SAFETY DATA SHEETS

This SDS packet was issued with item:

078402528

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078654164

SDS

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: **Methanol Component A**

Product Code(s): J0326ASDA

Synonyms: Methanol; Carbinol; Wood Alcohol

Recommended Use: For invitro veterinary use only.

Uses Advised Against: Not for use on humans.

Supplier: Jorgensen Laboratories
1450 Van Buren Avenue, Loveland, CO 80538
Phone: (970) 669-2500 or (800) 525-5614 Fax: (970) 663-5042

Emergency Phone Number: U.S. and Canada: (800) 535-5053 International: (352) 323-3500 (INFOTRAC)

2. HAZARDS IDENTIFICATION

Hazard Classifications:

Acute Toxicity – Oral:	Category 3
Acute Toxicity – Dermal:	Category 3
Acute Toxicity – Inhalation:	Category 3
Specific Target Organ Toxicity (Single Exposure):	Category 1
Flammable Liquids:	Category 2

Signal Word: DANGER

Hazard Statements:
Toxic if swallowed.
Toxic in contact with skin.
Toxic if inhaled.
Causes damage to organs.
Highly flammable liquid and vapor.

Pictograms:

Precautionary Statements:

Prevention:
Wash thoroughly after handling.
Do not eat, drink, or smoke when using this product.

Wear protective gloves, protective clothing, eye protection, and face protection.
Do not breathe fumes, mists, vapors, or spray.
Use only outdoors or in a well-ventilated area.
Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
Keep container tightly closed.
Ground container and receiving equipment.
Use explosion-proof electrical, ventilating, lighting, and transportation equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

Response: If swallowed: Immediately call a poison center or doctor. Rinse mouth.
If on skin (or hair): Wash with plenty of water. Call a poison center or doctor if you feel unwell. Take off immediately all contaminated clothing and wash it before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor.
If exposed: Call a poison center or doctor.
In case of fire, use water spray, dry powder, alcohol resistant foam, or carbon dioxide to extinguish.

Storage: Store locked up.
Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal: Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: This product is toxic to humans. Primates are especially susceptible to the toxic effects of methanol, which are not reflected through toxicity data (see Section 11).
May cause adverse reproductive effects.

Toxicity Statement: Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Methyl Alcohol	Methanol	67-56-1	CH_3OH	≥ 99.8

Trade Secret Statement: Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or poison control center immediately.

Skin Contact: Remove contaminated clothing and shoes. Wash skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Get medical attention if symptoms occur.

Eye Contact:	Check for and remove contact lenses if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if irritation persists.
General Advice:	Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that medical personnel and those providing first aid are aware of the material(s) involved and take precautions to protect themselves.
Symptoms and Effects:	May cause irritation to eyes, skin, respiratory tract, and gastrointestinal tract. Absorption through skin may cause visual disturbances and metabolic acidosis. Inhalation of vapors may cause dizziness, suffocation, nervous system effects, and cardiovascular effects. May affect the blood, brain, urinary system, liver, spleen, and eyes. Ingestion may cause nausea, vomiting, diarrhea, abdominal pain, constipation, nervous system effects, blindness, and respiration effects. May affect the blood, liver, kidneys, cardiovascular system, brain, pancreas, and eyes.
Immediate Medical Care/ Special Treatment:	If you feel unwell or are concerned, call a physician or poison control center immediately. Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, dry powder, alcohol resistant foam, carbon dioxide.
Unsuitable Extinguishing Media:	Do not use a solid (straight) water stream as it may scatter and spread fire.
Hazardous Combustion Products:	Carbon oxides.
Specific Hazards:	Highly flammable. Vapors may case flash fire or ignite explosively. Can be ignited easily by heat, sparks, or flames and burns vigorously. Material may burn with an invisible flame. Sealed containers may explode when heated or involved in fire. Material is sensitive to static discharge. Vapors may travel considerable distance to source of ignition and flash back. Vapor from the solvent may accumulate in container headspace resulting in flammability hazard. High vapor concentration in air may cause an explosion hazard.
Special Protective Equipment/ Precautions for Firefighters:	As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear. Use water spray to cool unopened containers. Move containers from fire area, if you can do so without risk. This material may evaporate if spilled and leave a flammable residue. In the event of fire and/or explosion, do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment:	Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Keep upwind. Keep out of low areas. Wear appropriate personal protective equipment (see Section 8). Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. Avoid contact with eyes, skin, and clothing.
Emergency Procedures:	In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).
Methods for Containment:	Eliminate all sources of ignition. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this

is possible. Product should not be released to the environment. Contain and recover liquid when possible.

Methods for Cleanup: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a noncombustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling: Do not handle, store, or open near an open flame, sources of heat, or sources of ignition. Wear personal protective equipment (see Section 8). Use only in well-ventilated areas. Provide sufficient air exchange and/or exhaust in work areas. Avoid contact with skin, eyes, and clothing. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Take precautionary measures against static discharge. To avoid ignition of vapors by static electricity discharge, all metal parts of equipment must be grounded. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues (vapors, liquids). Observe all warnings and precautions listed for this product.

Storage: Store in a cool, dry, ventilated area. Store in a segregated and approved area away from incompatible materials (see Section 10). Store in original container. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Ground container and transfer equipment. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

ACGIH:	TWA:	200 ppm
	STEL:	250 ppm
	BEL:	15 mg/L
OSHA:	PEL:	200 ppm
		260 mg/m^3

Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection: Wear safety glasses with side shields or safety goggles. Wear a face shield. Maintain approved eyewash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment:	Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

Appearance:	Colorless, transparent liquid.
Odor:	Pungent, alcoholic.
Odor Threshold:	100 ppm
Formula Weight:	32.04
pH:	No information found.
Melting/Freezing Point:	-97.8 °C
Boiling Point/Range:	64.7 °C
Decomposition Temperature:	No information found.
Flash Point:	9.7 °C
Auto-ignition Temperature:	455 °C
Flammability:	Explosive as vapor; flammable as liquid.
Flammability/Explosive Limits:	Lower: 6% by volume Upper: 36% by volume
Solubility:	Miscible with water, alcohol, ether, benzene, chloroform.
Vapor Pressure:	97.7 mmHg at 20 °C; 410 mmHg at 50 °C
Vapor Density:	1.11 (Air = 1)
Specific Gravity:	0.791 (Water = 1)
Evaporation Rate:	5.2 (Ether = 1)
Viscosity:	No information found.
Partition Coefficient (n-octanol/water):	-0.77

10. STABILITY AND REACTIVITY

Reactivity Data:	Highly flammable. See Section 9.
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat, flames, sparks, sources of ignition, incompatible materials.
Incompatible Materials:	Oxidizing agents, metals, reducing agents, acids.
Hazardous Decomposition Products:	Carbon oxides.
Possibility of Hazardous Reactions:	May react vigorously, violently, or explosively if exposed to extreme thermal conditions or in contact with the incompatible materials listed above.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Inhalation, ingestion, skin contact, eye contact.

Acute Effects: Harmful or fatal if swallowed, inhaled, or absorbed through the skin or eyes. Causes irritation to the eyes, skin, respiratory tract, and gastrointestinal tract. May cause visual disturbances or blindness if absorbed into the blood stream. May affect the blood, brain, urinary system, liver, spleen, eyes, kidneys, cardiovascular system, and pancreas.

Chronic Effects: May cause central nervous system effects. May cause damage to eyesight. Prolonged or repeated exposure may cause liver, kidney, brain, cardiovascular system, blood, spleen, and heart damage as well as adverse reproductive effects, birth defects, mutagenic effects, and dermatitis.

Toxicological Data:

LD_{50} Oral, Rat:	5628 mg/kg
LC_{50} Inhalation, Rat:	87.6 mg/L 6 h
LD_{50} Dermal, Rabbit:	15,800 mg/kg
LDL Oral, Human:	143 mg/kg

Toxic to reproduction based on animal data.

Symptoms of Exposure: Irritation, unconsciousness, visual disturbances, metabolic acidosis, drowsiness, dizziness, suffocation, shortness of breath, nervous system effects, cardiovascular effects, cough, nausea, vomiting, diarrhea, abdominal pain, constipation, blindness, and respiration effects.

Carcinogenic Effects: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicological Data:

EC_{50} Water Flea (Daphnia magna):	> 10,000 mg/L 48 h
LC_{50} Fathead Minnow (Pimephales promelas):	> 100 mg/L 96 h

Persistence and Degradability: Expected to be readily biodegradable.
Bioconcentration Factor: 1.0

Environmental Effects: Not expected to be hazardous to the environment. However, the possibility of an environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Partition Coefficient (n-octanol/water): -0.77

13. DISPOSAL INFORMATION

Disposal Instructions: All wastes must be handled in accordance with local, state, and federal regulations. Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers.

Contaminated Packaging: Because emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near product container. Offer rinsed packaging material to local recycling facilities.

Waste Codes: U154 (US RCRA Hazardous Waste U List – Ignitable Waste)

14. TRANSPORT INFORMATION

DOT:

UN Number: UN1230

Proper Shipping Name: Methanol

Hazard Class: 3

Packing Group: II

ERG Number: 127

Other Transport Precautions: DOT Reportable Quantity: Methanol: 5000 lb

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	Yes
Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	Yes
Pressure Hazard	No
Reactivity Hazard	No

Section 313: Methanol

CERCLA Reportable Quantities: Methanol: 5000 lb

Canada WHMIS: This SDS is prepared in compliance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Therefore, it complies with the 2015 Workplace Hazardous Materials Information System (WHMIS) as well.

International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION

Disclaimer: Jorgensen Laboratories provides the information in this Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this SDS are obtained from literature and do not constitute product specifications. Jorgensen Laboratories makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This SDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, Jorgensen Laboratories assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

Issue Date: October 10, 2016

Reason for Revision: Update of Sections 8, 9, 11, 12, 14, and 15 over 04/08/2015 version.

SDS

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: **Kinyoun Carbol Fuchsin**

Product Code(s): J0326ASD1

Synonyms: Mixture.

Recommended Use: For invitro veterinary use only.

Uses Advised Against: Not for use on humans.

Supplier: Jorgensen Laboratories
1450 Van Buren Avenue, Loveland, CO 80538
Phone: (970) 669-2500 or (800) 525-5614 Fax: (970) 663-5042

Emergency Phone Number: U.S. and Canada: (800) 535-5053 International: (352) 323-3500 (INFOTRAC)

2. HAZARDS IDENTIFICATION

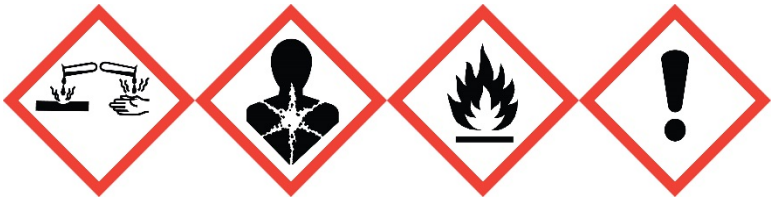
Hazard Classifications:

Acute Toxicity – Inhalation:	Category 4
Skin Corrosion/Irritation:	Category 1B
Eye Damage/Irritation:	Category 1
Germ Cell Mutagenicity:	Category 2
Specific Target Organ Toxicity (Repeated Exposure):	Category 2
Flammable Liquids:	Category 3

Signal Word: DANGER

Hazard Statements:
Harmful if inhaled.
Causes severe skin burns and serious eye damage.
Suspected of causing genetic defects.
May cause damage to organs though prolonged or repeated exposure.
Flammable liquid and vapor.

Pictograms:



Precautionary Statements:

Prevention: Do not breathe fumes, mists, vapors, or spray.

Use only outdoors or in a well-ventilated area.
Wash thoroughly after handling.
Wear protective gloves, protective clothing, eye protection, and face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
Keep container tightly closed.
Ground container and receiving equipment.
Use explosion-proof electrical, ventilating, lighting, and transportation equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

Response: Immediately call a poison center or doctor.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical attention.
In case of fire: Use water spray, dry powder, alcohol resistant foam, or carbon dioxide to extinguish.

Storage: Store locked up.
Store in a well-ventilated place. Keep cool.

Disposal: Disposal of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: Hazardous to aquatic life with long-lasting effects. Avoid release to the environment.

Toxicity Statement: This product contains >1% ingredients whose acute toxicity is unknown.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Water	Water	7732-18-5	H_2O	65 – 84
Ethanol	Ethyl Alcohol	64-17-5	C_2H_5OH	10 – 20
Phenol	Hydroxybenzene	108-95-2	C_6H_6O	5 – 10
Basic Fuchsin	Basic Red 9	569-61-9	$C_{19}H_{17}N_3 \bullet HCl$	1 – 5

Trade Secret Statement: Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediately call a poison center or doctor.

Ingestion:	Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor.
Skin Contact:	Remove contaminated clothing and shoes. Wash skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Immediately call a poison center or doctor.
Eye Contact:	Check for and remove contact lenses if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Immediately call a poison center or doctor.
General Advice:	Ensure that medical personnel and those providing first aid are aware of the material(s) involved and take precautions to protect themselves.
Symptoms and Effects:	Irritation, burns, dermatitis, nausea, vomiting, diarrhea, abdominal pain, coughing, shortness of breath, nervous system effects, circulatory collapse, tachypnea, convulsions, necrosis, jaundice, respiratory failure, narcosis. Harmful if swallowed. May cause irritation or burns to the eyes, skin, respiratory tract, and gastrointestinal tract. May affect the nervous system, respiratory system, and circulatory system. Prolonged or repeated exposure may cause damage to the kidneys, liver, bladder, brain, endocrine system, and immune system.
Immediate Medical Care/ Special Treatment:	Immediately call a poison center or doctor. Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, dry powder, alcohol resistant foam, carbon dioxide.
Unsuitable Extinguishing Media:	Do not use a solid (straight) water stream, as it may scatter and spread fire.
Hazardous Combustion Products:	Carbon oxides, toxic fumes.
Specific Hazards:	Flammable. Vapors may cause flash fire or ignite explosively. Burns if ignited by heat, sparks, or flames. Material may burn with an invisible flame. Sealed containers may explode when heated or involved in fire. Material is sensitive to static discharge. Vapors may travel considerable distance to source of ignition and flash back. Vapor from the solvent may accumulate in container headspace, resulting in flammability hazard.
Special Protective Equipment/ Precautions for Firefighters:	As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear. Use water spray to cool unopened containers. Move containers from fire area, if you can do so without risk. This material may evaporate and leave a flammable residue if spilled. In the event of fire and/or explosion, do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment:	Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Keep upwind. Keep out of low areas. Wear appropriate personal protective equipment (see Section 8). Remove all sources of ignition. Avoid contact with eyes, skin, and clothing.
Emergency Procedures:	In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

Methods for Containment: Eliminate all sources of ignition. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material where possible. Product should not be released to the environment. Contain and recover liquid when possible.

Methods for Cleanup: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a noncombustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Residues from spills can be dissolved with alcohol or acetone solution. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling: Do not handle near open flame, sources of heat, or sources of ignition. Wear personal protective equipment (see Section 8). Use only in well-ventilated areas. Avoid contact with skin, eyes, and clothing. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product.

Storage: Store in a cool, dry, ventilated area. Store away from incompatible materials (see Section 10). Store in original container. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

Water:	No information found.		
Ethanol:	ACGIH:	STEL:	1000 ppm
	OSHA:	PEL:	1000 ppm
			1900 mg/m^3
Phenol:	ACGIH:	TLV:	5 mg/m^3
	OSHA:	PEL:	19 mg/m^3
	NIOSH:	CEIL:	60 mg/m^3
Basic Fuchsin:	No information found.		

Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection: Wear safety glasses with side shields or safety goggles. Wear a face shield. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to

exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment: Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

Appearance:	Red, opaque liquid.
Odor:	Mild, phenolic.
Odor Threshold:	No information found.
Formula Weight:	Mixture.
pH:	No information found.
Melting/Freezing Point:	No information found.
Boiling Point/Range:	No information found.
Decomposition Temperature:	No information found.
Flash Point:	43.3 °C (estimated)
Auto-ignition Temperature:	Not applicable.
Flammability:	Flammable liquid and vapor.
Flammability/Explosive Limits:	No information found.
Solubility:	Miscible with water.
Vapor Pressure:	No information found.
Vapor Density:	No information found.
Specific Gravity:	0.990 (Water = 1)
Evaporation Rate:	No information found.
Viscosity:	No information found.
Partition Coefficient (n-octanol/water):	No information found.

10. STABILITY AND REACTIVITY

Reactivity Data:	Flammable. See Section 9.
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat, flames, sparks, incompatible materials.
Incompatible Materials:	Oxidizing agents, strong acids.
Hazardous Decomposition Products:	Carbon oxides, toxic fumes.
Possibility of Hazardous Reactions:	May react vigorously, violently, or explosively if exposed to extreme thermal conditions or if contacted with the incompatible materials listed above.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Inhalation, ingestion, skin contact, eye contact.

Acute Effects: Harmful if swallowed, inhaled, or absorbed through skin. May cause irritation or burns to the eyes, skin, respiratory tract, and gastrointestinal tract. May affect the respiratory system and circulatory system.

Chronic Effects: Prolonged or repeated exposure may cause damage to the kidneys, liver, bladder, brain, endocrine system, and immune system.

Toxicological Data:

Water: Not applicable.

Ethanol:
LD_{50} Oral, Rat: 7060 mg/kg
LC_{50} Inhalation, Rat: 124.7 mg/L 4 h

Phenol:
LD_{50} Oral, Rat: 317 mg/kg
LD_{50} Dermal, Rabbit: 630 mg/kg
LD_{50} Inhalation, Rat: 0.316 mg/L 4 h
Causes severe skin and eye irritation based on animal data.
May cause mutagenic effects based on animal data.

Basic Fuchsin: No information found.

Symptoms of Exposure: Irritation, burns, dermatitis, nausea, vomiting, diarrhea, abdominal pain, coughing, shortness of breath, nervous system effects, circulatory collapse, tachypnea, convulsions, necrosis, jaundice, respiratory failure, narcosis.

Carcinogenic Effects: No component of this product is considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC: Phenol: 3 – Not classifiable as to its carcinogenicity to humans.

ACGIH: Phenol: A4 – Not classifiable as a human carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicological Data:

Water: Not applicable.

Ethanol:
EC_{50}, Water Flea (Daphnia magna): 7.7 mg/L 48 h
LC_{50}, Fathead Minnow (Pimephales promelas): > 100 mg/L 96 h

Phenol: No information found.

Basic Fuchsin: No information found.

Persistence and Degradability: May not be readily biodegradable.

Environmental Effects: Hazardous to aquatic life and groundwater resources with long-lasting effects. Avoid release to the environment.

13. DISPOSAL INFORMATION

Disposal Instructions: All wastes must be handled in accordance with local, state, and federal regulations. Minimize exposure to product waste (see Section 8).

Contaminated Packaging: Because emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

Waste Codes: D002: Waste Corrosive Material (pH ≤ 2 or pH ≥12.5 or corrosive to steel)

14. TRANSPORT INFORMATION

DOT:

UN Number: UN2924

Proper Shipping Name: Flammable liquids, corrosive (Ethanol, Phenol)

Hazard Class: 3, 8

Packing Group: III

ERG Number: 132

Environmental Hazard Regulations: No information found.

Other Transport Precautions: No information found.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	Yes
Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	Yes
Pressure Hazard	No
Reactivity Hazard	No

Section 313: Phenol: 1000 lb

CERCLA Reportable Quantities: No information found.

Canada WHMIS: This SDS is prepared in compliance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Therefore, it complies with the 2015 Workplace Hazardous Materials Information System (WHMIS) as well.

International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION

Disclaimer: Jorgensen Laboratories provides the information in this Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this SDS are obtained from literature and do not constitute product specifications. Jorgensen Laboratories makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This SDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, Jorgensen Laboratories assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

Issue Date: October 6, 2016

Reason for Revision: Update of Sections 8, 9, 11, 12, and 15 over 02/24/2015 version.

SDS

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: **50% Ethanol**

Product Code(s): J0326ASD2

Synonyms: Mixture.

Recommended Use: For invitro veterinary use only.

Uses Advised Against: Not for use on humans.

Supplier: Jorgensen Laboratories
1450 Van Buren Avenue, Loveland, CO 80538
Phone: (970) 669-2500 or (800) 525-5614 Fax: (970) 663-5042

Emergency Phone Number: U.S. and Canada: (800) 535-5053 International: (352) 323-3500 (INFOTRAC)

2. HAZARDS IDENTIFICATION

Hazard Classifications: Specific Target Organ Toxicity (Single Exposure): Category 1
Flammable Liquids: Category 3

Signal Word: DANGER

Hazard Statements: Causes damage to organs.
Flammable liquid and vapor.

Pictograms:

Precautionary Statements:

Prevention: Do not breathe fumes, mists, vapors, or spray.
Wash thoroughly after handling.
Do not eat, drink, or smoke when using this product.
Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
Keep container tightly closed.
Ground container and receiving equipment.
Use explosion-proof electrical, ventilating, lighting, and transportation equipment.
Use only non-sparking tools.

Take precautionary measures against static discharge.
Wear protective gloves, protective clothing, eye protection, and face protection.

Response: If exposed: Call a poison center or doctor.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
In case of fire, use water spray, dry powder, alcohol resistant foam, or carbon dioxide to extinguish.

Storage: Store locked up.
Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: This product may be toxic to humans. Primates are especially susceptible to the toxic effects of methanol, which are not reflected through toxicity data (see Section 11).
May cause adverse reproductive effects based on human and animal data.

Toxicity Statement: Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Water	Water	7732-18-5	H_2O	57.1
Ethanol	Ethyl Alcohol	64-17-5	C_2H_5OH	38.9
Methanol	Methyl Alcohol	67-56-1	CH_3OH	1.93
Isopropanol	Isopropyl Alcohol	67-63-0	C_3H_7OH	2.15

Trade Secret Statement: Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor immediately if you feel unwell or are concerned.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Call a poison center or doctor immediately if you feel unwell or are concerned.

Skin Contact: Remove contaminated clothing and shoes. Wash skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Call a poison center or doctor immediately if you feel unwell or are concerned.

Eye Contact: Check for and remove contact lenses if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a poison center or doctor immediately if you feel unwell or are concerned.

General Advice:	Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that medical personnel and those providing first aid are aware of the material(s) involved and take precautions to protect themselves.
Symptoms and Effects:	May cause irritation to eyes, skin, respiratory tract, and gastrointestinal tract. Absorption through skin may cause visual disturbances and metabolic acidosis. Inhalation of vapors may cause dizziness, suffocation, nervous system effects, and cardiovascular effects. May affect the blood, brain, urinary system, liver, spleen, and eyes. Ingestion may cause nausea, vomiting, diarrhea, abdominal pain, constipation, nervous system effects, blindness, and respiration effects. May affect the blood, liver, kidneys, cardiovascular system, brain, pancreas, and eyes.
Immediate Medical Care/ Special Treatment:	If you feel unwell or are concerned, call a poison center or doctor immediately. Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, dry powder, alcohol resistant foam, carbon dioxide.
Unsuitable Extinguishing Media:	Do not use a solid (straight) water stream, as it may scatter and spread fire.
Hazardous Combustion Products:	Carbon oxides.
Specific Hazards:	Flammable. Vapors may cause flash fire or ignite explosively. Burns vigorously if ignited easily by heat, sparks, or flames. Material may burn with an invisible flame. Sealed containers may explode when heated or involved in fire. Material is sensitive to static discharge. Vapors may travel considerable distance to source of ignition and flash back. Vapor from the solvent may accumulate in container headspace, resulting in flammability hazard.
Special Protective Equipment/ Precautions for Firefighters:	As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear. Use water spray to cool unopened containers. Move containers from fire area, if you can do so without risk. This material may evaporate and leave a flammable residue if spilled. In the event of fire and/or explosion, do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment:	Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Keep upwind. Keep out of low areas. Wear appropriate personal protective equipment (see Section 8). Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharge. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. Avoid contact with eyes, skin, and clothing.
Emergency Procedures:	In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).
Methods for Containment:	Eliminate all sources of ignition. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material where possible. Product should not be released to the environment. Contain and recover liquid when possible.
Methods for Cleanup:	Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a non-combustible container for reclamation or disposal. Do not flush to sewer.

Clean contaminated surface thoroughly. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling:

Do not handle near an open flame, sources of heat, or sources of ignition. Wear personal protective equipment (see Section 8). Use only in well-ventilated areas. Provide sufficient air exchange and/or exhaust in work areas. Avoid contact with skin, eyes, and clothing. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Take precautionary measures against static discharge. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues (vapors, liquids). Observe all warnings and precautions listed for this product.

Storage:

Store in a cool, dry, ventilated area. Store in a segregated and approved area away from incompatible materials (see Section 10). Store in original container. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Ground container and transfer equipment. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

Water:	No information found.		
Ethanol:	ACGIH:	STEL:	1000 ppm
	OSHA:	PEL:	1000 ppm
			1900 mg/m^3
Methanol:	ACGIH:	TWA:	200 ppm
		STEL:	250 ppm
		BEL:	15 mg/L
	OSHA:	PEL:	200 ppm
			260 mg/m^3
Isopropanol:	ACGIH:	TWA:	200 ppm
		STEL:	400 ppm
		BEL:	40 mg/L
	OSHA:	PEL:	400 ppm
			980 mg/m^3

Engineering Controls:

Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection:

Wear safety glasses with side shields or safety goggles. Wear a face shield. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection:

Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection:	An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or in any other circumstances where air-purifying respirators may not provide adequate protection.
Specific Requirements for Personal Protective Equipment:	Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

Appearance:	Colorless, transparent liquid.
Odor:	Alcoholic.
Odor Threshold:	No information found.
Formula Weight:	Mixture.
pH:	No information found.
Melting/Freezing Point:	< 0 °C
Boiling Point/Range:	< 100 °C
Decomposition Temperature:	No information found.
Flash Point:	25 °C (estimated)
Auto-ignition Temperature:	No information found.
Flammability:	Explosive as vapor; flammable as liquid.
Flammability/Explosive Limits:	Lower: 3.3% by volume Upper: 19% by volume
Solubility:	Miscible with water, ether, acetone, benzene, acetic acid.
Vapor Pressure:	No information found.
Vapor Density:	No information found.
Specific Gravity:	0.920 (Water = 1)
Evaporation Rate:	No information found.
Viscosity:	No information found.
Partition Coefficient (n-octanol/water):	No information found.

10. STABILITY AND REACTIVITY

Reactivity Data:	Flammable. See Section 9.
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat, flames, sparks, sources of ignition, incompatible materials.
Incompatible Materials:	Oxidizing agents, metals, halogens, isocyanates, inorganic salts, inorganic hydrides, organic materials, hydrazine, acid anhydrides, bases, acids.
Hazardous Decomposition Products:	Carbon oxides.

Possibility of Hazardous Reactions: May react vigorously, violently or explosively if exposed to extreme thermal conditions or in contact with the incompatible materials listed above.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Inhalation, ingestion, skin contact, eye contact.

Acute Effects: May be harmful or fatal if swallowed, inhaled, or absorbed through the skin. Causes irritation to the eyes, skin, respiratory tract, and gastrointestinal tract. May cause blindness or visual disturbances if absorbed into the blood stream. May affect the blood, brain, urinary system, liver, spleen, eyes, kidneys, cardiovascular system, and pancreas.

Chronic Effects: May cause central nervous system effects. May cause damage to eyesight. Prolonged or repeated exposure may cause liver, kidney, brain, cardiovascular system, blood, spleen, and heart damage. Prolonged or repeated exposure may cause adverse reproductive effects and dermatitis.

Toxicological Data:

Water:	Not applicable.	
Ethanol:	LD_{50} Oral, Rat:	7060 mg/kg
	LC_{50} Inhalation, Rat:	124.7 mg/L 4 h
Methanol:	LD_{50} Oral, Rat:	5628 mg/kg
	LD_{50} Dermal, Rabbit:	15,800 mg/kg
	LC_{50} Inhalation, Rat:	87.5 mg/L 6 h
Isopropanol:	LD_{50} Oral, Rat:	5045 mg/kg
	LD_{50} Dermal, Rabbit:	12,800 mg/kg
	LC_{50} Inhalation, Rat:	72.6 mg/L 4 h

Symptoms of Exposure: Irritation, unconsciousness, visual disturbances, metabolic acidosis, drowsiness, dizziness, suffocation, shortness of breath, nervous system effects, cardiovascular effects, cough, nausea, vomiting, diarrhea, abdominal pain, constipation, blindness, and respiration effects.

Carcinogenic Effects: No component of this product is considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH:	Isopropanol:	A4 – Not classifiable as a human carcinogen
IARC:	Isopropanol:	3 – Not classifiable to humans

12. ECOLOGICAL INFORMATION

Ecotoxicological Data:

Water:	Not applicable.	
Ethanol:	EC_{50}, Water Flea (Daphnia magna):	7.7 mg/L 48 h
	LC_{50}, Fathead Minnow (Pimephales promelas):	> 100 mg/L 96 h
Methanol:	EC_{50}, Water Flea (Daphnia magna):	> 10,000 mg/L 48 h
	LC_{50}, Fathead Minnow (Pimephales promelas):	> 100 mg/L 96 h
Isopropanol:	LC_{50}, Western Mosquitofish (Gambusia affinis):	>1400 mg/L 96 h

Persistence and Degradability: Expected to be readily biodegradable.

Environmental Effects: May be hazardous to aquatic organisms. Avoid release to the environment.

13. DISPOSAL INFORMATION

Disposal Instructions: All wastes must be handled in accordance with local, state, and federal regulations. Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers.

Contaminated Packaging: Because emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near product container. Offer rinsed packaging material to local recycling facilities.

Waste Codes: Methanol: U154 (US RCRA Hazardous Waste U List – Ignitable Waste)

14. TRANSPORT INFORMATION

DOT:

UN Number: UN1987

Proper Shipping Name: Alcohols, n.o.s. (Denatured ethanol)

Hazard Class: 3

Packing Group: II

ERG Number: 127

Environmental Hazard Regulations: No information found.

Other Transport Precautions: No information found.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	Yes
Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	Yes
Pressure Hazard	No
Reactivity Hazard	No

Section 313: Isopropyl Alcohol, Methanol: De Minimis Concentration: 1.0%

CERCLA Reportable Quantities: Methanol: 5000 lb

Canada WHMIS: This SDS is prepared in compliance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Therefore, it complies with the 2015 Workplace Hazardous Materials Information System (WHMIS) as well.

International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION

Disclaimer: Jorgensen Laboratories provides the information in this Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this SDS are obtained from literature and do not constitute product specifications. Jorgensen Laboratories makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This SDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, Jorgensen Laboratories assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

Issue Date: October 6, 2016

Reason for Revision: Update of Sections 8, 9, 11, 12, and 15 over 03/05/2015 version.

SDS

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: **1% Sulfuric Acid**

Product Code(s): J0326ASD3

Synonyms: Hydrogen Sulfate; Oil of Vitriol; Babcock Acid

Recommended Use: For invitro veterinary use only.

Uses Advised Against: Not for use on humans.

Supplier: Jorgensen Laboratories
1450 Van Buren Avenue, Loveland, CO 80538
Phone: (970) 669-2500 or (800) 525-5614 Fax: (970) 663-5042

Emergency Phone Number: U.S. and Canada: (800) 535-5053 International: (352) 323-3500 (INFOTRAC)

2. HAZARDS IDENTIFICATION

Hazard Classifications:

Skin Corrosion/Irritation:	Category 2
Eye Damage/Irritation:	Category 2A

Signal Word: WARNING

Hazard Statements:
Causes skin irritation.
Causes serious eye irritation.

Pictograms:

Precautionary Statements:

Prevention:
Wash thoroughly after handling.
Wear protective gloves, protective clothing, eye protection, and face protection.

Response:
If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention.
Take off contaminated clothing and wash it before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage: Not applicable.

Disposal: Not applicable.

Hazards Not Otherwise Classified: This product may be hazardous to the environment. Avoid release to groundwater or aquatic environments.
Inhalation of inorganic mists containing sulfuric acid may cause cancer.

Toxicity Statement: Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Water	Water	7732-18-5	H_2O	98.2
Sulfuric Acid	Hydrogen Sulfate; Oil of Vitriol	7664-93-9	H_2SO_4	1.82

Trade Secret Statement: Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician if symptoms occur.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Call a physician if symptoms occur.

Skin Contact: Wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if symptoms occur.

Eye Contact: Check for and remove contact lenses, if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician if symptoms occur.

General Advice: Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that those providing first aid and medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Symptoms and Effects: Severe skin and eye irritation or burns, irritation of respiratory system, burning sensation of the respiratory tract, coughing, hoarseness, choking sensation, dyspnea (shortness of breath and difficulty breathing), shallow respiration, salivation, burning of mouth, throat, and stomach, thirst, difficulty swallowing, abdominal pain, nausea, vomiting, diarrhea, weak and rapid pulse or rapid heart rate (tachycardia), shock.

Immediate Medical Care/ Special Treatment: Call a physician if symptoms occur. Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry powder, alcohol resistant foam, carbon dioxide.

Unsuitable Extinguishing Media: Avoid use of water.

Hazardous Combustion Products: Hydrogen, sulfur oxides.

Specific Hazards: Contact with metals may produce hydrogen gas. Excessive thermal conditions may cause decomposition, yielding sulfur oxides. Contact with water may cause violent exothermic reaction.

Special Protective Equipment/ Precautions for Firefighters: As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment: Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Keep upwind. Wear appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing.

Emergency Procedures: In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

Methods for Containment: Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover liquid when possible.

Methods for Cleanup: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Residues from spills can be diluted with water and neutralized with alkaline material such as soda ash or lime. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling: Wear personal protective equipment (see Section 8). Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with skin, eyes, and clothing. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues (vapors, liquids). Observe all warnings and precautions listed for this product. As with all acids, never add water directly to this product. Instead, add acids to water to prevent violent eruption of the solution.

Storage: Store in a cool, dry, ventilated area. Store in a segregated and approved area away from heat and incompatible materials (see Section 10). Store in original container. Do not store in metallic containers. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits: Water: No information found.

Sulfuric Acid:	OSHA (PEL):	1 mg/m^3
	ACGIH (TLV):	0.2 mg/m^3

Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection: Wear safety glasses with side shields or safety goggles. Wear a face shield. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a full-face, positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment: Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

Appearance: Colorless, transparent liquid.

Odor: Very slight.

Odor Threshold: > 1 mg/m^3

Formula Weight: 98.08 (as H_2SO_4)

pH: 0.3 (1 N solution)

Melting/Freezing Point: ≈ 0 °C

Boiling Point/Range: ≈ 100 °C

Decomposition Temperature: 340 °C

Flash Point: Not applicable.

Auto-ignition Temperature: Not applicable.

Flammability: Not flammable.

Flammability/Explosive Limits: Not applicable.

Solubility: Miscible with water.

Vapor Pressure: No information found.

Vapor Density (Relative): 3.4 (Air = 1)

Specific Gravity: 1.01 (Water = 1)

Evaporation Rate: No information found.

Viscosity: ≤ 23 mPa s at 20 °C

Partition Coefficient (n-octanol/water): No information found.

10. STABILITY AND REACTIVITY

Reactivity Data: Corrosive. See Section 11.

Chemical Stability: Stable under normal conditions. Sensitive to moisture.

Conditions to Avoid: Excessive heat, moisture, incompatible materials.

Incompatible Materials: Strong bases, strong acids, organic compounds, combustible materials, metals.

Hazardous Decomposition Products: Hydrogen, sulfur oxides.

Possibility of Hazardous Reactions: May react vigorously, violently, or explosively with the incompatible materials listed above. Excess thermal conditions may yield hazardous sulfur oxides. Contact with metals may produce hazardous concentrations of hydrogen gas. Contact with strong bases may cause violent exothermic reaction.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Inhalation, ingestion, skin contact, eye contact.

Acute Effects: May be harmful if swallowed, inhaled, or absorbed through the skin. May cause irritation of the eyes, skin, respiratory tract, and gastrointestinal tract. May enter lungs if swallowed or vomited. Liquid and vapors are corrosive. May cause tissue damage.

Chronic Effects: Prolonged or repeated exposure may affect liver function, respiratory function, kidney function, and behavioral/central nervous system function. Prolonged or repeated exposure may cause tooth decay, dermatitis, conjunctivitis, reproductive effects, mutagenic effects, and cancer.

Toxicological Data:

Water: Not applicable.

Sulfuric Acid: LD_{50} Oral, Rat: 2140 mg/kg
LC_{50} Inhalation, Rat: 0.510 mg/L 2 h
Corrosive to skin and eyes based on animal data.

Symptoms of Exposure: Irritation, burning, ulceration, coughing, sneezing, choking sensation, hoarseness, dyspnea, bronchitis, gastric infection, nausea, vomiting, diarrhea, thirst, difficulty swallowing, salivation, chills, fever, shock, weak and rapid pulse.

Carcinogenic Effects: This product may cause cancer.

ACGIH: Sulfuric Acid: A2 – Suspected human carcinogen

IARC: Sulfuric Acid: 1 – Carcinogenic to humans

12. ECOLOGICAL INFORMATION

Ecotoxicological Data: Water: Not applicable.

	Sulfuric Acid:	LC_{50}, Western Mosquitofish (Gambusia affinis):	42 mg/L 96 h
		EC_{50}, Water Flea (Daphnia magna):	29 mg/L 24 h

Persistence and Degradability: Expected to be readily biodegradable.

Environmental Effects: May be harmful to aquatic life. May leach into groundwater.

13. DISPOSAL INFORMATION

Disposal Instructions: Minimize exposure to product waste (see Section 8). All wastes must be handled in accordance with local, state, and federal regulations.

Contaminated Packaging: Because emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

Waste Codes: No information found.

14. TRANSPORT INFORMATION

DOT:

UN Number: UN3264

Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid)

Hazard Class: 8

Packing Group: III

ERG Number: 154

Environmental Hazard Regulations: No information found.

Other Transport Precautions: No information found.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302:	Sulfuric Acid:	Reportable Quantity:	1000 lb
		Threshold Planning Quantity:	1000 lb

Sections 311/312:

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	Yes
Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	Yes

Section 313: Component: Sulfuric Acid
De Minimis Concentration: 1.0 %

CERCLA Reportable Quantities: Sulfuric Acid: 1000 lb

Canada WHMIS: This SDS is prepared in compliance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Therefore, it complies with the 2015 Workplace Hazardous Materials Information System (WHMIS) as well.

International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION

Disclaimer: Jorgensen Laboratories provides the information in this Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this SDS are obtained from literature and do not constitute product specifications. Jorgensen Laboratories makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This SDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, Jorgensen Laboratories assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

Issue Date: October 6, 2016

Reason for Revision: Update of Sections 3, 8, 9, 11, 12, 13, and 15 over 03/16/2015 version.

SDS

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: **Loeffler's Methylene Blue**

Product Code(s): J0326ASD4

Synonyms: Mixture.

Recommended Use: For invitro veterinary use only.

Uses Advised Against: Not for use on humans.

Supplier: Jorgensen Laboratories
1450 Van Buren Avenue, Loveland, CO 80538
Phone: (970) 669-2500 or (800) 525-5614 Fax: (970) 663-5042

Emergency Phone Number: U.S. and Canada: (800) 535-5053 International: (352) 323-3500 (INFOTRAC)

2. HAZARDS IDENTIFICATION

Hazard Classifications: Flammable Liquids: Category 3

Signal Word: WARNING

Hazard Statements: Flammable liquid and vapor.

Pictograms:

Precautionary Statements:

Prevention: Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
Keep container tightly closed.
Ground container and receiving equipment.
Use explosion-proof electrical, ventilating, lighting, and transportation equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves, protective clothing, eye protection, and face protection.

Response: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

In case of fire: Use water spray, dry powder, alcohol resistant foam, or carbon dioxide to extinguish.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: This product may be toxic to humans. Primates are especially susceptible to the toxic effects of methanol, which are not reflected through toxicity data (see Section 11). May cause adverse reproductive effects based on human and animal data.

Toxicity Statement: Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Water	Water	7732-18-5	H_2O	80.7
Ethanol	Ethyl Alcohol	64-17-5	C_2H_5OH	17.0
Methanol	Methyl Alcohol	67-56-1	CH_3OH	0.848
Isopropanol	Isopropyl Alcohol	67-63-0	C_3H_7OH	0.942
Methylene Blue	Basic Blue 9	7220-79-3	$C_{16}H_{18}N_3SCl \bullet 3H_2O$	0.397
Potassium Hydroxide	Caustic Potash	1310-58-3	KOH	0.0446

Trade Secret Statement: Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately if you feel unwell or are concerned.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Call a physician immediately if you feel unwell or are concerned.

Skin Contact: Remove contaminated clothing and shoes. Wash skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Call a physician immediately if you feel unwell or are concerned.

Eye Contact: Check for and remove contact lenses if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately if you feel unwell or are concerned.

General Advice: Ensure that medical personnel and those providing first aid are aware of the material(s) involved and take precautions to protect themselves.

Symptoms and Effects: Irritation, nausea, vomiting, diarrhea, visual disturbances, abdominal pain, nervous system effects, drowsiness, dizziness, blindness, metabolic acidosis, unconsciousness. May cause irritation to the eyes, skin, respiratory tract, and gastrointestinal tract. May cause blindness or visual disturbances if absorbed into the blood stream. May affect the blood, brain, urinary system, liver, spleen, eyes, kidneys, cardiovascular system, and pancreas. Prolonged or repeated exposure may affect the liver, kidneys, cardiovascular system, and nervous system. May cause damage to eyesight. May cause mutagenic effects, adverse reproductive effects, and dermatitis.

Immediate Medical Care/ Special Treatment:	If you feel unwell or are concerned, call a physician or poison control center immediately. Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, dry powder, alcohol resistant foam, carbon dioxide.
Unsuitable Extinguishing Media:	Do not use a solid (straight) water stream, as it may scatter and spread fire.
Hazardous Combustion Products:	Carbon oxides, nitrogen oxides, toxic fumes.
Specific Hazards:	Flammable. Vapors may cause flash fire or ignite explosively. Burns if ignited by heat, sparks, or flames. Sealed containers may explode when heated or involved in fire. Material may be sensitive to static discharge. Vapors may travel considerable distance to source of ignition and flash back. Vapor from the solvent may accumulate in container headspace, resulting in flammability hazard.
Special Protective Equipment/ Precautions for Firefighters:	As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear. Use water spray to cool unopened containers. Move containers from fire area, if you can do so without risk. This material may evaporate and leave a flammable residue if spilled. In the event of fire and/or explosion, do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment:	Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Wear appropriate personal protective equipment (see Section 8). Remove all sources of ignition. Avoid contact with eyes, skin, and clothing.
Emergency Procedures:	In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).
Methods for Containment:	Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover liquid when possible.
Methods for Cleanup:	Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a noncombustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Spills can be dissolved with alcohol or acetone solution. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling:	Do not handle near an open flame, excessive heat, or sources of ignition. Wear personal protective equipment (see Section 8). Provide sufficient air exchange and/or exhaust in work areas. Avoid contact with skin, eyes, and clothing. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product.
Storage:	Store in a cool, dry, ventilated area. Limit exposure to light. Store in a segregated and approved area away from incompatible materials (see Section 10). Store in original

container. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

Water:	No information found.		
Ethanol:	ACGIH:	STEL:	1000 ppm
	OSHA:	PEL:	1000 ppm
			1900 mg/m^3
Methanol:	ACGIH:	TWA:	200 ppm
		STEL:	250 ppm
		BEL:	15 mg/L
	OSHA:	PEL:	200 ppm
			260 mg/m^3
Isopropanol:	ACGIH:	TWA:	200 ppm
		STEL:	400 ppm
		BEL:	40 mg/L
	OSHA:	PEL:	400 ppm
			980 mg/m^3
Methylene Blue:	No information found.		
Potassium Hydroxide:	OSHA:	PEL:	2 mg/m^3
	ACGIH:	TLV:	2 mg/m^3

Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection: Wear safety glasses with side shields or safety goggles. Wear a face shield. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment: Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

Appearance: Blue, opaque liquid.

Odor:	Slight, alcoholic.
Odor Threshold:	No information found.
Formula Weight:	Mixture.
pH:	No information found.
Melting/Freezing Point:	< 0 °C
Boiling Point/Range:	< 100 °C
Decomposition Temperature:	No information found.
Flash Point:	38 °C (estimated)
Auto-ignition Temperature:	No information found.
Flammability:	Flammable liquid and vapor.
Flammability/Explosive Limits:	No information found.
Solubility:	Miscible with water, alcohol.
Vapor Pressure:	No information found.
Vapor Density:	No information found.
Specific Gravity:	0.960 (Water = 1)
Evaporation Rate:	No information found.
Viscosity:	No information found.
Partition Coefficient (n-octanol/water):	No information found.

10. STABILITY AND REACTIVITY

Reactivity Data:	Flammable. See Section 9.
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat, incompatible materials.
Incompatible Materials:	Oxidizing agents, acids, bases, metals, organic materials.
Hazardous Decomposition Products:	Carbon oxides, nitrogen oxides, toxic fumes.
Possibility of Hazardous Reactions:	May react vigorously, violently or explosively if exposed to extreme thermal conditions or in contact with the incompatible materials listed above.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure:	Inhalation, ingestion, skin contact, eye contact.
Acute Effects:	May be harmful if swallowed. May cause irritation to the eyes, skin, respiratory tract, and gastrointestinal tract. May cause blindness or visual disturbances if absorbed into the blood stream. May affect the blood, brain, urinary system, liver, spleen, eyes, kidneys, cardiovascular system, and pancreas.

Chronic Effects: Prolonged or repeated exposure may affect the liver, kidneys, cardiovascular system, and nervous system. May cause damage to eyesight. May cause mutagenic effects, adverse reproductive effects, and dermatitis.

Toxicological Data:

Water:	Not applicable.	
Ethanol:	LD_{50} Oral, Rat:	7060 mg/kg
	LC_{50} Inhalation, Rat:	124.7 mg/L 4 h
Methanol:	LD_{50} Oral, Rat:	5628 mg/kg
	LD_{50} Dermal, Rabbit:	15,800 mg/kg
	LC_{50} Inhalation, Rat:	87.5 mg/L 6 h
Isopropanol:	LD_{50} Oral, Rat:	5045 mg/kg
	LD_{50} Dermal, Rabbit:	12,800 mg/kg
	LC_{50} Inhalation, Rat:	72.6 mg/L 4 h
Methylene Blue:	No information found.	
Potassium Hydroxide:	LD_{50} Dermal, Rabbit:	273 mg/kg
	Corrosive to eyes and skin based on human and animal data.	

Symptoms of Exposure: Irritation, nausea, vomiting, diarrhea, visual disturbances, abdominal pain, nervous system effects, drowsiness, dizziness, blindness, metabolic acidosis, unconsciousness.

Carcinogenic Effects: No component of this product is considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH:	Isopropanol:	A4 – Not classifiable as a human carcinogen
IARC:	Isopropanol:	3 – Not classifiable as to its carcinogenicity to humans

12. ECOLOGICAL INFORMATION

Ecotoxicological Data:

Water:
Not applicable.

Ethanol:

EC_{50}, Water Flea (Daphnia magna):	7.7 mg/L 48 h
LC_{50}, Fathead Minnow (Pimephales promelas):	> 100 mg/L 96 h

Methanol:

EC_{50}, Water Flea (Daphnia magna):	> 10,000 mg/L 48 h
LC_{50}, Fathead Minnow (Pimephales promelas):	> 100 mg/L 96 h

Isopropanol:

LC_{50}, Western Mosquitofish (Gambusia affinis):	>1400 mg/L 96 h

Methylene Blue:
No information found.

Potassium Hydroxide:

LC_{50}, Western Mosquitofish (Gambusia affinis):	80 mg/L 96 h

Persistence and Degradability: May not be readily biodegradable.

Environmental Effects: Not expected to be hazardous to the environment. However, the possibility of an environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL INFORMATION

Disposal Instructions: All wastes must be handled in accordance with local, state, and federal regulations. Minimize exposure to product waste (see Section 8).

Contaminated Packaging: Because emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

Waste Codes: Methanol: U154 (US RCRA Hazardous Waste U List – Ignitable Waste)

14. TRANSPORT INFORMATION

DOT:

UN Number: UN1987

Proper Shipping Name: Alcohols, n.o.s. (Denatured ethanol)

Hazard Class: 3

Packing Group: III

ERG Number: 127

Environmental Hazard Regulations: No information found.

Other Transport Precautions: No information found.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	Yes
Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	Yes
Pressure Hazard	No
Reactivity Hazard	No

Section 313: Isopropyl Alcohol, Methanol: De Minimis Concentration: 1.0%

CERCLA Reportable Quantities: Methanol: 5000 lb
Potassium Hydroxide: 1000 lb

Canada WHMIS: This SDS is prepared in compliance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Therefore, it complies with the 2015 Workplace Hazardous Materials Information System (WHMIS) as well.

International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION

Disclaimer: Jorgensen Laboratories provides the information in this Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this SDS are obtained from literature and do not constitute product specifications. Jorgensen Laboratories makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This SDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, Jorgensen Laboratories assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

Issue Date: October 6, 2016

Reason for Revision: Update of Section 8, 9, 11, 12, and 15 over 03/06/2016 version.