

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** KOVA® Stain

**Product Component:** 87116, 87116E

### 1.2. Intended Use of the Product

**Use of the Substance/Mixture:** In vitro diagnostic device

### 1.3. Name, Address, and Telephone of Manufacturer/Supplier

Kova International, Inc.

7272 Chapman Avenue, Suite B

Garden Grove, CA 92841

Tel: 1-714-902-1700

Fax: 1-714-908-7945

Business hours: (8:00 a.m. - 5:00 p.m., PST, Monday - Friday)

### 1.4. Emergency Telephone Number

**Emergency Number** : Contact your local Poison Center.

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

#### GHS-US Classification

Flam. Liq. 3 H226

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

### 2.2. Label Elements

#### GHS-US Labeling

#### Hazard Pictograms (GHS-US)

:



GHS02

#### Signal Word (GHS-US)

: Warning

#### Hazard Statements (GHS-US)

: H226 - Flammable liquid and vapor.

#### Precautionary Statements (GHS-US)

: 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.  
 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.  
 P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.  
 P403+P235 - Store in a well-ventilated place. Keep cool.  
 P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. This material or its emissions may defat skin, cause contact dermatitis, or aggravate existing skin disease.

### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

**3.2. Mixture**

Name	Product Identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5	82.056	Not classified
Glycerin	(CAS No) 56-81-5	9.09	Not classified
Ethyl alcohol	(CAS No) 64-17-5	8.55	Flam. Liq. 2, H225 Eye Irrit. 2A, H319
Phenazinium, 3,7-diamino-2,8-dimethyl-5-phenyl-, chloride	(CAS No) 477-73-6	0.2	Eye Dam. 1, H318
C.I. Basic Violet 3	(CAS No) 548-62-9	0.082	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Carc. 1B, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Ethanedioic acid, diammonium salt, monohydrate	(CAS No) 6009-70-7	0.022	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Eye Dam. 1, H318

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:** Not expected to present a significant hazard under anticipated conditions of normal use.

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

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation. Repeated or prolonged skin contact may cause dermatitis and defatting.

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

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

**Chronic Symptoms:** None known.

**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 (CO<sub>2</sub>). 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.

**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. Remove containers from fire area if this can be done without risk. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Do not breathe fumes from fires or vapors from decomposition.

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

**Hazardous Combustion Products:** Thermal decomposition generates: Carbon oxides (CO, CO<sub>2</sub>). Hydrocarbons. Nitrogen oxides. Hydrogen chloride.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid breathing (vapor, mist, spray). 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.

**6.1.1. For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection 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. Eliminate ignition sources. Ventilate area.

**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. 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. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

**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:** Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, and spray. Take precautionary measures against static discharge. Use only non-sparking tools.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash contaminated clothing before reuse.

**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 and well-ventilated place. Keep container tightly closed and away from combustible materials. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Keep in fireproof place.

**Incompatible Products:** Strong acids, strong bases, strong oxidizers. Alkalis. Metals. Combustible materials. Strong mineral acids. Water reactive materials.

**Storage Temperature:** 20 - 29 °C (68 to 84.2°F)

**7.3. Specific End Use(s)**

In vitro diagnostic device

**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).

<b>Ethyl alcohol (64-17-5)</b>		
<b>USA ACGIH</b>	ACGIH STEL (ppm)	1000 ppm
<b>USA ACGIH</b>	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL (TWA) (ppm)	1000 ppm
<b>USA IDLH</b>	US IDLH (ppm)	3300 ppm (10% LEL)
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
<b>USA OSHA</b>	OSHA PEL (TWA) (ppm)	1000 ppm
<b>Glycerin (56-81-5)</b>		
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (mist, total particulate)

5 mg/m<sup>3</sup> (mist, respirable fraction)

**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. 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. Local exhaust and general ventilation must be adequate to meet exposure standards. Site-specific risk assessments should be conducted to determine the appropriate exposure control measures. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. 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. Wear fire/flamm resistant/retardant clothing.

**Hand Protection**

: Wear protective gloves.

**Eye Protection**

: Chemical safety goggles.

**Skin and Body Protection**

: Wear suitable protective clothing. In laboratory, medical or industrial settings, impervious disposable gloves and protective clothing are recommended if skin contact is possible.

**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.

**Environmental Exposure Controls**

: Avoid release to the environment.

**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 : Purple, dark
- Odor : Slight alcohol
- Odor Threshold : No data available
- pH : 5 - 7
- 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
- Decomposition Temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor Pressure : No data available
- Relative Vapor Density at 20°C : 0.62
- Relative Density : No data available
- Solubility : Soluble in water. Soluble in methanol.
- 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:** 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:** Strong acids, strong bases, strong oxidizers. Combustible materials. Water reactive materials. Alkalis. Strong mineral acids. Metals.

**10.6. Hazardous Decomposition Products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects

**Acute Toxicity:** Not classified

<b>Ethyl alcohol (64-17-5)</b>	
LD50 Oral Rat	10470 mg/kg
LD50 Dermal Rat	20 ml/kg
LC50 Inhalation Rat	124.7 mg/l/4h
<b>Glycerin (56-81-5)</b>	
LD50 Oral Rat	23000 mg/kg
LD50 Dermal Rabbit	> 10 g/kg
LC50 Inhalation Rat	> 570 mg/m <sup>3</sup> (Exposure time: 1 h)
<b>C.I. Basic Violet 3 (548-62-9)</b>	
LD50 Oral Rat	420 mg/kg
<b>Ethanedioic acid, diammonium salt, monohydrate (6009-70-7)</b>	
ATE (Oral)	500.00 mg/kg body weight
ATE (Dermal)	1,100.00 mg/kg body weight

**Skin Corrosion/Irritation:** Not classified

pH: 5 - 7

**Serious Eye Damage/Irritation:** Not classified.

pH: 5 - 7

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

<b>Ethyl alcohol (64-17-5)</b>	
IARC group	1
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Aspiration Hazard:** Not classified

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

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation. Repeated or prolonged skin contact may cause dermatitis and defatting.

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

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

**Chronic Symptoms:** None known.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General** : Not classified.

<b>Ethyl alcohol (64-17-5)</b>	
EC50 Daphnia 1	9268 - 14221 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
ErC50 (Algae)	1000 mg/l
<b>Glycerin (56-81-5)</b>	
LC50 Fish 1	54000 (51000 - 57000) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

**12.2. Persistence and Degradability**

KOVA® Stain	
Persistence and Degradability	Not established.
Ethyl alcohol (64-17-5)	
Persistence and Degradability	Readily biodegradable.

**12.3. Bioaccumulative Potential**

KOVA® Stain	
Bioaccumulative Potential	Not established.
Ethyl alcohol (64-17-5)	
Log Pow	-0.32
Bioaccumulative Potential	Not established.
Glycerin (56-81-5)	
BCF Fish 1	(no bioaccumulation)
Log Pow	-1.76

**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 : ETHANOL SOLUTIONS  
 Hazard Class : 3  
 Identification Number : UN1170  
 Label Codes : 3  
 Packing Group : III  
 ERG Number : 127



**14.2. In Accordance with IMDG**

Proper Shipping Name : ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)  
 Hazard Class : 3  
 Identification Number : UN1170  
 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 : ETHANOL SOLUTION  
 Packing Group : III  
 Identification Number : UN1170  
 Hazard Class : 3  
 Label Codes : 3  
 ERG Code (IATA) : 3L



**SECTION 15: REGULATORY INFORMATION**

**15.1. US Federal Regulations**

KOVA® Stain	
SARA Section 311/312 Hazard Classes	Fire hazard
Ethyl alcohol (64-17-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

<b>Glycerin (56-81-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>C.I. Basic Violet 3 (548-62-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Phenazinium, 3,7-diamino-2,8-dimethyl-5-phenyl-, chloride (477-73-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Ethanedioic acid, diammonium salt, monohydrate (6009-70-7)</b>	
<b>CERCLA RQ</b>	5000 lb listed under Ammonium oxalate
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

**15.2. US State Regulations**

<b>Ethyl alcohol (64-17-5)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer. Ethyl Alcohol is included on the Proposition 65 list when it is used in alcoholic beverages.
<b>U.S. - California - Proposition 65 - Developmental Toxicity</b>	WARNING: This product contains chemicals known to the State of California to cause birth defects. Ethyl Alcohol is included on the Proposition 65 list when it is used in alcoholic beverages.
<b>Ethyl alcohol (64-17-5)</b>	
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	
<b>Glycerin (56-81-5)</b>	
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	
<b>Ethanedioic acid, diammonium salt, monohydrate (6009-70-7)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	

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

<b>Revision Date</b>	: 09/16/2016
<b>Other Information</b>	: 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. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Carc. 1B	Carcinogenicity Category 1B
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation
H350	May cause cancer

H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

*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)