Date: 01.08.2024

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Kit Components

Kit Product No.	Kit Product Description
212539	KIT GRAM STAIN STABILIZED

Kit Component(s)	Kit Component(s) Description
0332975BJAA	Gram Crystal Violet
0333075BJAA	GRAM DECOLORIZER 250ML
0333275BJAA	Gram Safranin
0334275BJAA	STABILIZED GRAM IODINE 250ML

IMDG

UN number or ID number:	UN 3316
UN Proper Shipping Name:	CHEMICAL KIT
Transport Hazard Class(es)	
Class:	9
Label(s):	9
EmS No.:	F-A, S-P
Packing Group:	II
Environmental Hazards:	Not Regulated.
Marine Pollutant:	No
Special precautions for user:	Not Regulated.

IATA

UN number or ID number:	UN 3316
Proper Shipping Name:	CHEMICAL KIT
Transport Hazard Class(es):	
Class:	9
Label(s):	9MI
Packing Group:	II

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Environmental Hazards:	Not Regulated.
Marine Pollutant:	No
Cargo aircraft only:	Forbidden.

Special precautions for user:	Not Regulated.

Please note: If a listed component does not have a corresponding document included, this means that the product is not hazardous and does not require a Safety Data Sheet.

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SAFETY DATA SHEET

Classified in accordance with Health Canada Hazardous Products Regulations (SOR/2015-17)

1. Identification

Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
0332975BJAA	Gram Crystal Violet	No data available

Recommended use of the chemical and restrictions on use

Recommended use: Laboratory Chemicals
Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: BD, Integrated Diagnostic Solutions
Address: 7 Loveton Circle
Sparks, MD 21152
USA

Telephone: 1 844 823 5433
Fax: not available
Contact Person: Business Unit Product Stewardship Team
E-mail: IDS_SDS@bd.com

Emergency telephone number: CHEMTREC 1 800 424 9300

2. Hazard identification

Hazard Classification

Physical Hazards

Flammable liquids	Category 3
Static-accumulating flammable liquid	Category 1

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Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Carcinogenicity	Category 1B
Specific Target Organ Toxicity - Single Exposure	Category 1

Environmental Hazards

Acute hazards to the aquatic environment	Category 3
Chronic hazards to the aquatic environment	Category 3

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:
H226: Flammable liquid and vapor.
FK: Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.
Spark: Sparks may ignite liquid and vapor.
H241: May cause flash fire or explosion.
H319: Causes serious eye irritation.
H350: May cause cancer.
H370: Causes damage to organs.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention:
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilating and lighting equipment.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.

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P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
-: These alone may be insufficient to remove static electricity.

Response:

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
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/attention.
P308+P311: IF exposed or concerned: Call a POISON CENTER/doctor.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

Disposal:

P501: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards which do not result in GHS classification:

None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
2-Propanol	No data available.	67-63-0	1 - 5%
Methanol	No data available.	67-56-1	1 - 5%
Ethanol	No data	64-17-5	1 - 5%

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	available.		
Phenol	No data available.	108-95-2	0.1 - 1%
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.	548-62-9	0.1 - 1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General information: Get immediate medical advice/attention.

Inhalation: Get medical attention immediately. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position.

Skin Contact: Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention immediately.

Eye contact: Get medical attention immediately. Continue to rinse. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

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Ingestion:	If swallowed, rinse mouth with water (only if the person is conscious). Call a physician or poison control center immediately.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	Symptoms may be delayed.
Hazards:	May cause cancer. Causes damage to organs. Causes serious eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment:	Immediately call a POISON CENTER/doctor/…

5. Fire-fighting measures

General Fire Hazards:	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water to keep fire exposed containers cool and disperse vapors.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, foam, dry powder or carbon dioxide. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.

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Special hazards arising from the substance or mixture:	Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Exposure to fire can generate toxic fumes. Fire or excessive heat may produce hazardous decomposition products.

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures:	May form explosive or toxic mixtures with air. Static charges generated by emptying package in or near flammable vapor may cause flash fire. May form toxic or explosive vapors in presence of certain metals. The product is highly flammable and may be ignited even after short contact with an ignition source.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. By heating and fire, toxic vapors/gases may be formed. Ventilate closed spaces before entering them. Move containers from fire area if you can do so without risk. Stop leak if you can do so without risk.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.
Accidental release measures:	No data available.

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Methods and material for containment and cleaning up:	Prevent entry into waterways, sewer, basements or confined areas. Stop leak if possible without any risk. Sweep up and place in a clearly labeled container for chemical waste. See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.
Environmental Precautions:	Do not release into the environment. Environmental manager must be informed of all major spillages.

7. Handling and storage

Handling

Technical measures:	No data available.
Local/Total ventilation:	No data available.
Safe handling advice:	Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, on clothing. Do not eat, drink or smoke when using the product. Read and follow manufacturer's recommendations. Wash promptly with soap and water if skin becomes contaminated. Use personal protective equipment as required.
Contact avoidance measures:	No data available.

Storage

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Safe storage conditions: Store in tightly closed original container in a dry, cool and well-ventilated place. Store locked up. Follow rules for flammable liquids.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values		Source
2-Propanol	TWA	200 ppm	492 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
	STEL	400 ppm	984 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
2-Propanol		400 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
		200 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
2-Propanol	STEL	400 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
	TWA	200 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
2-Propanol	15 MIN ACL	400 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
	8 HR ACL	200 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

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2-Propanol	STEL	500 ppm	1,230 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
2-Propanol	STEL	400 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
	TWA	200 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
	TWA	400 ppm	985 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
2-Propanol	TWA	200 ppm		US. ACGIH Threshold Limit Values, as amended
	STEL	400 ppm		US. ACGIH Threshold Limit Values, as amended
2-Propanol	STEL	500 ppm	1,225 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
2-Propanol	REL	400 ppm	980 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
2-Propanol	IDLH	2,000 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
2-Propanol	LEL		2.0 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Methanol	TWA	200 ppm	262 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
	STEL	250 ppm	328 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
Methanol	STEL	250 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
	TWA	200 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological

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				Substances (Workers Compensation Board); as amended
Methanol		200 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
		250 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Methanol	STEL	250 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
	TWA	200 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Methanol	15 MIN ACL	250 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
	8 HR ACL	200 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
Methanol	TWA	200 ppm	262 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
	STEL	250 ppm	328 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
Methanol	STEL	250 ppm		US. ACGIH Threshold Limit Values, as amended
	TWA	200 ppm		US. ACGIH Threshold Limit Values, as amended
Methanol	REL	200 ppm	260 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Methanol	STEL	250 ppm	325 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Methanol	IDLH	6,000 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Methanol	LEL		6.0 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

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Ethanol	TWA	1,000 ppm	1,880 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
Ethanol	STEL	1,000 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
Ethanol		1,000 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Ethanol	STEL	1,000 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Ethanol	8 HR ACL	1,000 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
	15 MIN ACL	1,250 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
Ethanol	TWA	1,000 ppm		Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
Ethanol	STEL	1,000 ppm		US. ACGIH Threshold Limit Values, as amended
Ethanol	REL	1,000 ppm	1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Ethanol	IDLH	3,300 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Ethanol	LEL		3.3 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

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Phenol	TWA	5 ppm	19 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
Phenol	TWA	5 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
Phenol		5 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Phenol	TWA	5 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Phenol	8 HR ACL	5 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
	15 MIN ACL	7.5 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

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Phenol	TWA	5 ppm	19 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
Phenol	TWA	5 ppm		US. ACGIH Threshold Limit Values, as amended
Phenol	REL	5 ppm	19 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Phenol	Ceil_Time	15.6 ppm	60 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Phenol	IDLH	250 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Phenol	LEL		1.8 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

Biological Limit Values

Chemical name	Parameters / Sampling Time	Exposure Limit Values	Source
2-Propanol	acetone Sampling time: End of shift at end of work week.	40 mg/l (Urine)	ACGIH BEI
Methanol	methanol Sampling time: End of shift.	15 mg/l (Urine)	ACGIH BEI
Phenol	Phenol with hydrolysis Sampling time: End of shift.	250 mg/g (Creatinine in urine)	ACGIH BEI

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Appropriate Engineering Controls	Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection:	Wear safety glasses with side shields (or goggles).
Hand Protection:	Material: Use suitable protective gloves if risk of skin contact.
Other:	Wear appropriate clothing to prevent reasonably probable skin contact.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Hygiene measures:	Do not eat, drink or smoke when using the product. Do not get this material in contact with skin. Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray.

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9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	According to product specification.
Odor:	Characteristic
Odor Threshold:	No data available.
Freezing point:	No data available.
Boiling Point:	No data available.
Flammability:	No data available.

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Flash Point:	109.9 °F/43.3 °C
Self-ignition:	No data available.
Decomposition Temperature:	No data available.
pH:	No data available.

Viscosity

Dynamic viscosity:	Not determined.

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Kinematic viscosity:	Not determined.
Flow Time:	No data available.

Solubility(ies)

Solubility in Water:	Completely Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Vapor pressure:	No data available.
Relative density:	No data available.
Density:	No data available.
Bulk density:	No data available.
Relative vapor density:	No data available.

Other information

Metal Corrosion:	Non-corrosive per US Department of Transportation testing protocol.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	No data available.

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Possibility of hazardous reactions:	Do not subject to grinding/shock/friction/. Contact with acids and metals can lead to violent decomposition.
Conditions to avoid:	Heat, sparks, flames. Shocks and physical damage. Avoid conditions which create dust. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
Incompatible Materials:	Strong acids. Strong oxidizing agents. Peroxides. Other metals or alloys.
Hazardous Decomposition Products:	By fire, toxic gases may be formed (COx, NOx).

11. Toxicological information

General information: Known or suspected carcinogen for humans. Can cause internal organ effects.

Information on likely routes of exposure

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: Irritating to eyes.

Ingestion: No data available.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix, 4,000 mg/kg
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	No data available.
Phenol	LD 50, Mouse, 270 mg/kg LD 50, Rat, 530 mg/kg, 2 = reliable with restrictions, Weight of evidence LD 50, Rat, 650 mg/kg, 2 = reliable with restrictions, Weight of evidence LD 50, Rat, 540 mg/kg, 2 = reliable with restrictions, Weight of evidence

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	LD 50, Rat, 340 mg/kg, 2 = reliable with restrictions, Weight of evidence
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Dermal

Product:	ATEmix, 12,000 mg/kg
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	LD 50, Rabbit, 17,100 mg/kg, 4 = not assignable
Phenol	LD 50, Rabbit, 850 mg/kg LD 50, Rat, 669 mg/kg LD 50, Rat, 670 mg/kg
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Inhalation

Product:	ATEmix, 120 mg/l, Vapour
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	No data available.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	Based on available data, the classification criteria are not met.
Phenol	NOAEL Rabbit, Dermal, 18 d, 130 mg/kg, Experimental result, Key study Dermal LOAEL Rabbit, Dermal, 18 d, 260 mg/kg, Experimental result, Key study Dermal LOAEL Mouse, Male, Oral, 4.7 mg/l, Oral Experimental result, Not

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	specified LOAEL Rat, Female, Male, Oral, 103 Weeks, 5,000 ppm(m), Oral Experimental result, Weight of Evidence study LOAEL Rat, Male, Oral, 10 - 13 Weeks, 5,000 ppm(m), Oral Experimental result, Weight of Evidence study
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Skin Corrosion/Irritation

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	Based on available data, the classification criteria are not met.
Phenol	Corrosive, in vivo, Rabbit, 72 h, Experimental result, Supporting study Corrosive, in vivo, Rat, Experimental result, Supporting study Corrosive, In vitro, In vitro, Experimental result, Supporting study
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Serious Eye Damage/Eye Irritation

Product:	Irritating to eyes.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	No data available.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Respiratory or Skin Sensitization

Product:	No data available.
Components:	
2-Propanol	Skin sensitization:, in vivo, Guinea pig, Non sensitising
Methanol	Skin sensitization:, in vivo, Guinea pig, Non sensitising

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Ethanol	Based on available data, the classification criteria are not met. Skin sensitization:, in vivo, Guinea pig, Non sensitising
Phenol	Skin sensitization:, in vivo, Mouse, Non sensitising Skin sensitization:, Human, Non sensitising
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Carcinogenicity

Product:	May cause cancer.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	Based on available data, the classification criteria are not met.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	Overall evaluation: 2B. Possibly carcinogenic to humans.

ACGIH: US.ACGIH Threshold Limit Values:
No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
No carcinogens present or none present in regulated quantities

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
No carcinogens present or none present in regulated quantities

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended

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No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity
In vitro

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	Based on available data, the classification criteria are not met.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

In vivo

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	Based on available data, the classification criteria are not met.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Reproductive toxicity

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	Based on available data, the classification criteria are not met.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Specific Target Organ Toxicity - Single Exposure

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Product:	Causes damage to organs.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	Based on available data, the classification criteria are not met.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	Based on available data, the classification criteria are not met.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Aspiration Hazard

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	No data available.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Information on health hazards

Other hazards

Product:	No data available.

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12. Ecological information

General information: Harmful to aquatic life with long lasting effects.

Ecotoxicity:

Toxicity to Aquatic Plants

Product:	Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the environment.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	EC10, Green algae (Chlorella vulgaris), 72 h, 11.5 mg/l EC 50, Green algae (Chlorella vulgaris), 72 h, 275 mg/l
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	LC 50, Turbellarian, flatworm (Dugesia tigrina), 96 h, > 100 mg/l, Mortality
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Acute hazards to the aquatic environment:

Fish

Product:	Expected to be harmful to aquatic organisms.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	LC 50, Fathead Minnow, 96 h, 14,200 mg/l

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	LC 50, Fathead Minnow, 96 h, 15,300 mg/l LC 50, Oncorhynchus mykiss, 24 h, 11,200 mg/lflow-through, Experimental result, Supporting study
Phenol	LC 50, Danio rerio, 96 h, 86.4 mg/lStatic, Experimental result, Supporting study LC 50, Pimephales promelas, 96 h, 67.5 mg/lflow-through, Experimental result, Key study
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl] methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	LC 50, Medaka, high-eyes (Oryzias latipes), 48 h, 0.1 mg/lStatic, Mortality LC 50, Medaka, high-eyes (Oryzias latipes), 24 h, 0.2 mg/lStatic, Mortality

Aquatic Invertebrates

Product:	Expected to be harmful to aquatic organisms.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	LC 50, Water flea (Ceriodaphnia dubia), 48 h, 5,012 mg/l LC 50, Grass shrimp,freshwater prawn (Palaemonetes kadiakensis), 18 h, 10,100 mg/l LC 50, Grass shrimp,freshwater prawn (Palaemonetes kadiakensis), 96 h, > 250 mg/lStatic, Mortality
Phenol	LC 50, Nitokra spinipes, 96 h, 37 mg/lStatic, experimental result Experimental result, Supporting study EC 50, Daphnia magna, 24 h, 21 mg/lStatic, experimental result Experimental result, Not specified LC 50, Brachionus rubens, 24 h, 600 mg/l, experimental result Experimental result, Not specified LC 50, Gammarus pulex, 96 h, 69 mg/lflow-through, experimental result Experimental result, Not specified LC 50, Artemia salina, 24 h, 157 mg/lStatic, experimental result Experimental result, Not specified
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl] methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Chronic hazards to the aquatic environment:

Fish

Product:	Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the environment.
Components:	
2-Propanol	No data available.

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Methanol	No data available.
Ethanol	No data available.
Phenol	NOAEL, Pimephales promelas, 0.75 mg/l, experimental result Experimental result, Not specified NOAEL, Cyprinus carpio, 0.11 mg/l, semi-static, experimental result Experimental result, Supporting study LC 10, Oncorhynchus mykiss, 0.0017 mg/l, experimental result Experimental result, Not specified LC 50, Carassius auratus, 0.33 mg/l, experimental result Experimental result, Not specified LOAEL, Oncorhynchus mykiss, 0.2 mg/l, experimental result Experimental result, Not specified
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl] methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Aquatic Invertebrates

Product:	Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the environment.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	EC10, Water flea (Daphnia magna), 10 d, 454 mg/l NOEC, Water flea (Daphnia magna), 10 d, 9.6 mg/l
Phenol	EC 10, Daphnia magna, 0.05 mg/l, semi-static, experimental result Experimental result, Supporting study NOAEL, Daphnia magna, 0.16 mg/l, semi-static, experimental result Experimental result, Key study NOAEL, Daphnia magna, 0.5 mg/l, semi-static, experimental result Experimental result, Not specified NOAEL, Daphnia magna, < 0.1 mg/l, semi-static, experimental result Experimental result, Supporting study EC 10, Daphnia magna, 0.46 mg/l, semi-static, experimental result Experimental result, Key study
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl] methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Persistence and Degradability

Biodegradation

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Product:	No data available.
Components:	
2-Propanol	53 %, 5 d, Experimental result, Key study Detected in water.
Methanol	84 %, Experimental result, Key study Detected in water. 46.3 %, 5 d, Experimental result, Supporting study Soil 69 %, Experimental result, Key study Detected in water. 71.5 %, 5 d, Experimental result, Key study Detected in water. 82.7 %, 5 d, Experimental result, Key study Detected in water.
Ethanol	Readily biodegradable 13.6 %, 5 d, Soil Read-across from supporting substance (structural analogue or surrogate), Supporting study 89 %, 14 d, Detected in water. Experimental result, Supporting study 53.4 %, 5 d, Soil Read-across from supporting substance (structural analogue or surrogate), Supporting study 46.3 %, 5 d, Soil Read-across from supporting substance (structural analogue or surrogate), Supporting study
Phenol	50 %, 200 h, Sediment Experimental result, Not specified
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	3.6 %, 28 d, Experimental result, Key study Detected in water.

BOD/COD Ratio

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	No data available.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	Green algae (Chlorella fusca vacuolata), 28,400, Static
Ethanol	Potential to bioaccumulate is low.

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Phenol	Danio rerio, 17.5, Aquatic sediment Experimental result, Key study Pimephales promelas, 3.5, Aquatic sediment Estimated by calculation, Supporting study Oncorhynchus mykiss, 8.2, Aquatic sediment Estimated by calculation, Not specified Carassius auratus, 1.9, Aquatic sediment Experimental result, Not specified Scenedesmus quadricauda, 3.5, Aquatic sediment Experimental result, Not specified
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	-0.77
Ethanol	No data available.
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Mobility in soil:

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.
Ethanol	soil - Very mobile liquid
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Results of PBT and vPvB assessment:

Product:	No data available.
Components:	
2-Propanol	No data available.
Methanol	No data available.

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Ethanol	Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent/very bioaccummulative) criteria
Phenol	No data available.
Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)	No data available.

Other adverse effects:

Other hazards
Product: No data available.

13. Disposal considerations

General information: This material and its container must be disposed of as hazardous waste.

Disposal methods: Dispose of waste at a facility with special permission to dispose industrial wastes subject to special control. Waste should be accompanied by a manifest for the industrial wastes.

Contaminated Packaging: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

14. Transport information

IATA

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UN number or ID number:	UN 3316
UN Proper Shipping Name:	CHEMICAL KIT
Transport Hazard Class(es)	
Class:	9
Label(s):	9MI (Miscellaneous)
Packing Group:	III
Passenger and cargo aircraft :	
Limited quantity	None.
Environmental Hazards	
Environmentally Hazardous:	No
Marine Pollutant:	No
Special precautions for user:	PG
Passenger and cargo aircraft:	Forbidden.
Cargo aircraft only :	Forbidden.

IMDG

UN number or ID number:	UN 3316
UN Proper Shipping Name:	CHEMICAL KIT
Transport Hazard Class(es)	
Class:	9
Label(s):	9

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EmS No.:	F-A, S-P
Packing Group:	III
Limited quantity	None.

Environmental Hazards

Environmentally Hazardous:	No
Marine Pollutant:	No

Special precautions for user: PG

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

Canada Federal Regulations

List of Toxic Substances (CEPA, Schedule 1)

Not Regulated

Export Control List (CEPA 1999, Schedule 3)

Not Regulated

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National Pollutant Release Inventory (NPRI)

Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

Chemical Identity

Isopropyl alcohol

METHANOL

Ethanol

Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)

Chemical Identity

Isopropyl alcohol

METHANOL

Greenhouse Gases

Not Regulated

Canada. Substances Subject to Significant New Activity (SNAc) Reporting Requirements

Not Regulated

Controlled Drugs and Substances Act

CA CDSI	Not Regulated
CA CDSII	Not Regulated
CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated

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CA CDSVIII	Not Regulated

Precursor Control Regulations

Not Regulated

16.Other information, including date of preparation or last revision

Date of first report version: 04/17/2014

Generation date: 07/23/2024

Version #: 2.3

Abbreviations and acronyms:

ACGIH:	US. ACGIH Threshold Limit Values, as amended
CAD AB OEL:	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
CAD BC OEL:	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
CAD MB OEL:	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
CAD ON OEL:	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
CAD SK OEL:	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
NIOSH IDLH:	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
NIOSH/GUIDE:	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
OEL (QUE):	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
ACGIH / STEL:	Short Term Exposure Limit (STEL):
ACGIH / TWA:	Time Weighted Average (TWA):
CAD AB OEL / STEL:	Short Term Exposure Limit (STEL):
CAD AB OEL / TWA:	Time Weighted Average (TWA):
CAD BC OEL / TWA:	Time Weighted Average (TWA):
CAD BC OEL / STEL:	Short Term Exposure Limit (STEL):
CAD MB OEL / TWA:	Time Weighted Average (TWA):
CAD MB OEL / STEL:	Short Term Exposure Limit (STEL):
CAD ON OEL / STEL:	Short Term Exposure Limit (STEL):
CAD ON OEL / TWA:	Time Weighted Average (TWA):

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CAD SK OEL / 8 HR ACL:	8 hour average contamination limit:
CAD SK OEL / 15 MIN ACL:	15 minute average contamination limit:
NIOSH IDLH / LEL:	Lower Explosive Limit (LEL):
NIOSH IDLH / IDLH:	Immediately dangerous to life or health (IDLH) concentration:
NIOSH/GUIDE / Ceil_Time:	Ceiling Limit Value and Time Period (if specified):
NIOSH/GUIDE / REL:	Recommended exposure limit (REL):
NIOSH/GUIDE / STEL:	Short Term Exposure Limit (STEL):
OEL (QUE) / TWA:	Time Weighted Average (TWA):
OEL (QUE) / STEL:	Short Term Exposure Limit (STEL):

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Source of information: European Chemicals Agency (ECHA): Information on Chemicals.

Further Information: No data available.

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SAFETY DATA SHEET

Classified in accordance with Health Canada Hazardous Products Regulations (SOR/2015-17)

1. Identification

Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
0333075BJAA	GRAM DECOLORIZER 250ML	No data available

Recommended use of the chemical and restrictions on use

Recommended use: Laboratory Chemicals
Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: BD, Integrated Diagnostic Solutions
Address: 7 Loveton Circle
Sparks, MD 21152
USA

Telephone: 1 844 823 5433
Fax: not available
Contact Person: Business Unit Product Stewardship Team
E-mail: IDS_SDS@bd.com

Emergency telephone number: CHEMTREC 1 800 424 9300

2. Hazard identification

Hazard Classification

Physical Hazards

Flammable liquids	Category 2
Static-accumulating flammable liquid	Category 1

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Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Specific Target Organ Toxicity - Single Exposure	Category 3

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:
H225: Highly flammable liquid and vapor.
FK: Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.
Spark: Sparks may ignite liquid and vapor.
H241: May cause flash fire or explosion.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilating and lighting equipment.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/ eye protection/ face protection.
-: These alone may be insufficient to remove static electricity.

Response:
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER or doctor/ physician if you feel unwell.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P337+P313: If eye irritation persists: Get medical advice/attention.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage: P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.

Disposal: P501: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
2-Propanol	No data available.	67-63-0	60 - 80%
2-Propanone	No data available. **01-2119471330-49-0062	67-64-1	10 - 30%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**See Section 15 for HMIRA Registration information

The exact concentration has been withheld as a trade secret.

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4. First-aid measures

Description of first aid measures

General information: Get medical attention if symptoms occur. Causes serious eye irritation. May cause drowsiness or dizziness.

Inhalation: Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Get medical attention if any discomfort continues.

Skin Contact: Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Ingestion: If swallowed, rinse mouth with water (only if the person is conscious). DO NOT induce vomiting. Get medical attention immediately.

Personal Protection for First-aid Responders: No data available.

Most important symptoms and effects, both acute and delayed

Symptoms: Symptoms may be delayed.

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Hazards:	Causes serious eye irritation. May cause drowsiness or dizziness.

Indication of immediate medical attention and special treatment needed

Treatment:	Get medical attention if symptoms occur.

5. Fire-fighting measures

General Fire Hazards:	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water to keep fire exposed containers cool and disperse vapors. In case of fire: Evacuate area.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, foam, dry powder or carbon dioxide. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
Special hazards arising from the substance or mixture:	Fire or excessive heat may produce hazardous decomposition products.

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures:	May explode when heated or when exposed to flames or sparks.

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Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Contact local authorities in case of spillage to drain/aquatic environment. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.
Accidental release measures:	No data available.
Methods and material for containment and cleaning up:	All equipment used when handling the product must be grounded. Eliminate sources of ignition. Prevent spreading of vapors through sewers, ventilation systems and confined areas. Absorb spillage with suitable absorbent material. Prevent runoff from entering drains, sewers, or streams. See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.
Environmental Precautions:	Avoid release to the environment.

7. Handling and storage

Handling

Technical measures:	No data available.

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Local/Total ventilation: No data available.

Safe handling advice: When using do not eat, drink or smoke. Use personal protective equipment as required. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Read and follow manufacturer's recommendations. Use spark-proof tools and explosion-proof equipment.

Contact avoidance measures: No data available.

Storage

Safe storage conditions: Store in a cool, dry place. Keep container tightly closed. Keep from contact with oxidizing materials.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values		Source
2-Propanol	TWA	200 ppm	492 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
	STEL	400 ppm	984 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
2-Propanol		400 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
		200 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended

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2-Propanol	STEL	400 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
	TWA	200 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
2-Propanol	15 MIN ACL	400 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
	8 HR ACL	200 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
2-Propanol	STEL	500 ppm	1,230 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
2-Propanol	STEL	400 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
	TWA	200 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
	TWA	400 ppm	985 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
2-Propanol	TWA	200 ppm		US. ACGIH Threshold Limit Values, as amended
	STEL	400 ppm		US. ACGIH Threshold Limit Values, as amended
2-Propanol	STEL	500 ppm	1,225 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
2-Propanol	REL	400 ppm	980 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
2-Propanol	IDLH	2,000 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
2-Propanol	LEL		2.0 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

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2-Propanone	TWA	500 ppm	1,200 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
	STEL	750 ppm	1,800 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
2-Propanone	TWA	250 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
	STEL	500 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
2-Propanone		500 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
		250 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
2-Propanone	15 MIN ACL	750 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
	8 HR ACL	500 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
2-Propanone	TWA	250 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
	STEL	500 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
2-Propanone	TWA	250 ppm		Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
	STEL	500 ppm		Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
2-Propanone	TWA	250 ppm		US. ACGIH Threshold Limit Values, as amended
	STEL	500 ppm		US. ACGIH Threshold Limit Values, as amended

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2-Propanone	REL	250 ppm	590 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
2-Propanone	LEL		2.5 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
2-Propanone	IDLH	2,500 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

Biological Limit Values

Chemical name	Parameters / Sampling Time	Exposure Limit Values	Source
2-Propanol	acetone Sampling time: End of shift at end of work week.	40 mg/l (Urine)	ACGIH BEI
2-Propanone	acetone Sampling time: End of shift.	25 mg/l (Urine)	ACGIH BEI

Appropriate Engineering Controls Use explosion-proof ventilation equipment to stay below exposure limits. Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses with side shields (or goggles).

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Hand Protection:	Material: Chemical resistant gloves Additional Information: Wash hands after contact.Material: Suitable gloves can be recommended by the glove supplier.
Other:	Wear a lab coat or similar protective clothing.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Hygiene measures:	Observe good industrial hygiene practices.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	According to product specification.
Odor:	Characteristic
Odor Threshold:	No data available.
Freezing point:	No data available.
Boiling Point:	133.0 - 180 °F/56.1 - 82 °C

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Flammability:	No data available.
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Flash Point:	19.9 °F/-6.7 °C
Self-ignition:	No data available.
Decomposition Temperature:	No data available.
pH:	No data available.
Viscosity	
Dynamic viscosity:	Not determined.
Kinematic viscosity:	Not determined.
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	Completely Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Vapor pressure:	No data available.
Relative density:	No data available.
Density:	No data available.
Bulk density:	No data available.

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Relative vapor density:	No data available.

Other information

Metal Corrosion:	Non-corrosive per US Department of Transportation testing protocol.

10. Stability and reactivity

Reactivity:	Material is stable under normal conditions.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Material is stable under normal conditions.
Conditions to avoid:	Avoid exposure to high temperatures or direct sunlight. Flammable/combustible - Keep away from oxidizers, heat and flames. Keep away from sources of ignition - No smoking.
Incompatible Materials:	Water reactive material.
Hazardous Decomposition Products:	Stable; however, may decompose if heated.

11. Toxicological information

Information on likely routes of exposure

Inhalation: No data available.

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Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix, 12,000 mg/kg
Components:	
2-Propanol	No data available.
2-Propanone	LD 50, Mouse, 5.2 g/kg LD 50, Rat, 5,800 mg/kg LD 50, Rabbit, 5,340 mg/kg LD 50, Mouse, 3,000 mg/kg LD 50, Rat, 9,800 mg/kg

Dermal

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Inhalation

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	NOAEL Rat, Male, Inhalation, 2 - 8 Weeks, 19,000 ppm(m), Experimental result, Weight of Evidence study Inhalation

Skin Corrosion/Irritation

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Serious Eye Damage/Eye Irritation

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	Irritating, Exposure for 15 minutes to 1660 ppm causes irritation of eyes

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Respiratory or Skin Sensitization

Product:	No data available.
Components:	
2-Propanol	Skin sensitization:, in vivo, Guinea pig, Non sensitising
2-Propanone	Skin sensitization:, in vivo, Guinea pig, Non sensitising Skin sensitization:, in vivo, Mouse, Non sensitising

Carcinogenicity

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogens present or none present in regulated quantities

ACGIH: US.ACGIH Threshold Limit Values:
No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
No carcinogens present or none present in regulated quantities

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
No carcinogens present or none present in regulated quantities

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity
In vitro

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

In vivo

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Reproductive toxicity

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

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Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Aspiration Hazard

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Information on health hazards

Other hazards

Product:	No data available.

12. Ecological information

Ecotoxicity:

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	LC 50, Diatom (Nitzschia linearis), 5 d, 11.493 - 11.727 mg/l, Mortality LC 50, Turbellarian, flatworm (Dugesia tigrina), 96 h, > 100 mg/l, Mortality

Acute hazards to the aquatic environment:

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Fish

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	LC 50, Pimephales promelas, 96 h, 7,160 mg/lAcute toxicity NOAEL, Pimephales promelas, 48 h, 12,000 mg/lStatic, Experimental result, Supporting study LC 50, Fathead minnow (Pimephales promelas), 168 h, 6,705 - 7,650 mg/lFlow through, Mortality LC 50, Carp (Leuciscus idus melanotus), 48 h, 11,300 mg/l, Mortality LC 50, Oryzias latipes, 48 h, 14,300 mg/lStatic, Experimental result, Supporting study

Aquatic Invertebrates

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	LC 50, Oligochaete, worm (Lumbriculus variegatus), 96 h, > 100 mg/lStatic, Mortality LC 50, Water flea (Daphnia magna), 96 h, > 100 mg/lStatic, Mortality LC 50, Asiatic clam (Corbicula manilensis), 96 h, > 20,000 mg/lStatic, Mortality EC 50, Water flea (Daphnia magna), 48 h, 10,294 - 17,704 mg/lStatic, Intoxication LC 50, Ramshorn snail (Helisoma trivolvis), 96 h, > 100 mg/lStatic, Mortality

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Persistence and Degradability

Biodegradation

Product:	No data available.
Components:	
2-Propanol	53 %, 5 d, Experimental result, Key study Detected in water.

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2-Propanone	76 %, Experimental result, Supporting study Detected in water. 76 %, Experimental result, Supporting study Detected in water. 75 %, 4 h, Experimental result, Not specified Detected in water. 100 %, 4 d, Experimental result, Key study Detected in water. 25.5 - 36.7 %, 281 d, Experimental result, Key study Soil

BOD/COD Ratio

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	-0.24

Mobility in soil:

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Results of PBT and vPvB assessment:

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Other adverse effects:

Other hazards

Product:	No data available.

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13. Disposal considerations

General information:	Dispose of waste and residues in accordance with local authority requirements. This product is highly flammable. Don't use fire to cut empty container after use.
Disposal methods:	Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Contaminated Packaging:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

14. Transport information

IATA

UN number or ID number:	UN 3316
UN Proper Shipping Name:	CHEMICAL KIT
Transport Hazard Class(es)	
Class:	9
Label(s):	9MI (Miscellaneous)
Packing Group:	II
Passenger and cargo aircraft :	

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Limited quantity	None.

Environmental Hazards

Environmentally Hazardous:	No
Marine Pollutant:	No

Special precautions for user: PG

Passenger and cargo aircraft:	Forbidden.
Cargo aircraft only :	Forbidden.

IMDG

UN number or ID number:	UN 3316
UN Proper Shipping Name:	CHEMICAL KIT

Transport Hazard Class(es)

Class:	9
Label(s):	9
EmS No.:	F-A, S-P
Packing Group:	II
Limited quantity	None.

Environmental Hazards

Environmentally Hazardous:	No
Marine Pollutant:	No

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Special precautions for user:

PG

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

Canada Federal Regulations

List of Toxic Substances (CEPA, Schedule 1)

Not Regulated

Export Control List (CEPA 1999, Schedule 3)

Not Regulated

National Pollutant Release Inventory (NPRI)

Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

Chemical Identity

Isopropyl alcohol

Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)

Chemical Identity

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Isopropyl alcohol

VOLATILE ORGANIC COMPOUNDS

Greenhouse Gases

Not Regulated

Canada. Substances Subject to Significant New Activity (SNAc) Reporting Requirements

Not Regulated

Controlled Drugs and Substances Act

CA CDSI	Not Regulated
CA CDSII	Not Regulated
CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated
CA CDSVIII	Not Regulated

Precursor Control Regulations

Chemical Identity

ACETONE

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16.Other information, including date of preparation or last revision

Date of first report version: 06/23/2017

Generation date: 07/23/2024

Version #: 1.3

Abbreviations and acronyms:

ACGIH:	US. ACGIH Threshold Limit Values, as amended
CAD AB OEL:	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
CAD BC OEL:	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
CAD MB OEL:	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
CAD ON OEL:	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
CAD SK OEL:	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
NIOSH IDLH:	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
NIOSH/GUIDE:	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
OEL (QUE):	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
ACGIH / STEL:	Short Term Exposure Limit (STEL):
ACGIH / TWA:	Time Weighted Average (TWA):
CAD AB OEL / STEL:	Short Term Exposure Limit (STEL):
CAD AB OEL / TWA:	Time Weighted Average (TWA):
CAD BC OEL / TWA:	Time Weighted Average (TWA):
CAD BC OEL / STEL:	Short Term Exposure Limit (STEL):
CAD MB OEL / TWA:	Time Weighted Average (TWA):
CAD MB OEL / STEL:	Short Term Exposure Limit (STEL):
CAD ON OEL / STEL:	Short Term Exposure Limit (STEL):
CAD ON OEL / TWA:	Time Weighted Average (TWA):
CAD SK OEL / 8 HR ACL:	8 hour average contamination limit:
CAD SK OEL / 15 MIN ACL:	15 minute average contamination limit:
NIOSH IDLH / LEL:	Lower Explosive Limit (LEL):
NIOSH IDLH / IDLH:	Immediately dangerous to life or health (IDLH) concentration:
NIOSH/GUIDE / REL:	Recommended exposure limit (REL):
NIOSH/GUIDE / STEL:	Short Term Exposure Limit (STEL):
OEL (QUE) / TWA:	Time Weighted Average (TWA):
OEL (QUE) / STEL:	Short Term Exposure Limit (STEL):

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for

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Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further Information: No data available.

Disclaimer:

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SAFETY DATA SHEET

Classified in accordance with Health Canada Hazardous Products Regulations (SOR/2015-17)

1. Identification

Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
0333275BJAA	Gram Safranin	No data available

Recommended use of the chemical and restrictions on use

Recommended use: Laboratory Chemicals
Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: BD, Integrated Diagnostic Solutions
Address: 7 Loveton Circle
Sparks, MD 21152
USA

Telephone: 1 844 823 5433
Fax: not available
Contact Person: Business Unit Product Stewardship Team
E-mail: IDS_SDS@bd.com

Emergency telephone number: CHEMTREC 1 800 424 9300

2. Hazard identification

Hazard Classification

Physical Hazards

Flammable liquids	Category 3
Static-accumulating flammable liquid	Category 1

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Health Hazards

Specific Target Organ Toxicity - Single Exposure	Category 1

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:
H226: Flammable liquid and vapor.
FK: Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.
Spark: Sparks may ignite liquid and vapor.
H241: May cause flash fire or explosion.
H370: Causes damage to organs.

Precautionary Statements

Prevention:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilating and lighting equipment.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/ eye protection/ face protection.
-: These alone may be insufficient to remove static electricity.

Response:
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P308+P311: IF exposed or concerned: Call a POISON CENTER/doctor.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:
P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

Disposal:
P501: Dispose of contents/ container to an approved facility in accordance

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with local, regional, national and international regulations.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Ethanol	No data available.	64-17-5	10 - 30%
Methanol	No data available.	67-56-1	0.1 - 1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General information: Get medical attention if symptoms occur.

Inhalation: Provide fresh air, warmth and rest, preferably in comfortable upright sitting position.

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Skin Contact:	Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.
Ingestion:	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	Symptoms may be delayed.
Hazards:	Causes damage to organs.

Indication of immediate medical attention and special treatment needed

Treatment:	Get medical attention if symptoms occur.

5. Fire-fighting measures

General Fire Hazards:	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water spray to keep fire-exposed containers cool. In case of fire: Evacuate area.

Suitable (and unsuitable) extinguishing media

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Suitable extinguishing media:	Water spray, foam, dry powder or carbon dioxide. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
Special hazards arising from the substance or mixture:	Fire or excessive heat may produce hazardous decomposition products.

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures:	May travel considerable distance to source of ignition and flash back.May explode when heated or when exposed to flames or sparks.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Contact local authorities in case of spillage to drain/aquatic environment. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.
Accidental release measures:	No data available.

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Methods and material for containment and cleaning up:	All equipment used when handling the product must be grounded. Eliminate sources of ignition. Prevent spreading of vapors through sewers, ventilation systems and confined areas. Absorb spillage with suitable absorbent material. Prevent runoff from entering drains, sewers, or streams. See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.
Environmental Precautions:	Avoid release to the environment.

7. Handling and storage

Handling

Technical measures:	No data available.
Local/Total ventilation:	No data available.
Safe handling advice:	When using do not eat, drink or smoke. Read and follow manufacturer's recommendations. Use personal protective equipment as required. Use spark-proof tools and explosion-proof equipment.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Keep container tightly closed. Keep in a cool,

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ventilated location far from heat source and flame

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values		Source
Ethanol	TWA	1,000 ppm	1,880 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
Ethanol	STEL	1,000 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
Ethanol		1,000 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Ethanol	STEL	1,000 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Ethanol	8 HR ACL	1,000 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
	15 MIN ACL	1,250 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

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Ethanol	TWA	1,000 ppm		Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
Ethanol	STEL	1,000 ppm		US. ACGIH Threshold Limit Values, as amended
Ethanol	REL	1,000 ppm	1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Ethanol	IDLH	3,300 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Ethanol	LEL		3.3 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Methanol	TWA	200 ppm	262 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
	STEL	250 ppm	328 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
Methanol	STEL	250 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
	TWA	200 ppm		Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
Methanol		200 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
		250 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Methanol	STEL	250 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
	TWA	200 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Methanol	15 MIN ACL	250 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
	8 HR ACL	200 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table

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				21), as amended
Methanol	TWA	200 ppm	262 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
	STEL	250 ppm	328 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
Methanol	STEL	250 ppm		US. ACGIH Threshold Limit Values, as amended
	TWA	200 ppm		US. ACGIH Threshold Limit Values, as amended
Methanol	REL	200 ppm	260 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Methanol	STEL	250 ppm	325 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Methanol	IDLH	6,000 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Methanol	LEL		6.0 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

Biological Limit Values

Chemical name	Parameters / Sampling Time	Exposure Limit Values	Source
Methanol	methanol Sampling time: End of shift.	15 mg/l (Urine)	ACGIH BEI

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Appropriate Engineering Controls	Use explosion-proof ventilation equipment. Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection:	Wear safety glasses with side shields (or goggles).
Hand Protection:	Material: Chemical resistant gloves Additional Information: Wash hands after contact.Material: Suitable gloves can be recommended by the glove supplier.
Other:	Wear a lab coat or similar protective clothing.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Hygiene measures:	Observe good industrial hygiene practices.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid

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Form:	liquid
Color:	According to product specification.
Odor:	Characteristic
Odor Threshold:	No data available.
Freezing point:	No data available.
Boiling Point:	174 °F/79 °C
Flammability:	No data available.

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Flash Point:	102.0 °F/38.9 °C
Self-ignition:	No data available.
Decomposition Temperature:	No data available.
pH:	No data available.

Viscosity

Dynamic viscosity:	Not determined.
Kinematic viscosity:	Not determined.
Flow Time:	No data available.

Solubility(ies)

Solubility in Water:	Completely Soluble
Solubility (other):	No data available.

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Partition coefficient (n-octanol/water):	No data available.
Vapor pressure:	No data available.
Relative density:	No data available.
Density:	No data available.
Bulk density:	No data available.
Relative vapor density:	No data available.

Other information

Metal Corrosion:	Non-corrosive per US Department of Transportation testing protocol.

10. Stability and reactivity

Reactivity:	Material is stable under normal conditions.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Stable
Conditions to avoid:	Avoid exposure to high temperatures or direct sunlight. Flammable/combustible - Keep away from oxidizers, heat and flames. Keep away from sources of ignition - No smoking.

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Incompatible Materials:	Water reactive material.
Hazardous Decomposition Products:	Stable; however, may decompose if heated.

11. Toxicological information

General information: Can cause internal organ effects.

Information on likely routes of exposure

Inhalation: Limited inhalation hazard at normal work temperatures.

Skin Contact: Negligible irritation to skin at ambient temperatures.

Eye contact: No data available.

Ingestion: No data available.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix, 10,000 mg/kg
Components:	
Ethanol	No data available.
Methanol	No data available.

Dermal

Product:	ATEmix, 30,000 mg/kg
Components:	
Ethanol	LD 50, Rabbit, 17,100 mg/kg, 4 = not assignable
Methanol	No data available.

Inhalation

Product:	ATEmix, 300 mg/l, Vapour
Components:	
Ethanol	No data available.
Methanol	No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
Ethanol	Based on available data, the classification criteria are not met.
Methanol	No data available.

Skin Corrosion/Irritation

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Product:	No data available.
Components:	
Ethanol	Based on available data, the classification criteria are not met.
Methanol	No data available.

Serious Eye Damage/Eye Irritation

Product:	No data available.
Components:	
Ethanol	No data available.
Methanol	No data available.

Respiratory or Skin Sensitization

Product:	No data available.
Components:	
Ethanol	Based on available data, the classification criteria are not met. Skin sensitization:, in vivo, Guinea pig, Non sensitising
Methanol	Skin sensitization:, in vivo, Guinea pig, Non sensitising

Carcinogenicity

Product:	No data available.
Components:	
Ethanol	Based on available data, the classification criteria are not met.
Methanol	No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogens present or none present in regulated quantities

ACGIH: US.ACGIH Threshold Limit Values:
No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
No carcinogens present or none present in regulated quantities

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
No carcinogens present or none present in regulated quantities

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity
In vitro

Product:	No data available.
Components:	
Ethanol	Based on available data, the classification criteria are not met.

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Methanol	No data available.

In vivo

Product:	No data available.
Components:	
Ethanol	Based on available data, the classification criteria are not met.
Methanol	No data available.

Reproductive toxicity

Product:	No data available.
Components:	
Ethanol	Based on available data, the classification criteria are not met.
Methanol	No data available.

Specific Target Organ Toxicity - Single Exposure

Product:	Causes damage to organs.
Components:	
Ethanol	Based on available data, the classification criteria are not met.
Methanol	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
Ethanol	Based on available data, the classification criteria are not met.
Methanol	No data available.

Aspiration Hazard

Product:	No data available.
Components:	
Ethanol	No data available.
Methanol	No data available.

Information on health hazards

Other hazards

Product:	No data available.

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12. Ecological information

General information: This material has not been tested for environmental effects.

Ecotoxicity:

Toxicity to Aquatic Plants

Product:	No data on possible environmental effects have been found.
Components:	
Ethanol	EC10, Green algae (Chlorella vulgaris), 72 h, 11.5 mg/l EC 50, Green algae (Chlorella vulgaris), 72 h, 275 mg/l
Methanol	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
Ethanol	LC 50, Turbellarian, flatworm (Dugesia tigrina), 96 h, > 100 mg/l, Mortality
Methanol	No data available.

Acute hazards to the aquatic environment:

Fish

Product:	No data on possible environmental effects have been found.
Components:	
Ethanol	LC 50, Fathead Minnow, 96 h, 14,200 mg/l LC 50, Fathead Minnow, 96 h, 15,300 mg/l LC 50, Oncorhynchus mykiss, 24 h, 11,200 mg/lflow-through, Experimental result, Supporting study
Methanol	No data available.

Aquatic Invertebrates

Product:	No data on possible environmental effects have been found.
Components:	
Ethanol	LC 50, Water flea (Ceriodaphnia dubia), 48 h, 5,012 mg/l LC 50, Grass shrimp,freshwater prawn (Palaemonetes kadiakensis), 18 h, 10,100 mg/l LC 50, Grass shrimp,freshwater prawn (Palaemonetes kadiakensis), 96 h, > 250 mg/lStatic, Mortality
Methanol	No data available.

Chronic hazards to the aquatic environment:

Fish

Product:	No data on possible environmental effects have been found.
Components:	
Ethanol	No data available.

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Methanol	No data available.

Aquatic Invertebrates

Product:	No data on possible environmental effects have been found.
Components:	
Ethanol	EC10, Water flea (Daphnia magna), 10 d, 454 mg/l NOEC, Water flea (Daphnia magna), 10 d, 9.6 mg/l
Methanol	No data available.

Persistence and Degradability

Biodegradation

Product:	Expected to be readily biodegradable.
Components:	
Ethanol	Readily biodegradable 13.6 %, 5 d, Soil Read-across from supporting substance (structural analogue or surrogate), Supporting study 89 %, 14 d, Detected in water. Experimental result, Supporting study 53.4 %, 5 d, Soil Read-across from supporting substance (structural analogue or surrogate), Supporting study 46.3 %, 5 d, Soil Read-across from supporting substance (structural analogue or surrogate), Supporting study
Methanol	84 %, Experimental result, Key study Detected in water. 46.3 %, 5 d, Experimental result, Supporting study Soil 69 %, Experimental result, Key study Detected in water. 71.5 %, 5 d, Experimental result, Key study Detected in water. 82.7 %, 5 d, Experimental result, Key study Detected in water.

BOD/COD Ratio

Product:	No data available.
Components:	
Ethanol	No data available.
Methanol	No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
Ethanol	Potential to bioaccumulate is low.
Methanol	Green algae (Chlorella fusca vacuolata), 28,400, Static

Partition Coefficient n-octanol / water (log Kow)

Product:	No data available.
Components:	
Ethanol	No data available.
Methanol	-0.77

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Mobility in soil:

Product:	No data available.
Components:	
Ethanol	soil - Very mobile liquid
Methanol	No data available.

Results of PBT and vPvB assessment:

Product:	No data available.
Components:	
Ethanol	Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent/very bioaccummulative) criteria
Methanol	No data available.

Other adverse effects:

Other hazards
Product: These materials have not been tested for environmental effects.

13. Disposal considerations

General information: Dispose of waste and residues in accordance with local authority requirements. This product is highly flammable. Don't use fire to cut empty container after use.

Disposal methods: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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14. Transport information

IATA

UN number or ID number:	UN 3316
UN Proper Shipping Name:	CHEMICAL KIT
Transport Hazard Class(es)	
Class:	9
Label(s):	9MI (Miscellaneous)
Packing Group:	III
Passenger and cargo aircraft :	
Limited quantity	None.
Environmental Hazards	
Environmentally Hazardous:	No
Marine Pollutant:	No
Special precautions for user:	PG
Passenger and cargo aircraft:	Forbidden.
Cargo aircraft only :	Forbidden.

IMDG

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UN number or ID number:	UN 3316
UN Proper Shipping Name:	CHEMICAL KIT
Transport Hazard Class(es)	
Class:	9
Label(s):	9
EmS No.:	F-A, S-P
Packing Group:	III
Limited quantity	None.
Environmental Hazards	
Environmentally Hazardous:	No
Marine Pollutant:	No
Special precautions for user:	PG

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

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Canada Federal Regulations

List of Toxic Substances (CEPA, Schedule 1)

Not Regulated

Export Control List (CEPA 1999, Schedule 3)

Not Regulated

National Pollutant Release Inventory (NPRI)

Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

Chemical Identity

Ethanol

METHANOL

Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)

Chemical Identity

METHANOL

Greenhouse Gases

Not Regulated

Canada. Substances Subject to Significant New Activity (SNAc) Reporting Requirements

Not Regulated

Controlled Drugs and Substances Act

CA CDSI	Not Regulated
CA CDSII	Not Regulated

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CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated
CA CDSVIII	Not Regulated

Precursor Control Regulations

Not Regulated

16.Other information, including date of preparation or last revision

Date of first report version: 04/17/2014

Generation date: 07/23/2024

Version #: 2.4

Abbreviations and acronyms:

ACGIH:	US. ACGIH Threshold Limit Values, as amended
CAD AB OEL:	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
CAD BC OEL:	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended
CAD MB OEL:	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
CAD ON OEL:	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
CAD SK OEL:	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
NIOSH IDLH:	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
NIOSH/GUIDE:	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
OEL (QUE):	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
ACGIH / STEL:	Short Term Exposure Limit (STEL):
ACGIH / TWA:	Time Weighted Average (TWA):

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CAD AB OEL / STEL:	Short Term Exposure Limit (STEL):
CAD AB OEL / TWA:	Time Weighted Average (TWA):
CAD BC OEL / TWA:	Time Weighted Average (TWA):
CAD BC OEL / STEL:	Short Term Exposure Limit (STEL):
CAD MB OEL / TWA:	Time Weighted Average (TWA):
CAD MB OEL / STEL:	Short Term Exposure Limit (STEL):
CAD ON OEL / STEL:	Short Term Exposure Limit (STEL):
CAD ON OEL / TWA:	Time Weighted Average (TWA):
CAD SK OEL / 8 HR ACL:	8 hour average contamination limit:
CAD SK OEL / 15 MIN ACL:	15 minute average contamination limit:
NIOSH IDLH / LEL:	Lower Explosive Limit (LEL):
NIOSH IDLH / IDLH:	Immediately dangerous to life or health (IDLH) concentration:
NIOSH/GUIDE / REL:	Recommended exposure limit (REL):
NIOSH/GUIDE / STEL:	Short Term Exposure Limit (STEL):
OEL (QUE) / TWA:	Time Weighted Average (TWA):
OEL (QUE) / STEL:	Short Term Exposure Limit (STEL):

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Source of information: European Chemicals Agency (ECHA): Information on Chemicals.

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Further Information: No data available.

Disclaimer:

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SAFETY DATA SHEET

Classified in accordance with Health Canada Hazardous Products Regulations (SOR/2015-17)

1. Identification

Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
0334275BJAA	STABILIZED GRAM IODINE 250ML	No data available

Recommended use of the chemical and restrictions on use

Recommended use: Laboratory Chemicals
Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: BD, Integrated Diagnostic Solutions
Address: 7 Loveton Circle
Sparks, MD 21152
USA

Telephone: 1 844 823 5433
Fax: not available
Contact Person: Business Unit Product Stewardship Team
E-mail: IDS_SDS@bd.com

Emergency telephone number: CHEMTREC 1 800 424 9300

2. Hazard identification

Hazard Classification

Health Hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1

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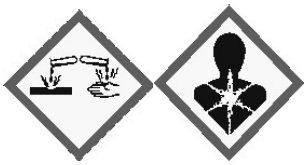
Respiratory sensitizer	Category 1B
Skin sensitizer	Category 1B
Specific Target Organ Toxicity - Repeated Exposure	Category 1

Environmental Hazards

Acute hazards to the aquatic environment	Category 3
Chronic hazards to the aquatic environment	Category 3

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement:
H315: Causes skin irritation.
H318: Causes serious eye damage.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317: May cause an allergic skin reaction.
H372: Causes damage to organs through prolonged or repeated exposure.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention:
P264: Wash face, hands and any exposed skin thoroughly after handling.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284: [In case of inadequate ventilation] wear respiratory protection.
P272: Contaminated work clothing should not be allowed out of the workplace.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.

Response:
P304+P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P310: Immediately call a POISON CENTER/doctor.
P363: Wash contaminated clothing before reuse.

Disposal: P501: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.	25655-41-8	5 - 10%
Potassium iodide (KI)	No data available.	7681-11-0	1 - 5%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

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Description of first aid measures

General information:	Causes serious eye damage. Causes skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. If medical advice is needed, have product container or label at hand. Get immediate medical advice/attention.
Inhalation:	Get medical attention if any discomfort continues. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position.
Skin Contact:	Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.
Eye contact:	Important! Immediately rinse with water for 60 minutes. Get medical attention immediately.
Ingestion:	If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Get medical attention immediately.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	Symptoms may be delayed.

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Hazards:	May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Causes serious eye damage. Causes skin irritation.

Indication of immediate medical attention and special treatment needed

Treatment:	Get immediate medical advice/attention. Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water.

5. Fire-fighting measures

General Fire Hazards:	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water to keep fire exposed containers cool and disperse vapors.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, foam, dry powder or carbon dioxide. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
Special hazards arising from the substance or mixture:	Fire or excessive heat may produce hazardous decomposition products.

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures:	No unusual fire or explosion hazards noted.

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Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wash thoroughly after dealing with a spillage. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. Contact local authorities in case of spillage to drain/aquatic environment.
Accidental release measures:	No data available.
Methods and material for containment and cleaning up:	Stop leak if possible without any risk. Absorb spillage with suitable absorbent material. Collect for salvage or disposal. Prevent runoff from entering drains, sewers, or streams. See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.
Environmental Precautions:	Do not release into the environment. Environmental manager must be informed of all major spillages.

7. Handling and storage

Handling

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Technical measures: No data available.

Local/Total ventilation: No data available.

Safe handling advice: Wash at the end of each work shift and before eating, smoking and using the toilet.Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes and avoid contact with skin and clothing. Wash promptly with soap and water if skin becomes contaminated. When using do not eat, drink or smoke. Read and follow manufacturer's recommendations. Use personal protective equipment as required.

Contact avoidance measures: No data available.

Storage

Safe storage conditions: Store in tightly closed original container in a dry, cool and well-ventilated place.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source

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Potassium iodide (KI) - Inhalable fraction and vapor.	TWA	0.01 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Potassium iodide (KI) - Inhalable fraction. - as Iodine (I)			0.01 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Potassium iodide (KI) - Inhalable fraction. - as Iodine (I)	TWA		0.01 mg/m3	US. ACGIH Threshold Limit Values, as amended

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls Adequate ventilation should be provided whenever the material is heated or mists are generated.

Individual protection measures, such as personal protective equipment

Eye/face protection: Chemical goggles and face shield are recommended.

Hand Protection: Material: Chemical resistant gloves

Other: Wear a lab coat or similar protective clothing.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

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Hygiene measures:	Do not eat, drink or smoke when using the product. Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet. Avoid contact with skin. Do not breathe dust/fume/gas/mist/vapors/spray.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	According to product specification.
Odor:	Characteristic
Odor Threshold:	No data available.
Freezing point:	No data available.
Boiling Point:	No data available.
Flammability:	No data available.

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Flash Point:	Not applicable
Self-ignition:	No data available.
Decomposition Temperature:	No data available.

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pH:	No data available.
Viscosity	
Dynamic viscosity:	Not determined.
Kinematic viscosity:	Not determined.
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	Completely Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Vapor pressure:	No data available.
Relative density:	No data available.
Density:	No data available.
Bulk density:	No data available.
Relative vapor density:	No data available.

Other information

Metal Corrosion:	Non-corrosive per US Department of Transportation testing protocol.

10. Stability and reactivity

Reactivity:	Material is stable under normal conditions.

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Chemical Stability:	No data available.
Possibility of hazardous reactions:	Stable; however, may decompose if heated. None under normal conditions.
Conditions to avoid:	Avoid exposure to high temperatures or direct sunlight.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition Products:	By heating and fire, harmful vapors/gases may be formed.

11. Toxicological information

General information: May cause allergic respiratory and skin reactions.

Information on likely routes of exposure

Inhalation:	May cause respiratory allergy.
Skin Contact:	Causes skin irritation. Prolonged or repeated contact may cause skin sensitization in susceptible individuals.
Eye contact:	May cause chemical eye burns.
Ingestion:	Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix, 26,315.79 mg/kg
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

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Dermal

Product:	Not classified for acute toxicity based on available data.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Inhalation

Product:	Not classified for acute toxicity based on available data.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Skin Corrosion/Irritation

Product:	Irritant
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Serious Eye Damage/Eye Irritation

Product:	May cause chemical eye burns.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Respiratory or Skin Sensitization

Product:	Skin and respiratory sensitizer
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Carcinogenicity

Product:	No data available.

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Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogens present or none present in regulated quantities

ACGIH: US.ACGIH Threshold Limit Values:
No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
No carcinogens present or none present in regulated quantities

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
No carcinogens present or none present in regulated quantities

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended
No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity
In vitro

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

In vivo

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Reproductive toxicity

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

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Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	Category 1
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Aspiration Hazard

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Information on health hazards

Other hazards

Product:	No data available.

12. Ecological information

General information: Harmful to aquatic life.

Ecotoxicity:

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Toxicity to microorganisms

Product:	No data available.

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Components:

2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Acute hazards to the aquatic environment:

Fish

Product:	Harmful to aquatic organisms.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	NOAEL, Danio rerio, 7 d, 100 mg/lStatic, Experimental result, Key study LC 0, Danio rerio, 96 h, 100 mg/lStatic, Experimental result, Key study LC 50, Oncorhynchus mykiss, 96 h, 3,780 mg/lStatic, Read-across from supporting substance (structural analogue or surrogate), Key study LC 50, Oncorhynchus mykiss, 96 h, 896 mg/lStatic, Experimental result, Supporting study LC 50, Oncorhynchus mykiss, 96 h, 2,190 mg/lStatic, Experimental result, Supporting study

Aquatic Invertebrates

Product:	Harmful to aquatic organisms.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	LC 50, Zebra mussel (Dreissena polymorpha), 24 h, 220 - 313 mg/lStatic, Mortality

Chronic hazards to the aquatic environment:

Fish

Product:	Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the environment.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Aquatic Invertebrates

Product:	Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the environment.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.

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Potassium iodide (KI)	No data available.

Persistence and Degradability

Biodegradation

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	50 %, 720 h, Estimated by calculation, Key study Soil 50 %, 360 h, Estimated by calculation, Key study Detected in water. 50 %, 3,240 h, Estimated by calculation, Key study Sediment 50 %, 360 h, Estimated by calculation, Key study Sediment

BOD/COD Ratio

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	Various, 2.27, Estimated by calculation, Key study Aquatic sediment

Partition Coefficient n-octanol / water (log Kow)

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Mobility in soil:

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.

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Potassium iodide (KI)	No data available.

Results of PBT and vPvB assessment:

Product:	No data available.
Components:	
2-Pyrrolidinone, 1-ethenyl-, homopolymer, compd. with iodine	No data available.
Potassium iodide (KI)	No data available.

Other adverse effects:

Other hazards

Product: Dangerous for the environment: May cause long-term adverse effects in the aquatic environment.

13. Disposal considerations

General information: Dispose of waste and residues in accordance with local authority requirements.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

Contaminated Packaging: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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14. Transport information

IATA

Not Regulated.

IMDG

Not Regulated.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

Canada Federal Regulations

List of Toxic Substances (CEPA, Schedule 1)

Not Regulated

Export Control List (CEPA 1999, Schedule 3)

Not Regulated

National Pollutant Release Inventory (NPRI)

Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

NPRI PT5	Not Regulated

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Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)

NPRI	Not Regulated

Greenhouse Gases

Not Regulated

Canada. Substances Subject to Significant New Activity (SNAc) Reporting Requirements

Not Regulated

Controlled Drugs and Substances Act

CA CDSI	Not Regulated
CA CDSII	Not Regulated
CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated
CA CDSVIII	Not Regulated

Precursor Control Regulations

Not Regulated

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16.Other information, including date of preparation or last revision

Date of first report version: 04/17/2014

Generation date: 03/19/2024

Version #: 2.2

Abbreviations and acronyms:

ACGIH:	US. ACGIH Threshold Limit Values, as amended
CAD MB OEL:	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
CAD ON OEL:	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
ACGIH / TWA:	Time Weighted Average (TWA):
CAD MB OEL / TWA:	Time Weighted Average (TWA):
CAD ON OEL / TWA:	Time Weighted Average (TWA):

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations

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Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Source of information: European Chemicals Agency (ECHA): Information on Chemicals.

Further Information: No data available.

Disclaimer:

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