

Jemmco, LLC

Leading supplier to the extrusion and web converting industries



DYNE - SDS FORMS & GHS LABELS Interactive Table of Contents

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Level 30

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 10/08/2018 Date of Issue: 07/01/2015

Version: 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Substance

Product Name: Level 30

Chemical Name: 2-ethoxyethanol

CAS-No.: 110-80-5

1.2. Intended Use of the Product

Use of the Substance/Mixture: For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Jemmco, LLC

10936 N Port Washington Road

Mequon, WI 53092-5031

Phone: 262-512-9559

Fax: 262-242-0432

1.4. Emergency Telephone Number

Emergency Number : Chemtrec: 800-424-9300 – For Chemical Emergencies Only

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Flam. Liq. 3 H226

Acute Tox. 4 (Oral) H302

Acute Tox. 3 H331

(Inhalation:vapor)

Repr. 1B H360

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

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H226 - Flammable liquid and vapor.

H302 - Harmful if swallowed.

H331 - Toxic if inhaled.

H360 - May damage fertility or the unborn child.

Precautionary Statements (GHS-US)

: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.

P240 - Ground/Bond container and receiving equipment.

P241 - Use explosion-proof electrical, ventilating, and lighting equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P261 - Avoid breathing vapors, mist, or spray.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves, protective clothing, and eye protection.

P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

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P311 - Call a poison center or doctor.
P321 - Specific treatment (see Section 4 on this SDS).
P330 - Rinse mouth.
P370+P378 - In case of fire: Use appropriate media (see Section 5) to extinguish.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.
P403+P233+P235 - Store in a well-ventilated place. Keep container tightly closed.. Keep cool.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name : Level 30
CAS-No. : 110-80-5

Name	Product Identifier	%	GHS-US classification
2-Ethoxyethanol	(CAS-No.) 110-80-5	100	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation:vapor), H331 Repr. 1B, H360

Full text of H-phrases: see Section 16.

3.2. Mixture

Not applicable

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Harmful if swallowed. Toxic if inhaled. May damage fertility. May damage the unborn child.

Symptoms/Injuries After Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts.

Chronic Symptoms: May damage fertility or the unborn child.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

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5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid and vapor.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Nitrous gases. Carbon oxides (CO, CO₂). Nitrogen oxides.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area. Eliminate ignition sources.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take precautionary measures against static discharge. Use only non-sparking tools. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups.

7.3. Specific End Use(s)

For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in Section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

2-Ethoxyethanol (110-80-5)		
USA ACGIH	ACGIH TWA (ppm)	5 ppm

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USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA ACGIH	Biological Exposure Indices (BEI)	100 mg/g Kreatinin Parameter: 2-Ethoxyacetic acid - Medium: urine - Sampling time: end of shift at end of workweek
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1.8 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	0.5 ppm
USA IDLH	US IDLH (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	740 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	Limit value category (OSHA)	prevent or reduce skin absorption

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Gas detectors should be used when toxic gases may be released.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Chemically resistant materials and fabrics. Wear fire/flamm resistant/retardant clothing.

Hand Protection

: Wear protective gloves.

Eye and Face Protection

: Chemical safety goggles.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: No data available
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: 40 °C (104 °F)
Auto-ignition Temperature	: No data available
Decomposition Temperature	: 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	: No data available
Viscosity	: No data available

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9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

10.2. Chemical Stability: Flammable liquid and vapor. May form flammable or explosive vapor-air mixture.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials: May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups.

10.6. Hazardous Decomposition Products: None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Oral: Harmful if swallowed. Inhalation:vapor: Toxic if inhaled.

Level 30 (110-80-5)	
ATE (Oral)	500.00 mg/kg body weight
ATE (Vapors)	3.00 mg/l/4h
2-Ethoxyethanol (110-80-5)	
LD50 Oral Rat	2800 mg/kg
LD50 Dermal Rabbit	3300 mg/kg
LC50 Inhalation Rat	15.2 mg/l/4h
LC50 Inhalation Rat	4267 ppm/4h
ATE (Oral)	500.00 mg/kg body weight
ATE (Vapors)	3.00 mg/l/4h

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: May damage fertility or the unborn child. In rats (offspring) a treatment-related aberration of the skeleton occurred at a dose of 100 µL/kg/day (administered to the mothers during gestation). The corresponding NOAEL was 25 µL/kg/day (corresponds to 23 mg/kg bw/d (density 0.919 g/cm³ at 25 °C (149°F))).

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts.

Chronic Symptoms: May damage fertility or the unborn child.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

2-Ethoxyethanol (110-80-5)	
LC50 Fish 1	> 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	> 10000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	> 0.1 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
NOEC Chronic Algae	100 mg/l

12.2. Persistence and Degradability

Level 30 (110-80-5)	
Persistence and Degradability	Not established.

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2-Ethoxyethanol (110-80-5)

Persistence and Degradability	Readily biodegradable.
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12.3. Bioaccumulative Potential

Level 30 (110-80-5)

Bioaccumulative Potential	Not established.
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2-Ethoxyethanol (110-80-5)

Log Pow	-0.1
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12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

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

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER

Hazard Class : 3

Identification Number : UN1171

Label Codes : 3

Packing Group : III

ERG Number : 127



14.2. In Accordance with IMDG

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER

Hazard Class : 3

Identification Number : UN1171

Packing Group : III

Label Codes : 3

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-D



14.3. In Accordance with IATA

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER

Packing Group : III

Identification Number : UN1171

Hazard Class : 3

Label Codes : 3

ERG Code (IATA) : 3L



SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Level 30 (110-80-5)

SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Acute toxicity (any route of exposure) Health hazard - Reproductive toxicity
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2-Ethoxyethanol (110-80-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a final Significant New Use Rule.
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CERCLA RQ	1000 lb
SARA Section 313 - Emission Reporting	1 %

15.2. US State Regulations

2-Ethoxyethanol (110-80-5) U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

California Proposition 65



This product can expose you to 2-Ethoxyethanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
2-Ethoxyethanol (110-80-5)		X		X

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision	: 10/08/2018
Other Information	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Acute Tox. 3 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Flam. Liq. 3	Flammable liquids Category 3
Repr. 1B	Reproductive toxicity Category 1B
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H331	Toxic if inhaled
H360	May damage fertility or the unborn child

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

Levels 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41

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According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 08/16/2018 Date of Issue: 07/09/2015

Version: 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Levels 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41

1.2. Intended Use of the Product

Use of the Substance/Mixture: For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Jemmco, LLC
10936 N Port Washington Road
Mequon, WI 53092-5031
Phone: 262-512-9559
Fax: 262-242-0432

1.4. Emergency Telephone Number

Emergency Number : Chemtrec: 800-424-9300 – For Chemical Emergencies Only

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Flam. Liq. 3	H226
Acute Tox. 4 (Oral)	H302
Acute Tox. 3 (Inhalation:vapor)	H331
Carc. 2	H351
Repr. 1B	H360
STOT RE 2	H373

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

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H226 - Flammable liquid and vapor.
H302 - Harmful if swallowed.
H331 - Toxic if inhaled.
H351 - Suspected of causing cancer.
H360 - May damage fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements (GHS-US)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P311 - Call a poison center or doctor.

P314 - Get medical advice/attention if you feel unwell.

P321 - Specific treatment (see Section 4 on this SDS).

P330 - Rinse mouth.

P370+P378 - In case of fire: Use appropriate media (see Section 5) to extinguish.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

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

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
2-Ethoxyethanol	(CAS-No.) 110-80-5	32.5 - 97.5	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation:vapor), H331 Repr. 1B, H360
Formamide	(CAS-No.) 75-12-7	2.5 - 67.5	Carc. 2, H351 Repr. 1B, H360 STOT RE 2, H373

Full text of H-phrases: see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Harmful if swallowed. Toxic if inhaled. May damage fertility. May damage the unborn child. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Symptoms/Injuries After Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Inhalation may damage the liver, kidneys, and central nervous system.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Ingestion may damage the liver, kidneys, and central nervous system.

Levels 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41

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Chronic Symptoms: May damage fertility or the unborn child. Repeated or prolonged skin contact may cause dermatitis and defatting. Repeated or prolonged exposure to this product may damage the hematopoietic and cardiovascular systems. Suspected of causing cancer.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid and vapor.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. May be corrosive to metals.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen oxides. Hydrogen cyanide. Ammonia.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Eliminate ignition sources. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take precautionary measures against static discharge. Use only non-sparking tools. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

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Incompatible Materials: May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups, iodine, sulfur trioxide, pyridine.

Special Rules on Packaging: Store in original container or corrosive resistant and/or lined container.

7.3. Specific End Use(s)

For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in Section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

2-Ethoxyethanol (110-80-5)		
USA ACGIH	ACGIH TWA (ppm)	5 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA ACGIH	Biological Exposure Indices (BEI)	100 mg/g Kreatinin Parameter: 2-Ethoxyacetic acid - Medium: urine - Sampling time: end of shift at end of workweek
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1.8 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	0.5 ppm
USA IDLH	US IDLH (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	740 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	Limit value category (OSHA)	prevent or reduce skin absorption
Formamide (75-12-7)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	15 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	10 ppm

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Gas detectors should be used when toxic gases may be released.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

Hand Protection

: Chemically resistant materials and fabrics.

Eye and Face Protection

: Wear protective gloves.

Skin and Body Protection

: Chemical safety goggles.

Respiratory Protection

: Wear suitable protective clothing.

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State

: Liquid

Appearance

: No data available

Odor

: No data available

Odor Threshold

: No data available

pH

: No data available

Evaporation Rate

: No data available

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Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: 40 °C (104 °F) (2-ethoxyethanol)
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
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	: No data available
Viscosity	: No data available

9.2. Other Information

VOC Content	: 32.5 - 97.5 %
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SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Reacts violently with strong oxidizers. Increased risk of fire or explosion. May be corrosive to metals.
- 10.2. Chemical Stability:** Flammable liquid and vapor. May form flammable or explosive vapor-air mixture.
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.
- 10.5. Incompatible Materials:** May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups, iodine, sulfur trioxide, pyridine.
- 10.6. Hazardous Decomposition Products:** None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Oral: Harmful if swallowed. Inhalation:vapor: Toxic if inhaled.

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ATE (Oral)	512.82 mg/kg body weight
ATE (Vapors)	3.08 mg/l/4h
2-Ethoxyethanol (110-80-5)	
LD50 Oral Rat	2800 mg/kg
LD50 Dermal Rabbit	3300 mg/kg
LC50 Inhalation Rat	15.2 mg/l/4h
LC50 Inhalation Rat	4267 ppm/4h
ATE (Oral)	500.00 mg/kg body weight
ATE (Vapors)	3.00 mg/l/4h
Formamide (75-12-7)	
LD50 Oral Rat	5577 mg/kg
LD50 Dermal Rabbit	6 g/kg
LC50 Inhalation Rat	> 3900 ppm (Exposure time: 6 h)

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

Reproductive Toxicity: May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Inhalation may damage the liver, kidneys, and central nervous system.

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Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Ingestion may damage the liver, kidneys, and central nervous system.

Chronic Symptoms: May damage fertility or the unborn child. Repeated or prolonged skin contact may cause dermatitis and defatting. Repeated or prolonged exposure to this product may damage the hematopoietic and cardiovascular systems.

Suspected of causing cancer.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

2-Ethoxyethanol (110-80-5)	
LC50 Fish 1	> 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	> 10000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	> 0.1 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
NOEC Chronic Algae	100 mg/l
Formamide (75-12-7)	
LC50 Fish 1	9135 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and Degradability

2-Ethoxyethanol (110-80-5)	
Persistence and Degradability	Readily biodegradable.

12.3. Bioaccumulative Potential

2-Ethoxyethanol (110-80-5)	
Log Pow	-0.1
Formamide (75-12-7)	
Log Pow	-0.82 (at 25 °C)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

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

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Hazard Class : 3
Identification Number : UN1171
Label Codes : 3
Packing Group : III
ERG Number : 127



14.2. In Accordance with IMDG

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Hazard Class : 3
Identification Number : UN1171
Packing Group : III
Label Codes : 3
EmS-No. (Fire) : F-E



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EmS-No. (Spillage) : S-D

14.3. In Accordance with IATA

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION

Packing Group : III

Identification Number : UN1171

Hazard Class : 3

Label Codes : 3

ERG Code (IATA) : 3L



SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

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SARA Section 311/312 Hazard Classes

Physical hazard - Flammable (gases, aerosols, liquids, or solids)
Health hazard - Acute toxicity (any route of exposure)
Health hazard - Carcinogenicity
Health hazard - Reproductive toxicity
Health hazard - Specific target organ toxicity (single or repeated exposure)

2-Ethoxyethanol (110-80-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

EPA TSCA Regulatory Flag

S - S - indicates a substance that is identified in a proposed or final Significant New Uses Rule.

CERCLA RQ

1000 lb

SARA Section 313 - Emission Reporting

1 %

Formamide (75-12-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State Regulations

2-Ethoxyethanol (110-80-5)

U.S. - California - Proposition 65 - Developmental Toxicity

WARNING: This product contains chemicals known to the State of California to cause birth defects.

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.

2-Ethoxyethanol (110-80-5)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

Formamide (75-12-7)

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, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision

: 08/16/2018

Other Information

: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Acute Tox. 3 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 2	Carcinogenicity Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 1B	Reproductive toxicity Category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2

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H226	Flammable liquid and vapor
H302	Harmful if swallowed
H331	Toxic if inhaled
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

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Revision Date: 08/16/2018 Date of Issue: 07/13/2015

Version: 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Levels 42, 43

1.2. Intended Use of the Product

Use of the Substance/Mixture: For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Jemmco, LLC

10936 N Port Washington Road

Mequon, WI 53092-5031

Phone: 262-512-9559

Fax: 262-242-0432

1.4. Emergency Telephone Number

Emergency Number : Chemtrec: 800-424-9300 – For Chemical Emergencies Only

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Flam. Liq. 3 H226

Acute Tox. 4 (Oral) H302

Acute Tox. 4 H332

(Inhalation:vapor)

Carc. 2 H351

Repr. 1B H360

STOT RE 2 H373

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

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :



GHS02



GHS07



GHS08

Signal Word (GHS-US) :

Danger

Hazard Statements (GHS-US) :

H226 - Flammable liquid and vapor.

H302+H332 - Harmful if swallowed or if inhaled.

H351 - Suspected of causing cancer.

H360 - May damage fertility or the unborn child.

H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements (GHS-US) :

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.

P233 - Keep container tightly closed.

P240 - Ground/Bond container and receiving equipment.

P241 - Use explosion-proof electrical, ventilating, and lighting equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P260 - Do not breathe vapors, mist, or spray.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves, protective clothing, and eye protection.

P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position

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comfortable for breathing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P312 - Call a poison center or doctor if you feel unwell.

P314 - Get medical advice/attention if you feel unwell.

P330 - Rinse mouth.

P370+P378 - In case of fire: Use appropriate media (see Section 5) to extinguish.

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

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Formamide	(CAS-No.) 75-12-7	71.5 - 74.7	Carc. 2, H351 Repr. 1B, H360 STOT RE 2, H373
2-Ethoxyethanol	(CAS-No.) 110-80-5	25.3 - 28.5	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation:vapor), H331 Repr. 1B, H360

Full text of H-phrases: see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Harmful if swallowed. Harmful if inhaled. May damage fertility. May damage the unborn child. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Symptoms/Injuries After Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Inhalation may damage the liver, kidneys, and central nervous system.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Ingestion may damage the liver, kidneys, and central nervous system.

Chronic Symptoms: May damage fertility or the unborn child. Repeated or prolonged skin contact may cause dermatitis and defatting. Repeated or prolonged exposure to this product may damage the hematopoietic and cardiovascular systems. Suspected of causing cancer.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

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SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid and vapor.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. May be corrosive to metals.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities:

Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen oxides. Hydrogen cyanide. Ammonia.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Eliminate ignition sources. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take precautionary measures against static discharge. Use only non-sparking tools. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups, iodine, sulfur trioxide, pyridine.

Special Rules on Packaging: Store in original container or corrosive resistant and/or lined container.

7.3. Specific End Use(s)

For professional use only.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in Section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

2-Ethoxyethanol (110-80-5)		
USA ACGIH	ACGIH TWA (ppm)	5 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA ACGIH	Biological Exposure Indices (BEI)	100 mg/g Kreatinin Parameter: 2-Ethoxyacetic acid - Medium: urine - Sampling time: end of shift at end of workweek
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1.8 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	0.5 ppm
USA IDLH	US IDLH (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	740 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	Limit value category (OSHA)	prevent or reduce skin absorption
Formamide (75-12-7)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	15 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	10 ppm

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Gas detectors should be used when toxic gases may be released.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Chemically resistant materials and fabrics.

Hand Protection

: Wear protective gloves.

Eye and Face Protection

: Chemical safety goggles.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: No data available
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: 40 °C (104 °F) (2-ethoxyethanol)
Auto-ignition Temperature	: No data available

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Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
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	: No data available
Viscosity	: No data available

9.2. Other Information

VOC Content	: 25.3 - 28.5 %
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SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Reacts violently with strong oxidizers. Increased risk of fire or explosion. May be corrosive to metals.
- 10.2. Chemical Stability:** Flammable liquid and vapor. May form flammable or explosive vapor-air mixture.
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.
- 10.5. Incompatible Materials:** May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups, iodine, sulfur trioxide, pyridine.
- 10.6. Hazardous Decomposition Products:** None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Oral: Harmful if swallowed. Inhalation:vapor: Harmful if inhaled.

Levels 42, 43	
ATE (Oral)	1,754.39 mg/kg body weight
ATE (Vapors)	10.53 mg/l/4h
2-Ethoxyethanol (110-80-5)	
LD50 Oral Rat	2800 mg/kg
LD50 Dermal Rabbit	3300 mg/kg
LC50 Inhalation Rat	15.2 mg/l/4h
LC50 Inhalation Rat	4267 ppm/4h
ATE (Oral)	500.00 mg/kg body weight
ATE (Vapors)	3.00 mg/l/4h
Formamide (75-12-7)	
LD50 Oral Rat	5577 mg/kg
LD50 Dermal Rabbit	6 g/kg
LC50 Inhalation Rat	> 3900 ppm (Exposure time: 6 h)

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

Reproductive Toxicity: May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Inhalation may damage the liver, kidneys, and central nervous system.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Ingestion may damage the liver, kidneys, and central nervous system.

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Chronic Symptoms: May damage fertility or the unborn child. Repeated or prolonged skin contact may cause dermatitis and defatting. Repeated or prolonged exposure to this product may damage the hematopoietic and cardiovascular systems. Suspected of causing cancer.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

2-Ethoxyethanol (110-80-5)	
LC50 Fish 1	> 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	> 10000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	> 0.1 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
NOEC Chronic Algae	100 mg/l
Formamide (75-12-7)	
LC50 Fish 1	9135 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and Degradability

2-Ethoxyethanol (110-80-5)	
Persistence and Degradability	Readily biodegradable.

12.3. Bioaccumulative Potential

2-Ethoxyethanol (110-80-5)	
Log Pow	-0.1
Formamide (75-12-7)	
Log Pow	-0.82 (at 25 °C)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

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

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Hazard Class : 3
Identification Number : UN1171
Label Codes : 3
Packing Group : III
ERG Number : 127



14.2. In Accordance with IMDG

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Hazard Class : 3
Identification Number : UN1171
Packing Group : III
Label Codes : 3
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D



14.3. In Accordance with IATA

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Packing Group : III

Levels 42, 43

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Identification Number : UN1171
Hazard Class : 3
Label Codes : 3
ERG Code (IATA) : 3L



SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Levels 42, 43	
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Acute toxicity (any route of exposure) Health hazard - Carcinogenicity Health hazard - Reproductive toxicity Health hazard - Specific target organ toxicity (single or repeated exposure)
2-Ethoxyethanol (110-80-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a proposed or final Significant New Uses Rule.
CERCLA RQ	1000 lb
SARA Section 313 - Emission Reporting	1 %
Formamide (75-12-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

2-Ethoxyethanol (110-80-5)	
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.
2-Ethoxyethanol (110-80-5)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	
Formamide (75-12-7)	
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, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 08/16/2018
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Acute Tox. 3 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 3
Acute Tox. 4 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 2	Carcinogenicity Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 1B	Reproductive toxicity Category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H331	Toxic if inhaled

Levels 42, 43

Safety Data Sheet

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H332	Harmful if inhaled
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

Levels 44, 45, 46, 47

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 08/16/2018 Date of Issue: 07/14/2015

Version: 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Levels 44, 45, 46, 47

1.2. Intended Use of the Product

Use of the Substance/Mixture: For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Jemmco, LLC
10936 N Port Washington Road
Mequon, WI 53092-5031
Phone: 262-512-9559
Fax: 262-242-0432

1.4. Emergency Telephone Number

Emergency Number : Chemtrec: 800-424-9300 – For Chemical Emergencies Only

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Flam. Liq. 3	H226
Acute Tox. 4 (Inhalation:vapor)	H332
Carc. 2	H351
Repr. 1B	H360
STOT RE 2	H373

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

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :



Signal Word (GHS-US) :

Hazard Statements (GHS-US) :

Precautionary Statements (GHS-US) :

- : Danger
- : H226 - Flammable liquid and vapor.
H332 - Harmful if inhaled.
H351 - Suspected of causing cancer.
H360 - May damage fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
- : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapors, mist, or spray.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, and eye protection.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a poison center or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.

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P370+P378 - In case of fire: Use appropriate media (see Section 5) to extinguish.

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

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Formamide	(CAS-No.) 75-12-7	78 - 85	Carc. 2, H351 Repr. 1B, H360 STOT RE 2, H373
2-Ethoxyethanol	(CAS-No.) 110-80-5	15 - 22	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation:vapor), H331 Repr. 1B, H360

Full text of H-phrases: see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Harmful if inhaled. May damage fertility. May damage the unborn child. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Symptoms/Injuries After Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Inhalation may damage the liver, kidneys, and central nervous system.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. Ingestion may damage the liver, kidneys, and central nervous system.

Chronic Symptoms: May damage fertility or the unborn child. Repeated or prolonged skin contact may cause dermatitis and defatting. Repeated or prolonged exposure to this product may damage the hematopoietic and cardiovascular systems. Suspected of causing cancer.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

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5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid and vapor.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. May be corrosive to metals.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen oxides. Hydrogen cyanide. Ammonia.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Eliminate ignition sources. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take precautionary measures against static discharge. Use only non-sparking tools. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups, iodine, sulfur trioxide, pyridine.

Special Rules on Packaging: Store in original container or corrosive resistant and/or lined container.

7.3. Specific End Use(s)

For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in Section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

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2-Ethoxyethanol (110-80-5)		
USA ACGIH	ACGIH TWA (ppm)	5 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA ACGIH	Biological Exposure Indices (BEI)	100 mg/g Kreatinin Parameter: 2-Ethoxyacetic acid - Medium: urine - Sampling time: end of shift at end of workweek
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1.8 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	0.5 ppm
USA IDLH	US IDLH (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	740 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	Limit value category (OSHA)	prevent or reduce skin absorption
Formamide (75-12-7)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	15 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	10 ppm

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Gas detectors should be used when toxic gases may be released.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Chemically resistant materials and fabrics.

Hand Protection

: Wear protective gloves.

Eye and Face Protection

: Chemical safety goggles.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: No data available
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: 40 °C (104 °F) (2-ethoxyethanol)
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available

Levels 44, 45, 46, 47

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative Density	: No data available
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information

VOC Content	: 15 - 22 %
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SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Reacts violently with strong oxidizers. Increased risk of fire or explosion. May be corrosive to metals.
- 10.2. Chemical Stability:** Flammable liquid and vapor. May form flammable or explosive vapor-air mixture.
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.
- 10.5. Incompatible Materials:** May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups, iodine, sulfur trioxide, pyridine.
- 10.6. Hazardous Decomposition Products:** None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Inhalation:vapor: Harmful if inhaled.

Levels 44, 45, 46, 47	
ATE (Vapors)	13.64 mg/l/4h
2-Ethoxyethanol (110-80-5)	
LD50 Oral Rat	2800 mg/kg
LD50 Dermal Rabbit	3300 mg/kg
LC50 Inhalation Rat	15.2 mg/l/4h
LC50 Inhalation Rat	4267 ppm/4h
ATE (Oral)	500.00 mg/kg body weight
ATE (Vapors)	3.00 mg/l/4h
Formamide (75-12-7)	
LD50 Oral Rat	5577 mg/kg
LD50 Dermal Rabbit	6 g/kg
LC50 Inhalation Rat	> 3900 ppm (Exposure time: 6 h)

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

Reproductive Toxicity: May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Inhalation may damage the liver, kidneys, and central nervous system.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. Ingestion may damage the liver, kidneys, and central nervous system.

Chronic Symptoms: May damage fertility or the unborn child. Repeated or prolonged skin contact may cause dermatitis and defatting. Repeated or prolonged exposure to this product may damage the hematopoietic and cardiovascular systems.

Suspected of causing cancer.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General	: Not classified.
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Levels 44, 45, 46, 47

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2-Ethoxyethanol (110-80-5)	
LC50 Fish 1	> 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	> 10000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	> 0.1 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
NOEC Chronic Algae	100 mg/l
Formamide (75-12-7)	
LC50 Fish 1	9135 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and Degradability

2-Ethoxyethanol (110-80-5)	
Persistence and Degradability	Readily biodegradable.

12.3. Bioaccumulative Potential

2-Ethoxyethanol (110-80-5)	
Log Pow	-0.1
Formamide (75-12-7)	
Log Pow	-0.82 (at 25 °C)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

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

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Hazard Class : 3
Identification Number : UN1171
Label Codes : 3
Packing Group : III
ERG Number : 127



14.2. In Accordance with IMDG

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Hazard Class : 3
Identification Number : UN1171
Packing Group : III
Label Codes : 3
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D



14.3. In Accordance with IATA

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Packing Group : III
Identification Number : UN1171
Hazard Class : 3
Label Codes : 3
ERG Code (IATA) : 3L



Levels 44, 45, 46, 47

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Levels 44, 45, 46, 47	
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Acute toxicity (any route of exposure) Health hazard - Carcinogenicity Health hazard - Reproductive toxicity Health hazard - Specific target organ toxicity (single or repeated exposure)
2-Ethoxyethanol (110-80-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a proposed or final Significant New Uses Rule.
CERCLA RQ	1000 lb
SARA Section 313 - Emission Reporting	1 %
Formamide (75-12-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

2-Ethoxyethanol (110-80-5)	
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.
2-Ethoxyethanol (110-80-5)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	
Formamide (75-12-7)	
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, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision	: 08/16/2018
Other Information	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Acute Tox. 3 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 3
Acute Tox. 4 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 2	Carcinogenicity Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 1B	Reproductive toxicity Category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H331	Toxic if inhaled
H332	Harmful if inhaled
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child

Levels 44, 45, 46, 47

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H373	May cause damage to organs through prolonged or repeated exposure
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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

Levels 48, 49, 50, 51, 52, 53, 54, 55, 56

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Revision Date: 08/16/2018

Date of Issue: 07/20/2015

Version: 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Levels 48, 49, 50, 51, 52, 53, 54, 55, 56

1.2. Intended Use of the Product

Use of the Substance/Mixture: For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Jemmco, LLC

10936 N Port Washington Road

Mequon, WI 53092-5031

Phone: 262-512-9559

Fax: 262-242-0432

1.4. Emergency Telephone Number

Emergency Number : Chemtrec: 800-424-9300 – For Chemical Emergencies Only

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Flam. Liq. 3 H226

Carc. 2 H351

Repr. 1B H360

STOT RE 2 H373

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

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H226 - Flammable liquid and vapor.
H351 - Suspected of causing cancer.
H360 - May damage fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements (GHS-US)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapors, mist, or spray.
P280 - Wear protective gloves, protective clothing, and eye protection.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P370+P378 - In case of fire: Use appropriate media (see Section 5) to extinguish.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.
P403+P233+P235 - Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Levels 48, 49, 50, 51, 52, 53, 54, 55, 56

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2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Formamide	(CAS-No.) 75-12-7	87 - 99	Carc. 2, H351 Repr. 1B, H360 STOT RE 2, H373
2-Ethoxyethanol	(CAS-No.) 110-80-5	1 - 13	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation:vapor), H331 Repr. 1B, H360

Full text of H-phrases: see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Suspected of causing cancer. May damage fertility. May damage the unborn child. May cause damage to organs through prolonged or repeated exposure.

Symptoms/Injuries After Inhalation: May be harmful if inhaled. Symptoms may include: Drowsiness. Nausea. Weakness. Headache. Blurred vision. Inhalation may damage the liver, kidneys, and central nervous system.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. Ingestion may damage the liver, kidneys, and central nervous system.

Chronic Symptoms: May damage fertility or the unborn child. Repeated or prolonged skin contact may cause dermatitis and defatting. Repeated or prolonged exposure to this product may damage the hematopoietic and cardiovascular systems. Suspected of causing cancer.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid and vapor.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. May be corrosive to metals.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

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Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen oxides. Hydrogen cyanide. Ammonia.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Eliminate ignition sources.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take precautionary measures against static discharge. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, spray. Avoid contact with skin, eyes and clothing. Avoid contact with skin, eyes and clothing.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups, iodine, sulfur trioxide, pyridine.

Special Rules on Packaging: Store in original container or corrosive resistant and/or lined container.

7.3. Specific End Use(s)

For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in Section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

2-Ethoxyethanol (110-80-5)		
USA ACGIH	ACGIH TWA (ppm)	5 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA ACGIH	Biological Exposure Indices (BEI)	100 mg/g Kreatinin Parameter: 2-Ethoxyacetic acid - Medium: urine - Sampling time: end of shift at end of workweek
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1.8 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	0.5 ppm

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USA IDLH	US IDLH (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	740 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	Limit value category (OSHA)	prevent or reduce skin absorption
Formamide (75-12-7)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	15 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	10 ppm

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

Hand Protection

: Chemically resistant materials and fabrics.

Eye and Face Protection

: Wear protective gloves.

Skin and Body Protection

: Chemical safety goggles.

Respiratory Protection

: Wear suitable protective clothing.

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: No data available
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: 40 °C (104 °F) (2-ethoxyethanol)
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
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	: No data available
Viscosity	: No data available

9.2. Other Information

VOC Content	: 1 - 13 %
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Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Reacts violently with strong oxidizers. Increased risk of fire or explosion. May be corrosive to metals.
- 10.2. Chemical Stability:** Flammable liquid and vapor. May form flammable or explosive vapor-air mixture.
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.
- 10.5. Incompatible Materials:** May react violently with reducing agents, strong oxidants, acids, alkali metals, alkaline-earth metals, substances with highly reactive hydroxyl groups, iodine, sulfur trioxide, pyridine.
- 10.6. Hazardous Decomposition Products:** None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Not classified

2-Ethoxyethanol (110-80-5)	
LD50 Oral Rat	2800 mg/kg
LD50 Dermal Rabbit	3300 mg/kg
LC50 Inhalation Rat	15.2 mg/l/4h
LC50 Inhalation Rat	4267 ppm/4h
ATE (Oral)	500.00 mg/kg body weight
ATE (Vapors)	3.00 mg/l/4h
Formamide (75-12-7)	
LD50 Oral Rat	5577 mg/kg
LD50 Dermal Rabbit	6 g/kg
LC50 Inhalation Rat	> 3900 ppm (Exposure time: 6 h)

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

Reproductive Toxicity: May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May be harmful if inhaled. Symptoms may include: Drowsiness. Nausea. Weakness.

Headache. Blurred vision. Inhalation may damage the liver, kidneys, and central nervous system.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. Ingestion may damage the liver, kidneys, and central nervous system.

Chronic Symptoms: May damage fertility or the unborn child. Repeated or prolonged skin contact may cause dermatitis and defatting. Repeated or prolonged exposure to this product may damage the hematopoietic and cardiovascular systems.

Suspected of causing cancer.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

2-Ethoxyethanol (110-80-5)	
LC50 Fish 1	> 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	> 10000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	> 0.1 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
NOEC Chronic Algae	100 mg/l
Formamide (75-12-7)	
LC50 Fish 1	9135 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)

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12.2. Persistence and Degradability

2-Ethoxyethanol (110-80-5)	
Persistence and Degradability	Readily biodegradable.

12.3. Bioaccumulative Potential

2-Ethoxyethanol (110-80-5)	
Log Pow	-0.1
Formamide (75-12-7)	
Log Pow	-0.82 (at 25 °C)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

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

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Hazard Class : 3
Identification Number : UN1171
Label Codes : 3
Packing Group : III
ERG Number : 127



14.2. In Accordance with IMDG

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Hazard Class : 3
Identification Number : UN1171
Packing Group : III
Label Codes : 3
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D



14.3. In Accordance with IATA

Proper Shipping Name : ETHYLENE GLYCOL MONOETHYL ETHER SOLUTION
Packing Group : III
Identification Number : UN1171
Hazard Class : 3
Label Codes : 3
ERG Code (IATA) : 3L



SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Levels 48, 49, 50, 51, 52, 53, 54, 55, 56	
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Carcinogenicity Health hazard - Reproductive toxicity Health hazard - Specific target organ toxicity (single or repeated exposure)
2-Ethoxyethanol (110-80-5)	

Levels 48, 49, 50, 51, 52, 53, 54, 55, 56

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Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a proposed or final Significant New Uses Rule.
CERCLA RQ	1000 lb
SARA Section 313 - Emission Reporting	1 %
Formamide (75-12-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

2-Ethoxyethanol (110-80-5)	
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.
2-Ethoxyethanol (110-80-5)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	
Formamide (75-12-7)	
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, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision	: 08/16/2018
Other Information	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Acute Tox. 3 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 2	Carcinogenicity Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 1B	Reproductive toxicity Category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H331	Toxic if inhaled
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

Levels 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70

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Revision Date: 08/16/2018 Date of Issue: 07/15/2015

Version: 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Levels 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70

1.2. Intended Use of the Product

Use of the Substance/Mixture: For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Jemmco, LLC
10936 N Port Washington Road
Mequon, WI 53092-5031
Phone: 262-512-9559
Fax: 262-242-0432

1.4. Emergency Telephone Number

Emergency Number : Chemtrec: 800-424-9300 – For Chemical Emergencies Only

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Carc. 2 H351
Repr. 1B H360
STOT RE 2 H373

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

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :



GHS08

Signal Word (GHS-US) :

Danger

Hazard Statements (GHS-US) :

H351 - Suspected of causing cancer.
H360 - May damage fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe vapors, mist, or spray.
P280 - Wear protective gloves, protective clothing, and eye protection.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

Precautionary Statements (GHS-US) :

2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Formamide	(CAS-No.) 75-12-7	3.6 - 100	Carc. 2, H351 Repr. 1B, H360 STOT RE 2, H373
Water	(CAS-No.) 7732-18-5	< 96.4	Not classified

Full text of H-phrases: see Section 16.

Levels 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70

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SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Suspected of causing cancer. May damage fertility. May damage the unborn child. May cause damage to organs through prolonged or repeated exposure.

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Repeated or prolonged exposure to this product may damage the hematopoietic or cardiovascular systems. May damage fertility or the unborn child. Suspected of causing cancer.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: May be corrosive to metals.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Hydrogen cyanide. Ammonia. Nitrogen oxides.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray. Avoid all contact with skin, eyes, or clothing.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

Levels 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers, iodine, pyridine, sulfur trioxide.

Special Rules on Packaging: Store in original container or corrosive resistant and/or lined container.

7.3. Specific End Use(s)

For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in Section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Formamide (75-12-7)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	15 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	10 ppm

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Chemically resistant materials and fabrics.

Hand Protection

: Wear protective gloves.

Eye and Face Protection

: Chemical safety goggles.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: No data available
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available

Levels 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
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	: No data available
Viscosity	: No data available

9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

- 10.1. **Reactivity:** May be corrosive to metals.
- 10.2. **Chemical Stability:** Stable under recommended handling and storage conditions (see Section 7).
- 10.3. **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. **Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. **Incompatible Materials:** Strong acids, strong bases, strong oxidizers, iodine, pyridine, sulfur trioxide.
- 10.6. **Hazardous Decomposition Products:** None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Not classified

Formamide (75-12-7)	
LD50 Oral Rat	5577 mg/kg
LD50 Dermal Rabbit	6 g/kg
LC50 Inhalation Rat	> 3900 ppm (Exposure time: 6 h)

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

Reproductive Toxicity: May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Repeated or prolonged exposure to this product may damage the hematopoietic or cardiovascular systems.
May damage fertility or the unborn child. Suspected of causing cancer.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

Formamide (75-12-7)	
LC50 Fish 1	9135 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and Degradability

No additional information available

12.3. Bioaccumulative Potential

Formamide (75-12-7)	
Log Pow	-0.82 (at 25 °C)

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Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information

: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

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

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Levels 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70

SARA Section 311/312 Hazard Classes

Health hazard - Specific target organ toxicity (single or repeated exposure)
Health hazard - Carcinogenicity
Health hazard - Reproductive toxicity

Formamide (75-12-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State Regulations

Formamide (75-12-7)

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, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision

: 08/16/2018

Other Information

: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Carc. 2	Carcinogenicity Category 2
Repr. 1B	Reproductive toxicity Category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

Jemmco, LLC

GHS Label - Dyne

Dyne Level 30



H226:	Flammable liquid and vapor
H302:	Harmful if swallowed
H331:	Toxic if inhaled
H360:	May damage fertility or the unborn child
P201:	Obtain special instructions before use.
P202:	Do not handle until all safety precautions have been read and understood.
P210:	Keep away from extremely high or low temperatures, ignition sources, and incompatible materials.- No smoking.
P240:	Ground/bond container and receiving equipment.
P241:	Use explosion-proof electrical, ventilating, and lighting equipment.
P242:	Use only non-sparking tools.
P243:	Take precautionary measures against static discharge.
P261:	Avoid breathing vapors, mist, or spray.
P264:	Wash hands, forearms, and other exposed areas thoroughly after handling.
P270:	Do not eat, drink or smoke when using this product.
P271:	Use only outdoors or in a well-ventilated area.
P280:	Wear protective gloves, protective clothing, and eye protection.
P301+P312:	If swallowed: Call a poison center or doctor if you feel unwell.
P303+P361+	
P353:	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340:	If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P308+P313:	If exposed or concerned: Get medical advice/attention.
P311:	Call a poison center or doctor.
P330:	Rinse mouth.
P370+P378:	In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder, water to extinguish.
P403+P233+	
P235:	Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Dyne Level 42, 43



H226:	Flammable liquid and vapor
H302+H332:	Harmful if swallowed or if inhaled
H351:	Suspected of causing cancer
H360:	May damage fertility or the unborn child
H373:	May cause damage to organs through prolonged or repeated exposure
P201:	Obtain special instructions before use.
P202:	Do not handle until all safety precautions have been read and understood.
P210:	Keep away from extremely high or low temperatures, ignition sources, and incompatible materials.- No smoking.
P233:	Keep container tightly closed.
P240:	Ground/bond container and receiving equipment.
P241:	Use explosion-proof electrical, ventilating, and lighting equipment.
P242:	Use only non-sparking tools.
P243:	Take precautionary measures against static discharge.
P260:	Do not breathe vapors, mist, or spray.
P264:	Wash hands, forearms, and other exposed areas thoroughly after handling.
P270:	Do not eat, drink or smoke when using this product.
P271:	Use only outdoors or in a well-ventilated area.
P280:	Wear protective gloves, protective clothing, and eye protection.
P301+P312:	If swallowed: Call a poison center or doctor if you feel unwell.
P303+P361+	
P353:	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340:	If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P312:	Call a poison center or doctor if you feel unwell.
P330:	Rinse mouth.
P370+P378:	In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder, water to extinguish.
P403+P235:	Store in a well-ventilated place. Keep cool.

Dyne Level 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41



H226:	Flammable liquid and vapor
H302:	Harmful if swallowed
H331:	Toxic if inhaled
H351:	Suspected of causing cancer
H360:	May damage fertility or the unborn child
H373:	May cause damage to organs through prolonged or repeated exposure
P201:	Obtain special instructions before use.
P202:	Do not handle until all safety precautions have been read and understood.
P210:	Keep away from extremely high or low temperatures, ignition sources, and incompatible materials.- No smoking.
P233:	Keep container tightly closed.
P240:	Ground/bond container and receiving equipment.
P241:	Use explosion-proof electrical, ventilating, and lighting equipment.
P242:	Use only non-sparking tools.
P243:	Take precautionary measures against static discharge.
P260:	Do not breathe vapors, mist, or spray.
P264:	Wash hands, forearms, and other exposed areas thoroughly after handling.
P270:	Do not eat, drink or smoke when using this product.
P271:	Use only outdoors or in a well-ventilated area.
P280:	Wear protective gloves, protective clothing, and eye protection.
P301+P312:	If swallowed: Call a poison center or doctor if you feel unwell.
P303+P361+	
P353:	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340:	If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P308+P313:	If exposed or concerned: Get medical advice/attention.
P311:	Call a poison center or doctor.
P314:	Get medical advice/attention if you feel unwell.
P330:	Rinse mouth.
P370+P378:	In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder, water to extinguish.
P403+P233+	
P235:	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405 :	Store locked up.

Dyne Level 44, 45, 46, 47



H226:	Flammable liquid and vapor
H332:	Harmful if inhaled
H351:	Suspected of causing cancer
H360:	May damage fertility or the unborn child
H373:	May cause damage to organs through prolonged or repeated exposure
P201:	Obtain special instructions before use.
P202:	Do not handle until all safety precautions have been read and understood.
P210:	Keep away from extremely high or low temperatures, ignition sources, and incompatible materials.- No smoking.
P233:	Keep container tightly closed.
P240:	Ground/bond container and receiving equipment.
P241:	Use explosion-proof electrical, ventilating, and lighting equipment.
P242:	Use only non-sparking tools.
P243:	Take precautionary measures against static discharge.
P260:	Do not breathe vapors, mist, or spray.
P271:	Use only outdoors or in a well-ventilated area.
P280:	Wear protective gloves, protective clothing, and eye protection.
P303+P361+	
P353:	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P34:	If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P312:	Call a poison center or doctor if you feel unwell.
P370+P378:	In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder, water to extinguish.
P403+P235:	Store in a well-ventilated place. Keep cool.
P405:	Store locked up.

Jemmco, LLC

GHS Label - Dyne

Dyne Level 48, 49, 50, 51, 52, 53, 54, 55, 56



H226: Flammable liquid and vapor
H351: Suspected of causing cancer
H360: May damage fertility or the unborn child
H373: May cause damage to organs through prolonged or repeated exposure
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from extremely high or low temperatures, ignition sources, and incompatible materials.- No smoking.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilating, and lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe vapors, mist, or spray.
P280: Wear protective gloves, protective clothing, and eye protection.
P303+P361+
P353: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P308+P313: If exposed or concerned: Get medical advice/attention.
P314: Get medical advice/attention if you feel unwell.
P370+P378: In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder, water to extinguish.
P403+P233+
P235: Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Dyne Level 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70



H351: Suspected of causing cancer
H360: May damage fertility or the unborn child
H373: May cause damage to organs through prolonged or repeated exposure
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe vapors, mist, or spray.
P280: Wear protective gloves, protective clothing, and eye protection.
P308+P313: If exposed or concerned: Get medical advice/attention.
P314: Get medical advice/attention if you feel unwell.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local, regional, national, and international regulations.