

Sternheimer-Malbin Stain

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
 Issue date: 5/31/2024 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : Sternheimer-Malbin Stain
 Product code : 6561 - all sizes

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only
 For professional use only
 Restrictions on use : Not for food, drug or household use

1.3. Supplier

Astral Diagnostics
 Ethos Biosciences, Inc.
 2070 Center Square Road
 Logan Township, New Jersey 08085
 United States
 T +1-856-224-0900; +1-800-441-0366 Technical Service; Monday-Friday: 8:00 AM-5:00 PM, Eastern US Time
www.ethosbiosciences.com

1.4. Emergency telephone number

Emergency number : 800-424-9300 CHEMTREC (USA) -- 24 Hours/Day, 7 Days/Week

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 3 H226 Flammable liquid and vapor
 Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning
 Hazard statements (GHS US) : H226 - Flammable liquid and vapor
 Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 - Keep container tightly closed.
 P240 - Ground/Bond container and receiving equipment.
 P241 - Use explosion-proof electrical/ventilating/lighting equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P370+P378 - In case of fire: Use media other than water to extinguish.

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P403+P235 - Store in a well-ventilated place. Keep cool.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.	GHS US classification
Water	CAS-No.: 7732-18-5	≥ 89	Not classified
ethanol	CAS-No.: 64-17-5	≤ 10.45	Flam. Liq. 2, H225 Carc. 1A, H350
isopropanol (2-propanol)	CAS-No.: 67-63-0	≤ 0.55	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 Aquatic Chronic 4, H413
safranin O	CAS-No.: 477-73-6	≤ 0.3	Skin Irrit. 2, H315 Eye Irrit. 2, H319
crystal violet (Basic Violet 3)	CAS-No.: 548-62-9	≤ 0.1	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Carc. 2, H351
ammonium oxalate	CAS-No.: 6009-70-7	≤ 0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Irrit. 2, H319

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

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4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapor.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling	: Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment.
Storage conditions	: Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Packaging materials	: Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanol (64-17-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethanol
ACGIH OEL STEL	1000 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2023
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl alcohol (Ethanol)
OSHA PEL TWA	1900 mg/m³ 1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
isopropanol (2-propanol) (67-63-0)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	200 ppm
ACGIH OEL STEL	400 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

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Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Purple
Odor	: Alcohol odour
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: $\approx 22\text{ }^{\circ}\text{C}$
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

crystal violet (Basic Violet 3)	
Boiling point	632 °C
Flash point	405 °C
Auto-ignition temperature	> 190 °C (T4)
Vapor pressure	< 0.01 hPa (25 °C)

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ammonium oxalate

Boiling point	Not applicable (decomposes)
Flash point	Not applicable
Vapor pressure	0.00000095 hPa (20 °C, OECD 104: Vapour Pressure)

ethanol

Boiling point	78 °C (1013 hPa)
Flash point	13 °C (Closed cup, 1013.25 hPa)
Auto-ignition temperature	363 – 425 °C (1013.25 hPa, T2)
Vapor pressure	57 hPa (20 °C)
Vapor pressure at 50°C	300 hPa

isopropanol (2-propanol)

Boiling point	83 °C (1013 hPa)
Flash point	12 °C (Closed cup)
Auto-ignition temperature	399 °C (T2)
Vapor pressure	44 hPa (20 °C)
Vapor pressure at 50°C	236 hPa (Antoine equation)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

crystal violet (Basic Violet 3) (548-62-9)	
LD50 oral rat	420 mg/kg (Rat, Experimental value, Oral)
LD50 dermal rabbit	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Experimental value, Dermal)
ATE US (oral)	420 mg/kg body weight

ammonium oxalate (6009-70-7)	
LD50 oral rat	375 – 475 mg/kg body weight (Rat, Male / female, Experimental value, Oral)
ATE US (oral)	375 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight

ethanol (64-17-5)	
LD50 oral rat	10470 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	8300 mg/kg body weight Animal: mouse
LD50 dermal rabbit	> 15800 mg/kg body weight (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	124.7 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	8300 mg/kg body weight

isopropanol (2-propanol) (67-63-0)	
LD50 oral rat	5840 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	16400 ml/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat [ppm]	> 10000 ppm (Equivalent or similar to OECD 403, 6 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	5840 mg/kg body weight
ATE US (dermal)	12890400 mg/kg body weight

Skin corrosion/irritation : Not classified

crystal violet (Basic Violet 3) (548-62-9)	
pH	3.07 (5 - 10 %, 27 °C, OECD 105: Water Solubility)

safranin O (477-73-6)	
pH	10 (1 %)

ammonium oxalate (6009-70-7)	
pH	6.4 (1.24 %)

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ethanol (64-17-5)	
pH	7 (789 g/l, 20 °C)
isopropanol (2-propanol) (67-63-0)	
pH	No data available in the literature
Serious eye damage/irritation	: Not classified
crystal violet (Basic Violet 3) (548-62-9)	
pH	3.07 (5 - 10 %, 27 °C, OECD 105: Water Solubility)
safranin O (477-73-6)	
pH	10 (1 %)
ammonium oxalate (6009-70-7)	
pH	6.4 (1.24 %)
ethanol (64-17-5)	
pH	7 (789 g/l, 20 °C)
isopropanol (2-propanol) (67-63-0)	
pH	No data available in the literature
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
ethanol (64-17-5)	
IARC group	1 - Carcinogenic to humans
isopropanol (2-propanol) (67-63-0)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
isopropanol (2-propanol) (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified
ethanol (64-17-5)	
NOAEL (subchronic,oral,animal/male,90 days)	< 9700 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
NOAEL (subchronic,oral,animal/female,90 days)	> 9400 mg/kg body weight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
crystal violet (Basic Violet 3) (548-62-9)	
Viscosity, kinematic	Not applicable (solid)
ethanol (64-17-5)	
Viscosity, kinematic	1.6 mm²/s (20 °C)
isopropanol (2-propanol) (67-63-0)	
Viscosity, kinematic	2.66 mm²/s (25 °C, Estimated value)

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Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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crystal violet (Basic Violet 3) (548-62-9)	
LC50 - Fish [1]	0.082 mg/l (96 h, Pimephales promelas, Static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	0.53 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	0.025 – 0.8 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Estimated value)
ethanol (64-17-5)	
LC50 - Fish [1]	15300 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 72h - Algae [1]	275 mg/l (Equivalent or similar to OECD 201, Chlorella vulgaris, Static system, Fresh water, Experimental value, Growth rate)
NOEC (chronic)	9.6 mg/l Test organisms (species): Daphnia magna Duration: '9 d'
isopropanol (2-propanol) (67-63-0)	
LC50 - Fish [1]	9640 – 10000 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)

12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
crystal violet (Basic Violet 3) (548-62-9)	
Persistence and degradability	Not readily biodegradable in water.
safranin O (477-73-6)	
Persistence and degradability	Biodegradability in water: no data available.
ammonium oxalate (6009-70-7)	
Persistence and degradability	Readily biodegradable in water.
Water (7732-18-5)	
Persistence and degradability	Not rapidly degradable
ethanol (64-17-5)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.8 – 0.967 g O ₂ /g substance
Chemical oxygen demand (COD)	1.7 g O ₂ /g substance

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ethanol (64-17-5)	
ThOD	2.1 g O ₂ /g substance
BOD (% of ThOD)	0.43

isopropanol (2-propanol) (67-63-0)	
Persistence and degradability	Biodegradable in the soil, Biodegradable in the soil under anaerobic conditions, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.19 g O ₂ /g substance
Chemical oxygen demand (COD)	2.23 g O ₂ /g substance
ThOD	2.4 g O ₂ /g substance

12.3. Bioaccumulative potential

crystal violet (Basic Violet 3) (548-62-9)	
BCF - Fish [1]	3.8 – 16 l/kg (6 week(s), Cyprinus carpio, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	1.172 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

safranin O (477-73-6)	
Bioaccumulative potential	No bioaccumulation data available.

ammonium oxalate (6009-70-7)	
Partition coefficient n-octanol/water (Log Pow)	< -4.8 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)
Bioaccumulative potential	Not bioaccumulative.

ethanol (64-17-5)	
Partition coefficient n-octanol/water (Log Pow)	-0.35 (Experimental value, Equivalent or similar to OECD 107, 24 °C)
Bioaccumulative potential	Not bioaccumulative.

isopropanol (2-propanol) (67-63-0)	
BCF - Fish [1]	1015 (BCFBAF v3.01, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	0.05 (Weight of evidence approach, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

crystal violet (Basic Violet 3) (548-62-9)	
Surface tension	44.2 mN/m (1 %)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	5.79 (log Koc, Experimental value)
Ecology - soil	Adsorbs into the soil.

ammonium oxalate (6009-70-7)	
Ecology - soil	No (test)data on mobility of the substance available.

ethanol (64-17-5)	
Surface tension	22.31 mN/m (20 °C, 100 %)

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ethanol (64-17-5)

Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.2 (log Koc, Experimental value)
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Ecology - soil	Highly mobile in soil.
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isopropanol (2-propanol) (67-63-0)

Surface tension	No data available (test not performed)
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Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.185 – 0.541 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
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Ecology - soil	Highly mobile in soil.
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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Flammable vapors may accumulate in the container. Do not re-use empty containers.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

UN-No.(DOT)	: UN1170
UN-No. (TDG)	: UN1170
UN-No. (IMDG)	: 1170
UN-No. (IATA)	: 1170

14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Ethanol solutions
Proper Shipping Name (TDG)	: ETHANOL SOLUTION
Proper Shipping Name (IMDG)	: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Proper Shipping Name (IATA)	: Ethanol solution

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT)	: 3
Hazard labels (DOT)	: 3



TDG

Transport hazard class(es) (TDG)	: 3
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Hazard labels (TDG) : 3



IMDG

Transport hazard class(es) (IMDG) : 3

Hazard labels (IMDG) : 3



IATA

Transport hazard class(es) (IATA) : 3

Hazard labels (IATA) : 3



14.4. Packing group

Packing group (DOT) : III

Packing group (TDG) : III

Packing group (IMDG) : III

Packing group (IATA) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1170

DOT Special Provisions (49 CFR 172.102) : 24 - Alcoholic beverages containing more than 70 percent alcohol by volume must be transported as materials in Packing Group II. Alcoholic beverages containing more than 24 percent but not more than 70 percent alcohol by volume must be transported as materials in Packing Group III.

B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 4b;150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

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DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
TDG	
UN-No. (TDG)	: UN1170
TDG Special Provisions	: 150 - An approved ERAP is required for the dangerous goods referred to in paragraph 7.2(1)(f) of Part 7 (Emergency Response Assistance Plan).
Explosive Limit and Limited Quantity Index	: 5 L
Excepted quantities (TDG)	: E1
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 60 L
Emergency Response Guide (ERG) Number	: 127
IMDG	
Special provision (IMDG)	: 144, 223
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Colourless, volatile liquids. Pure ETHANOL: flashpoint 13°C c.c. Explosive limits: 3.3% to 19%. Miscible with water.

IATA	
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
Special provision (IATA)	: A3, A58, A180
ERG code (IATA)	: 3L

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:		
crystal violet (Basic Violet 3)	CAS-No. 548-62-9	≤ 0.1%
safranin O	CAS-No. 477-73-6	≤ 0.3%
ammonium oxalate	CAS-No. 6009-70-7	≤ 0.1%

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Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

2-propanol

CAS-No. 67-63-0

≤ 0.55%

15.2. International regulations

CANADA

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

ethanol (64-17-5)

Listed on the Canadian DSL (Domestic Substances List)

isopropanol (2-propanol) (67-63-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Water (7732-18-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

ethanol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

isopropanol (2-propanol) (67-63-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
ethanol(64-17-5)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
isopropanol (2-propanol)(67-63-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Full text of hazard classes and H-statements

H225

Highly flammable liquid and vapor

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Full text of hazard classes and H-statements	
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H351	Suspected of causing cancer
H413	May cause long lasting harmful effects to aquatic life

Safety Data Sheet (SDS), USA

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness