

**Section 1-Identification of Product**

8554G

WHMIS Classification

Health: 2 Fire: 3 Stability: 0

**Contact Information**

Ambion, Inc 2130 Woodward St. Austin, TX 78744-1832 Tel: +1 512 651 0200 US Toll-free Tel: 800 888 8804 E-mail: [techserv@ambion.com](mailto:techserv@ambion.com) Web address [www.ambion.com](http://www.ambion.com)

Ambion (Europe) LTD Huntingdon, Cambridgeshire UK PE29 6XY Tel:+44 (0)1480 373 020 Fax: +44 (0)1480 373 010 E-mail: [eurotech@ambion.com](mailto:eurotech@ambion.com) Web address: [www.ambion.com](http://www.ambion.com)

Emergency Contact: In Europe, call 112. In USA, call 911

**Section 2-Composition/Information**

Hazardous Ingredients (Specific)	%	CAS #	LD <sub>50</sub>	LC <sub>50</sub>
Trade secret	75-100	Trade secret	Oral, rat: LD50 = 7060 mg/kg	Inhalation, rat: LC50 = 20000 ppm/10H
Trade secret	1-30	Trade secret	No Data	No Data

**Section 3-Hazard Identification**

**Routes of Entry**

Skin Contact	Causes moderate skin irritation. May cause cyanosis of the extremities.
Skin Absorption	Causes moderate skin irritation. May cause cyanosis of the extremities.
Eye Contact	Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.
Inhalation	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation.
Ingestion	May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

[Emergency Overview]

**WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS THE CENTRAL NERVOUS SYSTEM, LIVER, KIDNEYS, BLOOD, AND REPRODUCTIVE SYSTEM.**

WHMIS Symbols

N.A.

[Potential Health Effects]

Respiratory tract irritation, skin irritation, eye irritation, liver damage, central nervous system depression

**Section 4-First Aid Measures**

Skin Contact	Get medical aid if needed. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Eye Contact	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Inhalation	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not Breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Get medical aid if irritation or symptoms occur.

**Section 5-Fire Fighting Measures**

Flammable

Flammable

Means of Extinction	Alcohol resistant foam, carbon dioxide, regular dry chemical, water
Flashpoint (°C) and Method	35-75 F (1.6-24 C) (CC)
Upper Flammable Limit (% by volume)	3.3%
Lower Flammable Limit (% by volume)	19%
Autoignition Temperature (°C)	685F (363C)
Explosion Data – Sensitivity to Impact	No
Explosion Data – Sensitivity to Static Discharge	Yes
Hazardous Combustion Products	Yes
NFPA	Health: 2 Fire: 3 Stability: 0

**Section 6-Accidental Release Measures**

**Leak and Spill Procedures**

Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal.

**Section 7-Handling and Storage**

Handling Procedures and Equipment	Wash thoroughly after handling. Wash hands before eating. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.
Storage Requirements	Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

**Section 8-Exposure Control/Personal Protection**

**Exposure Limits**

ACGIH TLV	1000 ppm TWA
OSHA PEL	1000 ppm TWA; 1900 mg/m3 TWA
Other (specify)	NIOSH- 1000 ppm TWA; 1900 mg/m3 TWA 3300 ppm IDLH

**Engineering Controls (specific)**

General	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Local Exhaust	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, <i>Industrial Ventilation, A Manual of Recommended Practices</i> , most recent edition, for details.
Other	N.A.

**Personal Protective Equipment (specific)**

Gloves	Synthetic gloves
Respirator	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.
Eye	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Maintain eye wash fountain and quick-drench facilities in work area.
Footwear	Closed toe shoes
Clothing	Wear appropriate protective clothing to prevent skin exposure.
Other	

**Section 9-Physical and Chemical Properties**

Physical State	Liquid
Odor and Appearance	Mild – Spirits / Violet
Odor Threshold (ppm)	Not tested
Specific Gravity	0.790 @ 20 °C
Vapor Density (Air=1)	1.59
Vapor Pressure (mmHg)	0.790 @ 20 °C
Evaporation Rate	1.4

Boiling Point (°C)	0.790 @ 20 °C
Freezing Point (°C)	- 114.1 deg C
pH	Not available
Coefficient of Water/Oil Distribution	Not tested
[Solubility in Water]	Miscible

**Section 10-Stability and Reactivity**

Chemical Stability	Stable
Incompatible with other substances	Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium - tertbutoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.
Reactivity	N.A.
Hazardous Decomposition Products	Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide. Ammonia, oxides of nitrogen.

**Section 11-Toxicological Information**

Acute Effects	Rash, low body temperature, vomiting, digestive disorders, irregular heartbeat, headache, drowsiness, symptoms of drunkenness, disorientation, dilated pupils, lung congestion, liver damage, convulsions, coma
Chronic Effects	Diarrhea
Irritancy of Product	Eye, skin, gastrointestinal, respiratory
Skin Sensitization	No
Respiratory Sensitization	No

**Carcinogenicity**

IARC (1,2A, or 2B)	Not listed
ACGIH (A1, A2, or A3)	Not listed
Reproductive Toxicity	Intrauterine, Human - woman: TDLo = 200 mg/kg (female 5 day(s) pre - mating) Fertility - female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated).
Teratogenicity	Oral, Human - woman: TDLo = 41 gm/kg (female 41 week(s) after conception) Effects on Newborn - Apgar score (human only) and Effects on Newborn - other neonatal measures or effects and Effects on Newborn - drug dependence.
Embryotoxicity	May cross the placenta. May be excreted in breast milk.
Mutagenicity	DNA Inhibition: Human, Lymphocyte = 220 mmol/L.; Cytogenetic Analysis: Human, Lymphocyte = 1160 gm/L.; Cytogenetic Analysis: Human, Fibroblast = 12000 ppm.; Cytogenetic Analysis: Human, Leukocyte = 1 pph/72H (Continuous).; Sister Chromatid Exchange: Human, Lymphocyte = 500 ppm/72H (Continuous).
Name of Synergistic Products/Effects	N.A.

**Section 12-Ecological Information**

Aquatic Toxicity	FISH TOXICITY: 93 ug/L 96 hour(s) LC50 (Mortality) Bluegill ( <i>Lepomis macrochirus</i> ) ALGAL TOXICITY: 10000-25000 ug/L 1-2 hour(s) (Photosynthesis) Green algae ( <i>Acrosiphonia sonderi</i> ) BIOCONCENTRATION: 2230 ug/L 72 hour(s) BCF (Residue) Mayfly ( <i>Ephemera danica</i> ) 0.761 ug/L
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**Section 13-Disposal Considerations**

Waste Disposal	Chemical waste generators must determine the best method to discard this chemical waste that is classified as hazardous (Flammable). US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. Do not dispose of in municipal wastewater.
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<b>Section 14-Transport Information</b>	
<b>Special Shipping Information</b>	
PIN	Not listed
TDG	Not listed
[DOT]	Not listed
[IMO]	Not listed
[ICAO]	Not listed
<b>Section 15-Regulatory Information</b>	
[WHMIS Classification]	Not available
[OSHA]	OSHA considers none of the chemicals in this product highly hazardous.
[SARA]	CAS # Trade secret: acute, chronic, flammable.
[TSCA]	Listed
<b>Section 16-Other Information</b>	
<p>This bulletin is for your guidance and is based upon information and tests believed to be reliable. Ambion makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages thereto. The data are offered solely for your consideration, investigation, and verification. These suggestions should not be confused with state, municipal, or insurance requirements, or with national safety codes and constitute no warranty. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state, and local regulations.</p>	

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**Section 5-Fire Fighting Measures**

Flammable	Flammable
Means of Extinction	Alcohol resistant foam, carbon dioxide, regular dry chemical, water

Flashpoint (°C) and Method	35-75 F (1.6-24 C) (CC)
Upper Flammable Limit (% by volume)	3.3%
Lower Flammable Limit (% by volume)	19%
Autoignition Temperature (°C)	685F (363C)
Explosion Data – Sensitivity to Impact	No
Explosion Data – Sensitivity to Static Discharge	Yes
Hazardous Combustion Products	Yes
NFPA	Health: 2 Fire: 3 Stability: 1

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Footwear	Closed toe shoes
Clothing	Wear appropriate protective clothing to prevent skin exposure.
Other	

**Section 9-Physical and Chemical Properties**

Physical State	Liquid
Odor and Appearance	Mild – Spirits / Orange
Odor Threshold (ppm)	Not tested
Specific Gravity	0.790 @ 20 °C
Vapor Density (Air=1)	1.59
Vapor Pressure (mmHg)	0.790 @ 20 °C
Evaporation Rate	1.4
Boiling Point (°C)	0.790 @ 20 °C
Freezing Point (°C)	- 114.1 deg C

pH	Not available
Coefficient of Water/Oil Distribution	Not tested
[Solubility in Water]	Miscible

**Section 10-Stability and Reactivity**

Chemical Stability	Stable
Incompatible with other substances	Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium - tertbutoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.
Reactivity	N.A.
Hazardous Decomposition Products	Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Section 11-Toxicological Information**

Acute Effects	Rash, low body temperature, vomiting, digestive disorders, irregular heartbeat, headache, drowsiness, symptoms of drunkenness, disorientation, dilated pupils, lung congestion, liver damage, convulsions, coma
Chronic Effects	Diarrhea, Laboratory experiments have shown acridine orange to have mutagenic effects.
Irritancy of Product	Eye, skin, gastrointestinal, respiratory
Skin Sensitization	No
Respiratory Sensitization	No

**Carcinogenicity**

IARC (1,2A, or 2B)	Group 3
ACGIH (A1, A2, or A3)	Not Listed
Reproductive Toxicity	Intrauterine, Human - woman: TDLo = 200 mg/kg (female 5 day(s) pre - mating) Fertility - female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated).
Teratogenicity	Oral, Human - woman: TDLo = 41 gm/kg (female 41 week(s) after conception) Effects on Newborn - Apgar score (human only) and Effects on Newborn - other neonatal measures or effects and Effects on Newborn - drug dependence.
Embryotoxicity	May cross the placenta. May be excreted in breast milk.
Mutagenicity	DNA Inhibition: Human, Lymphocyte = 220 mmol/L.; Cytogenetic Analysis: Human, Lymphocyte = 1160 gm/L.; Cytogenetic Analysis: Human, Fibroblast = 12000 ppm.; Cytogenetic Analysis: Human, Leukocyte = 1 pph/72H (Continuous).; Sister Chromatid Exchange: Human, Lymphocyte = 500 ppm/72H (Continuous).
Name of Synergistic Products/Effects	N.A.

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<b>Special Shipping Information</b>	
PIN	Not listed
TDG	Not listed
[DOT]	Not listed
[IMO]	Not listed
[ICAO]	Not listed
<b>Section 15-Regulatory Information</b>	
[WHMIS Classification]	Not available
[OSHA]	OSHA considers none of the chemicals in this product highly hazardous.
[SARA]	CAS # Trade secret: acute, chronic, flammable. 313 Zinc compounds
[TSCA]	Listed
<b>Section 16-Other Information</b>	
<p>This bulletin is for your guidance and is based upon information and tests believed to be reliable. Ambion makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages thereto. The data are offered solely for your consideration, investigation, and verification. These suggestions should not be confused with state, municipal, or insurance requirements, or with national safety codes and constitute no warranty. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state, and local regulations.</p>	