36 days]

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Product/ingredient name

Result

Acetonitrile	OECD [Ready Biodegradability - CO ₂ in Sealed Vessels (Headspace Test)]	70% [21 days] - Readily	-
Atrazine (ISO)	-	9.86% [28 days] - Not readily	-
Diuron (ISO)	OECD 301F [Ready Biodegradability - Manometric Respirometry Test]	0% [28 days] - Not readily	Aerobic
prometryn	OECD [Ready Biodegradability - CO ₂ Evolution Test]	0% [28 days] - Not readily	Aerobic

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetonitrile	-	-	Readily
Acetone	-	-	Readily
Atrazine (ISO)	-	-	Not readily
Diuron (ISO)	-	-	Not readily
prometryn	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Acetonitrile	-0.34	3	Low
Acetone	-0.23	3	Low
Atrazine (ISO)	2.59	7.94	Low
1,3,5-Triazine-2,4-diamine, 6-chloro-N(sup 2)-(1-methylethyl)-	1.51	-	Low
Chlorotoluron (ISO)	2.41	-	Low
Diuron (ISO)	2.84	5.2 [OECD 305 C]	Low
3-Cyclohexyl-6-dimethylamino-1-methyl-1,2,3,4-tetrahydro-1,3,5-triazine-2,4-dione	1.85	-	Low
Linuron (ISO)	3.2	17.78	Low
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	2.13	-	Low
Methabenzthiazuron (ISO)	2.64	-	Low
Metoxuron (ISO)	1.64	-	Low
prometryn	3.51	-	Low
Terbutylazine	3.21	-	Low

Mobility in soil

Section 12. Ecological information

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.








Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Acetonitrile (I,T)	75-05-8	Listed	U003
Acetone (I)	67-64-1	Listed	U002

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1993	UN1993	UN1993	UN1993	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Acetonitrile, Acetone)	FLAMMABLE LIQUID, N.O.S. (Acetonitrile, Acetone)	LÍQUIDO INFLAMABLE, N. E.P. (Acetonitrile, Acetone)	FLAMMABLE LIQUID, N.O.S. (Acetonitrile, Acetone)	Flammable liquid, n. o.s. (Acetonitrile, Acetone)
Transport hazard class(es)	3 	3  	3 	3  	3 
Packing group	II	II	II	II	II
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

Remarks: Excepted Quantity

Section 14. Transport information

- DOT Classification** : **Reportable quantity** 6387.9 lbs / 2900.1 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 150. Non-bulk: 202. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.
Special provisions IB2, T7, TP1, TP8, TP28
- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark).
The marine pollutant mark is not required when transported by road or rail.
Explosive Limit and Limited Quantity Index 1
Passenger Carrying Road or Rail Index 5
Special provisions 16, 150
- Mexico Classification** : **Special provisions** 274
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-E, _S-E_
Special provisions 274
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353.
Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
Special provisions A3
- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

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

- U.S. Federal regulations** : **Clean Water Act (CWA) 307:** Acetonitrile
Clean Water Act (CWA) 311: Diuron (ISO)

TSCA 12(b) - Chemical export notification

Not applicable.

- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Not listed

SARA 302/304

Composition/information on ingredients

Section 15. Regulatory information

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : **FLAMMABLE LIQUIDS - Category 2**
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION - Category 1B

Composition/information on ingredients

Name	%	Classification
Acetonitrile	≥65 - ≤85	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A
Acetone	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Atrazine (ISO)	≥0.1 - ≤1	HNOC - Defatting irritant ACUTE TOXICITY (oral) - Category 4 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1
Chlorotoluron (ISO)	≥0.1 - ≤1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 COMBUSTIBLE DUSTS CARCINOGENICITY - Category 2
Diuron (ISO)	≥0.1 - ≤1	TOXIC TO REPRODUCTION - Category 2 ACUTE TOXICITY (oral) - Category 4 CARCINOGENICITY - Category 1B
Linuron (ISO)	≥0.1 - ≤1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ACUTE TOXICITY (oral) - Category 4 CARCINOGENICITY - Category 2
2-Chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide	≥0.1 - ≤1	TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN SENSITIZATION - Category 1B CARCINOGENICITY - Category 2
desethylterbutylazine	≥0.1 - ≤1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 SKIN SENSITIZATION - Category 1

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Acetonitrile	75-05-8	≥65 - ≤85
Supplier notification	Acetonitrile	75-05-8	≥65 - ≤85

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: ACETONITRILE; ACETONE
New York : The following components are listed: Acetonitrile; Acetone
New Jersey : The following components are listed: ACETONITRILE; ACETONE; LINURON
Pennsylvania : The following components are listed: ACETONITRILE; 2-PROPANONE
California Prop. 65

Section 15. Regulatory information

⚠ WARNING: This product can expose you to chemicals including Diuron, which is known to the State of California to cause cancer, and Atrazine, Des-ethyl atrazine, Linuron, Nifedipine and Nimodipine, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Atrazine	-	Yes.
Des-ethyl atrazine	-	Yes.
Diuron	-	-
Linuron	-	Yes.
Nifedipine	-	-
Nimodipine	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: At least one component is inactive.
Viet Nam	: Not determined.

Section 16. Other information

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION - Category 1B AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1	Expert judgment Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

History

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Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- DOT = Department of Transportation
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- TDG = Transportation of Dangerous Goods
- UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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