

MATERIAL SAFETY DATA SHEET

EM SCIENCE

**|1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

---

**Manufacturer.....:**

EM SCIENCE  
A Division of EM Industries  
P.O. Box 70  
480 Democrat Road  
Gibbstown, N.J. 08027

**Preparation Date.:** 10/19/99

**Information Phone Number.:** 856-423-6300

**Hours:** Mon. to Fri. 8:30-5

**Chemtrec Emergency Number:** 800-424-9300

**Hours:** 24 hrs a day

---

Phenol

108-95-2

0-1%

Denatured ethyl alcohol contains methanol but its concentration for this product is less than 1%.  
Approx. % as wt/vol

### 3. HAZARDS IDENTIFICATION

---

#### **EMERGENCY OVERVIEW**

FLAMMABLE LIQUID AND VAPOR.

HARMFUL IF INHALED, SWALLOWED OR ABSORBED THROUGH SKIN.

IRRITATING TO SKIN, EYES AND MUCOUS MEMBRANES.

MAY CAUSE EYE INJURY.

#### **Appearance:**

Violet or red liquid

#### **POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)**

#### **Symptoms of Exposure:**

Harmful if inhaled, swallowed, or absorbed through the skin. Contains Phenol (less than 1%) which is toxic and causes burns in concentrated form. Diluted phenol in this solution is expected to cause irritation to the eyes and skin. Eye contact may result in more serious injury depending on the extent of exposure.

#### **Medical Cond. Aggravated by Exposure:**

None found

#### **Routes of Entry:**

Inhalation, ingestion or skin contact.

#### **Carcinogenicity:**

The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

### 4. FIRST AID MEASURES

---

#### **Emergency First Aid:**

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.

Skin: Wash thoroughly with soap and water.

Eyes: Immediately flush thoroughly with water for at least 15 minutes.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.

Ingestion: If conscious, drink water and induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

## 5. FIRE FIGHTING MEASURES

---

**Flash Point (F):** 97F

**Flammable Limits LEL (%):** N/A

**Flammable Limits UEL (%):** N/A

**Extinguishing Media:**

Use water spray, foam, dry chemical, or CO<sub>2</sub>.

**Fire Fighting Procedures:**

Wear self-contained breathing apparatus.

**Fire & Explosion Hazards:**

Moderate fire hazard.

**4 rMohe fire hazyENTAL RELj 0E**

---

Use waterrd.

---

---



## 10. STABILITY AND REACTIVITY

---

**Stability:** Yes

**Hazardous Polymerization:**

Does not occur

**Hazardous Decomposition:**

CO<sub>x</sub>, Formaldehyde, Cl

**Conditions to Avoid:**

Heat; contact with ignition source.

**Materials To Avoid:**

- Water
- Acids
- Bases
- Corrosives
- Oxidizers
- Other: Reactive metals

## 11. TOXICOLOGICAL INFORMATION

---

**Toxicity Data**

None established

**Toxicological Findings:**

None

Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

## 12. DISPOSAL CONSIDERATIONS

---

**EPA Waste Numbers:** D001 U188

**Treatment:**

Incineration, fuels blending or recycle. Contact your local permitted waste disposal site (TSD) for permissible treatment sites.

ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

## 13. TRANSPORT INFORMATION

---

**DOT Proper Shipping Name:**

Flammable Liquid, n.o.s. (Contains Ethanol, Methanol)

**DOT ID Number :**

UN1993

---

**14. REGULATORY INFORMATION**

---

**TSCA Statement:**

This product is a "Mixture". The CAS numbers of all components are listed on the TSCA Inventory.

Component	SARA EHS (302)	SARA EHS TPQ (lbs)	CERCLA RQ (lbs)
-----------	----------------------	--------------------------	-----------------------

---

Water

Crystal Violet

Ethyl Alcohol

Phenol

Y

500/10000

1000

Component	OSHA Floor List	SARA 313	DeMinimis for SARA 313 (%)
-----------	--------------------	-------------	----------------------------------

---

Water

Crystal Violet

Ethyl Alcohol

Y

Phenol

Y

Y

1.0

If there is no information listed on the regulatory information chart, this indicates that the chemical is not covered by the specific regulation listed.

---

**15. OTHER INFORMATION**

---

**Comments:**

None

**NFPA Hazard Ratings:**

Health : 1  
Flammability : 2  
Reactivity : 0  
Special Hazards :

**Revision History:** 10/9/97

| = Revised Section

N/A = Not Available

N/E = None Established

The statements contained herein are offered for informational purposes only and are based upon technical data that EM Science believes to be accurate. It is intended for use only by persons having the necessary technical skill and at their own discretion and risk. Since conditions and manner of use are outside our control, we make NO WARRANTY, EXPRESS OR IMPLIED, OR MERCHANTABILITY, FITNESS OR OTHERWISE.

---

## MATERIAL SAFETY DATA SHEET

### EM SCIENCE

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

---

**Manufacturer.....:**

EM SCIENCE  
A Division of EM Industries  
P.O. Box 70  
480 Democrat Road  
Gibbstown, N.J. 08027

**Preparation Date.:** 10/6/97

**Information Phone Number.:** 856-423-6300

**Hours:** Mon. to Fri. 8:30-5

**Chemtrec Emergency Number:** 800-424-9300

**Hours:** 24 hrs a day

**Catalog Number(s):**

65092B

**Product Name:**

Safranin Stain

**Synonyms:**

None

**Chemical Family:**

Solution

**Formula:**

Solution

**Molecular Weight.:**

N/A

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

---

Component	CAS #	Appr %
Methanol	67-56-1	0-5%
Ethyl Alcohol	64-17-5	10-30%
Water	7732-18-5	70-90%
Safranin O	477-73-6	0-1%

Approx. % as wt/vol

**3. HAZARDS IDENTIFICATION**

---

**EMERGENCY OVERVIEW**

FLAMMABLE LIQUID AND VAPOR.

VAPOR HARMFUL.

MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED.

CANNOT BE MADE NON-POISONOUS.

May Cause Damage To Lungs and Central Nervous System.

ABSORPTION THROUGH SKIN HARMFUL.

**Appearance:**

Red liquid

**POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)****Symptoms of Exposure:**

Contains Methanol which is toxic by ingestion and inhalation. Can be toxic by skin absorption. After ingestion or inhalation, initial symptoms may be only that of mild intoxication, but may become severe after 12 to 18 hours. Affects central nervous system, especially optic nerve. Marked impairment of vision and enlargement of the liver has been reported with chronic exposure. Chronic exposure may also cause damage to kidneys and Central Nervous System. Causes dizziness, nausea, muscle weakness, narcosis, respiratory failure. Ingestion of methanol can produce blindness (100 ml can be fatal). Fetal development abnormalities and effects on embryo or fetus have been reported from prolonged exposure to methyl alcohol in laboratory



tests involving pregnant rats.

**Medical Cond. Aggravated by Exposure:**

Impaired liver or kidney function.

**Routes of Entry:**

Inhalation, ingestion or skin contact.

**Carcinogenicity:**

The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

**4. FIRST AID MEASURES**

---

**Emergency First Aid:**

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.

Skin: Wash thoroughly with soap and water.

Eyes: Immediately flush thoroughly with water for at least 15 minutes.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.

Ingestion: If conscious, drink water and induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

**5. FIRE FIGHTING MEASURES**

---

**Flash Point (F):** 97F

**Flammable Limits LEL (%):** N/A

**Flammable Limits UEL (%):** N/A

**Extinguishing Media:**

Use water spray, foam, dry chemical, or CO<sub>2</sub>.

**Fire Fighting Procedures:**

Wear self-contained breathing apparatus.

**Fire &Explosion Hazards:**

Moderate fire hazard.

**6. ACCIDENTAL RELEASE MEASURES**

---

**Spill Response:**

Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Exposure / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Disposal. Comply with Federal, State, and local

regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

---

---

Component	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	Skin
Methanol	200	262	250	328			X
Ethyl Alcohol	1000	1880					
Water							
Safranin O							

If there are no exposure limit numbers listed in the Exposure Guidelines chart, this indicates that no OSHA or ACGIH exposure limits have been established.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

**Boiling Point (C 760 mmHg) :** N/A

**Melting Point (C) :** N/A

**Specific Gravity (H<sub>2</sub>O = 1) :** N/A

**Vapor Pressure (mm Hg) :** N/A

**Percent Volatile by vol (%) :** N/A

**Vapor Density (Air = 1) :** N/A

**Evaporation Rate (BuAc = 1) :** N/A

**Solubility in Water (%) :** Soluble

**Appearance :**

Red liquid

## 10. STABILITY AND REACTIVITY

---

**Stability:** Yes

**Hazardous Polymerization:**

Does not occur

**Hazardous Decomposition:**

CO<sub>x</sub>, Formaldehyde, Cl

**Conditions to Avoid:**

Heat; contact with ignition source.

**Materials To Avoid:**

- ( ) Water
- ( ) Acids
- ( ) Bases
- ( ) Corrosives
- (X) Oxidizers
- (X) Other: Reactive metals

## 11. TOXICOLOGICAL INFORMATION

---

### Toxicity Data

None established

### Toxicological Findings:

None

Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

## 12. DISPOSAL CONSIDERATIONS

---

**EPA Waste Numbers:** D001

### Treatment:

Incineration, fuels blending or recycle. Contact your local permitted waste disposal site (TSD) for permissible treatment sites.

ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

## 13. TRANSPORT INFORMATION

---

### DOT Proper Shipping Name:

non-regulated (per 49CFR173.150(e))

### DOT ID Number :

none(per 49CFR173.150(e))

## 14. REGULATORY INFORMATION

---

### TSCA Statement:

This product is a "Mixture". The CAS numbers of all components are listed on the TSCA Inventory.

Component	SARA EHS (302)	SARA EHS TPQ (lbs)	CERCLA RQ (lbs)
Methanol			5000
Ethyl Alcohol			
Water			

Safranin O

Component	OSHA Floor List	SARA 313	DeMinimis for SARA 313 (%)
Methanol	Y	Y	1.0
Ethyl Alcohol	Y		
Water			
Safranin O			

If there is no information listed on the regulatory information chart, this indicates that the chemical is not covered by the specific regulation listed.

## 15. OTHER INFORMATION

---

### Comments:

None

### NFPA Hazard Ratings:

Health : 1  
Flammability : 2  
Reactivity : 0  
Special Hazards :

**Revision History:** 10/6/97

| = Revised Section

N/A = Not Available

N/E = None Established

The statements contained herein are offered for informational purposes only and are based upon technical data that EM Science believes to be accurate. It is intended for use only by persons having the necessary technical skill and at their own discretion and risk. Since conditions and manner of use are outside our control, we make NO WARRANTY, EXPRESS OR IMPLIED, OR MERCHANTABILITY, FITNESS OR OTHERWISE.

---

# MATERIAL SAFETY DATA SHEET

## EM SCIENCE

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

---

**Manufacturer.....:** EM SCIENCE  
A Division of EM Industries  
P.O. Box 70  
480 Democrat Road  
Gibbstown, N.J. 08027

**Preparation Date.:** 2/20/98

**Information Phone Number.:** 856-423-6300  
**Hours:** Mon. to Fri. 8:30-5  
**Chemtec Emergency Number:** 800-424-9300  
**Hours:** 24 hrs a day

**Catalog Number(s):**

65092D

**Product Name:**

Gram Iodine Concentrate

**Synonyms:**

None

**Chemical Family:**

Solution

**Formula:**

Solution

**Molecular Weight.:**

N/A

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

---

Component	CAS #	Appr %
Iodine	7553-56-2	0-15%
Water	7732-18-5	85-100%

Represents iodine content of inorganic iodine constituents.  
Approx. % as wt/vol

### 3. HAZARDS IDENTIFICATION

---

#### EMERGENCY OVERVIEW

IRRITATING TO SKIN, EYES AND MUCOUS MEMBRANES.  
MAY CAUSE EYE INJURY.

**Appearance:**

Brown liquid, pungent odor

#### POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

**Symptoms of Exposure:**

Irritating on contact with skin, eyes or mucous membranes. May cause eye injury. Ingestion or absorption of iodine may cause increased serum iodine levels, hypernatremia and acidosis. Chronic exposure may cause hyperthyroidism.

**Medical Cond. Aggravated by Exposure:**

Hyperthyroidism

**Routes of Entry:**

Inhalation, ingestion or skin contact

**Carcinogenicity:**

The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

### 4. FIRST AID MEASURES

---

**Emergency First Aid:**

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.

Skin: Immediately flush thoroughly with large amounts of water.

Eyes: Immediately flush thoroughly with water for at least 15 minutes.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.

Ingestion: Get immediate medical attention; if conscious, give water freely.

### 5. FIRE FIGHTING MEASURES

---

**Flash Point (F):** Noncombustible

**Flammable Limits LEL (%):** N/A

**Flammable Limits UEL (%):** N/A

**Extinguishing Media:**

Use any suitable for adjacent material.

**Fire Fighting Procedures:**

Wear self-contained breathing apparatus and protective clothing.

**Fire & Explosion Hazards:**

None established

**6. ACCIDENTAL RELEASE MEASURES**

---

**Spill Response:**

Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Exposure / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Disposal. Comply with Federal, State, and local regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

**7. HANDLING AND STORAGE**

---

**Handling & Storage:**

Store in a cool, dry area. Do not breathe vapor. Do not get in eyes, on skin, or on clothing.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

---

**ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:**

**Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:**

Material should be handled or transferred in an approved fume hood or with adequate ventilation. Protective gloves should be worn to prevent skin contact (Neoprene or equivalent) Safety glasses with side shields must be worn at all times.

**Work/Hygenic Practices:**

Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

**l. Ce deve PPM MG/M3e PPM MG/M3e PPM MG/M3e Sn sust**

---



## ACGIH – TLV:

Component	TWA		STEL		CL		Skin
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
Iodine			0.1	1.0	0.1	1.0	
Water							

If there are no exposure limit numbers listed in the Exposure Guidelines chart, this indicates that no OSHA or ACGIH exposure limits have been established.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

**Boiling Point (C 760 mmHg) :** N/A

**Melting Point (C) :** N/A

**Specific Gravity (H<sub>2</sub>O = 1) :** N/A

**Vapor Pressure (mm Hg) :** N/A

**Percent Volatile by vol (%) :** N/A

**Vapor Density (Air = 1) :** N/A

**Evaporation Rate (BuAc = 1) :** N/A

**Solubility in Water (%) :** Soluble

**Appearance :**

Brown liquid, pungent odor

## 10. STABILITY AND REACTIVITY

---

**Stability:** Yes

**Hazardous Polymerization:**

Does not occur

**Hazardous Decomposition:**

None indicated

**Conditions to Avoid:**

None indicated

**Materials To Avoid:**

- ( ) Water
- ( ) Acids
- ( ) Bases
- ( ) Corrosives
- ( ) Oxidizers
- (X) Other: none

## 11. TOXICOLOGICAL INFORMATION

---

### Toxicity Data

None established

### Toxicological Findings:

None

Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

## 12. DISPOSAL CONSIDERATIONS

---

EPA Waste Numbers: D002

### Treatment:

Specified Technology – Contact your local permitted waste disposal site (TSD) for permissible treatment sites.

ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

## 13. TRANSPORT INFORMATION

---

### DOT Proper Shipping Name:

non-regulated

### DOT ID Number :

none

## 14. REGULATORY INFORMATION

---

### TSCA Statement:

Exempt from TSCA listing requirements.

Component	OSHA Floor List	SARA 313	DeMinimis for SARA 313 (%)
-----------	--------------------	-------------	----------------------------------

---

Iodine

Y

Water

If there is no information listed on the regulatory information chart, this indicates that the chemical is not covered by the specific regulation listed.

## 15. OTHER INFORMATION

---

### Comments:

none

### NFPA Hazard Ratings:

Health : 0  
 Flammability : 0  
 Reactivity : 0  
 Special Hazards :

**Revision History:** 10/22/97

| = Revised Section

N/A = Not Available

N/E = None Established

The statements contained herein are offered for informational purposes only and are based upon technical data that EM Science believes to be accurate. It is intended for use only by persons having the necessary technical skill and at their own discretion and risk. Since conditions and manner of use are outside our control, we make NO WARRANTY, EXPRESS OR IMPLIED, OR MERCHANTABILITY, FITNESS OR OTHERWISE.

---

**MATERIAL SAFETY DATA SHEET**

# EM SCIENCE

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

---

**Manufacturer.....:** EM SCIENCE  
A Division of EM Industries  
P.O. Box 70  
480 Democrat Road  
Gibbstown, N.J. 08027

**Preparation Date.:** 9/3/97

**Information Phone Number.:** 856-423-6300  
**Hours:** Mon. to Fri. 8:30-5  
**Chemtrec Emergency Number:** 800-424-9300  
**Hours:** 24 hrs a day

### Catalog Number(s):

65092E

### Product Name:

Decolorizer

### Synonyms:

N/A

### Chemical Family:

Aliphatic alcohol

### Formula:

Solution

### Molecular Weight.:

N/A

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

---

Component	CAS #	Appr %
Isopropyl Alcohol	67-63-0	80%
Acetone	67-64-1	20%

Approx. % as wt/vol

## 3. HAZARDS IDENTIFICATION

---

### EMERGENCY OVERVIEW

FLAMMABLE LIQUID AND VAPOR.

MAY CAUSE EYE INJURY.  
HARMFUL IF INHALED OR SWALLOWED.

**Appearance:**

Clear, colorless liquid; characteristic odor

**POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)**

**Symptoms of Exposure:**

Effects of ingestion or inhalation: nausea, intoxication, central nervous system depression, headache, decreased blood rate, coma. High vapor concentrations cause irritation of eyes and respiratory system. Contact may cause eye injury, skin irritation. Chronic exposure to Acetone may be harmful during pregnancy. Exposure to Acetone may also be harmful to liver, kidneys, and central nervous system.

**Medical Cond. Aggravated by Exposure:**

Respiratory, skin, liver, and kidney conditions; pregnancy.

**Routes of Entry:**

Inhalation, ingestion or skin contact

**Carcinogenicity:**

The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

**4. FIRST AID MEASURES**

---

**Emergency First Aid:**

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.

Skin: Wash thoroughly with soap and water.

Eyes: Immediately flush thoroughly with water for at least 15 minutes.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.

Ingestion: If conscious, drink water and induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

**5. FIRE FIGHTING MEASURES**

---

**Flash Point (F):** 53F (tcc) for IPA

**Flammable Limits LEL (%):** N/A

**Flammable Limits UEL (%):** N/A

**Extinguishing Media:**

Dry chemical, CO<sub>2</sub>, "alcohol" foam; Water spray to cool fire—exposed containers and disperse vapors.

**Fire Fighting Procedures:**

Wear self-contained breathing apparatus.

**Fire &Explosion Hazards:**

Dangerous fire and explosive hazard. Vapor can travel distances to ignition source and flash back. Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below published autoignition or ignition temperatures. Ignition temperatures decrease with increasing vapor volume and vapor/air contact time and are influenced by pressure changes. Ignition may occur at typical elevated temperature process conditions, especially in process operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs.

**6. ACCIDENTAL RELEASE MEASURES**

---

**Spill Response:**

Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Exposure / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Disposal. Comply with Federal, State, and local regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

EM SCIENCE recommends Spill-X absorbent agents for various types of spills. Additional information on the Spill-X products can be provided through the EM SCIENCE Technical Service Department (856) 423-6300. The following EM SCIENCE Spill-X absorbent is recommended for this product:

SX0863 Solvent Spill Treatment Kit

**7. HANDLING AND STORAGE**

---

**Handling &Storage:**

Keep container closed. Store in a cool area away from ignition sources and oxidizers. Do not breathe vapor. Do not get in eyes. Avoid prolonged, or repeated, skin contact. Electrically ground all equipment when handling this product.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

---

**ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:**

**Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:**

Respiratory Protection: If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety equipment supplier). Engineering and/or administrative controls should be implemented to reduce exposure. Material should be handled or transferred in an approved fume hood or with adequate ventilation. Protective gloves (Butyl Rubber, PVC or equivalent) should be worn to prevent skin contact. Safety glasses with side shields must be worn at all times.

**Work/Hygenic Practices:**

Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

## EXPOSURE GUIDELINES

### OSHA – PEL:

Component	TWA		STEL		CL		Skin
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
Isopropyl Alcohol	400	980	500	1225			
Acetone	750	1800	1000	2400			

### ACGIH – TLV:

Component	TWA		STEL		CL		Skin
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
Isopropyl Alcohol	400	983	500	1230			
Acetone	750	1780	1000	2380			

If there are no exposure limit numbers listed in the Exposure Guidelines chart, this indicates that no OSHA or ACGIH exposure limits have been established.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

**Boiling Point (C 760 mmHg) :** N/A

**Melting Point (C) :** N/A

**Specific Gravity (H<sub>2</sub>O = 1) :** N/A

**Vapor Pressure (mm Hg) :** N/A

**Percent Volatile by vol (%) :** 100%

**Vapor Density (Air = 1) :** N/A

**Evaporation Rate (BuAc = 1) :** N/A

**Solubility in Water (%) :** Miscible

**Appearance :**

Clear, colorless liquid; characteristic odor

## 10. STABILITY AND REACTIVITY

---

**Stability:** Yes

**Hazardous Polymerization:**

Does not occur

**Hazardous Decomposition:**

CO<sub>x</sub>

**Conditions to Avoid:**

Heat, contact with ignition source.

**Materials To Avoid:**

- Water
- Acids
- Bases
- Corrosives
- Oxidizers
- Other: Halogens and halogen compounds; aldehydes

## 11. TOXICOLOGICAL INFORMATION

---

**Toxicity Data**

None established

**Toxicological Findings:**

None

Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

## 12. DISPOSAL CONSIDERATIONS

---

**EPA Waste Numbers:** D001

**Treatment:**

Incineration, fuels blending or recycle. Contact your local permitted waste disposal site (TSD) for permissible treatment sites.

ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

## 13. TRANSPORT INFORMATION

---

**DOT Proper Shipping Name:**

Flammable Liquids, n.o.s. (Isopropanol, Acetone)

**DOT ID Number :**

UN1993

## 14. REGULATORY INFORMATION

---



**TSCA Statement:**

This product is a "Mixture". The CAS numbers of all components are listed on the TSCA Inventory.

Component	SARA EHS (302)	SARA EHS TPQ (lbs)	CERCLA RQ (lbs)
Isopropyl Alcohol			
Acetone			5000

Component	OSHA Floor List	SARA 313	DeMinimis for SARA 313 (%)
Isopropyl Alcohol			
Acetone	Y	Y	0.1
	Y		

If there is no information listed on the regulatory information chart, this indicates that the chemical is not covered by the specific regulation listed.

**15. OTHER INFORMATION****Comments:**

None

**NFPA Hazard Ratings:**

Health : 1  
 Flammability : 3  
 Reactivity : 0  
 Special Hazards :

**Revision History:** 9/3/97

| = Revised Section

N/A = Not Available

N/E = None Established

The statements contained herein are offered for informational purposes only and are based upon technical data that EM Science believes to be accurate. It is intended for use only by persons having the necessary technical skill and at their own discretion and risk. Since conditions and manner of use are outside our control, we make NO WARRANTY, EXPRESS OR IMPLIED, OR MERCHANTABILITY, FITNESS OR OTHERWISE.