

## Hematoxylin Stain Set, Weigert Iron - Technical Memo

### SET INCLUDES:

Solution A: Ferric Chloride, Aqueous  
Solution B: Hematoxylin 1%, Alcoholic

### **Part 1409B**

250 ml  
250 ml

### **Part 1409A**

500 ml  
500 ml

### Additionally Needed:

Xylene, ACS  
Alcohol, Ethyl Denatured, 100%  
Alcohol, Ethyl Denatured, 95%

Part 1445  
Part 10841  
Part 10842

**For storage requirements and expiration date refer to individual bottle labels.**

### APPLICATION:

Newcomer Supply Hematoxylin Stain Set, Weigert Iron is designed to be the preferred nuclear stain in conjunction with trichrome and mucin stains. Another application includes the identification of amoeba in tissue sections (see reference #2).

An iron hematoxylin solution is the optimal nuclear stain when the succeeding stains are lengthy or acidic, where the use of an aluminum-mordanted hematoxylin stain in these conditions would have a tendency to decolorize.

### METHOD:

**Fixation:** Formalin 10%, Phosphate Buffered (Part 1090)

**Technique:** Paraffin sections cut at 5 microns

**Solutions:** All solutions are manufactured by Newcomer Supply, Inc.

All Newcomer Supply Stain Sets are designed to be used with Coplin jars filled to 40 ml following the staining procedure provided below.

### HEMATOXYLIN, WEIGERT IRON STAINING PROCEDURE:

1. Deparaffinize sections thoroughly in three changes of xylene, 3 minutes each. Hydrate through two changes each of 100% and 95% ethyl alcohols, 10 dips each. Wash well with distilled water.
  - a. See Procedure Notes #1 and #2.
2. Prepare fresh Weigert Iron Hematoxylin Working Solution.
  - a. Solution A: Ferric Chloride, Aqueous 20 ml
  - b. Solution B: Hematoxylin 1%, Alcoholic 20 ml
  - c. Prepare directly before use; combine and mix well.
3. Stain with fresh Weigert Iron Hematoxylin Working Solution for 10 minutes.
4. Rinse in tap water and check microscopically for good nuclear detail.
5. Wash in running tap water 10 minutes; rinse in distilled water.
  - a. See Procedure Note #3.
6. Proceed with selected stain procedure:
  - a. Mucin stain procedure
  - b. Trichrome stain procedure
  - c. Or counterstain as desired
7. Dehydrate in two changes each of 95% and 100% ethyl alcohol. Clear in three changes of xylene, 10 dips each; coverslip with compatible mounting medium.

### RESULTS:

Nuclei	Black
Other tissue components	Dependent on stain procedure or counterstain used

### PROCEDURE NOTES:

1. Drain staining rack/slides after each step to prevent solution carry over.
2. Do not allow sections to dry out at any point during staining procedure.
3. If Weigert Iron Hematoxylin Working Solution is not completely washed from the tissue sections, staining of the cell cytoplasm will be compromised.
4. If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

### REFERENCES:

1. Luna, Lee G. *Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology*. 3rd ed. New York: Blakiston Division, McGraw-Hill, 1968. 228-229.
2. Preece, Ann. *A Manual for Histologic Technicians*. 3rd ed. Boston: Little, Brown, 1972. 229.
3. Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 146.
4. Modifications developed by Newcomer Supply Laboratory.



**1. PRODUCT AND COMPANY IDENTIFICATION**

**1.1 Product Name:** Hematoxylin Stain Set, Weigert Iron, Sol'n A: Ferric Chloride, Acidified  
**Part Number:** 1409  
**CAS-No.:** Not applicable  
**SDS Number:** 2860

**1.2 Recommended Use:** Laboratory Chemicals

**1.3 Company:** Newcomer Supply  
 2505 Parview Road  
 Middleton, WI 53562 USA

**Telephone:** 1-800-383-7799

**Fax:** 1-608-831-0866

**Website:** [www.newcomersupply.com](http://www.newcomersupply.com)

**Email:** [newly@newcomersupply.com](mailto:newly@newcomersupply.com)

24 HOUR EMERGENCY CONTACT  
 CALL CHEMTREC: 1-800-424-9300  
 Contact CHEMTREC only in the event of  
 an emergency involving a chemical spill,  
 leak, fire, exposure or other accident.

**2. HAZARD(S) IDENTIFICATION**
**2.1 Classification of the substance or mixture**

GHS Classification, (in accordance with 29 CFR1910.1200)

Corrosive to metals, Category 1

Skin corrosion, Category 1B

Serious eye damage, Category 1

Specific Target Organ Toxicity – Respiratory System - Single exposure, Category 3

Acute toxicity (oral), Category 4

**2.2 GHS Label elements**

**Signal Word** DANGER

**Pictogram**



**Hazard Statement(s):**

- May be corrosive to metals
- Causes severe skin burns and eye damage
- May cause respiratory irritation
- May cause drowsiness or dizziness
- Harmful if swallowed

**Precautionary Statement(s):**

**Prevention:**

- Keep only in original container.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wash skin thoroughly after handling.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use only outdoors or in a well-ventilated area.
- Do not eat, drink or smoke when using this product.

**Response:**

- Absorb spillage to prevent material damage.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Wash contaminated clothing before reuse.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- Specific treatment: see first aid measures in section 4.

Version 1.1

- Immediately call a POISON CENTER or doctor/physician.

**Storage:**

- Store in a corrosive resistant container/container with a resistant inner liner.
- Store in a well ventilated place. Keep container tightly closed.
- Store locked up.

**Disposal:**

- Dispose of contents/ container to an approved waste disposal plant.

**2.3 Description of any hazards not otherwise classified** None

**2.4 >1% of mixture with unknown acute toxicity** None

**3. COMPOSITION/INFORMATION ON INGREDIENTS**
**3.2 Mixture**
**Hazardous Components**

Component		Concentration
Name	Hydrochloric Acid	
CAS-No.	7647-01-0	<1%
Name	Ferric Chloride	
CAS-No.	7750-08-0	1-2%

**4. FIRST-AID MEASURES**
**4.1 Description of necessary measures**
**Inhalation (breathing)**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician

**Skin Contact**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician

**Eye Contact**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Immediately call a POISON CENTER or doctor/physician

**Ingestion (swallowed)**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician

**4.2 Most important symptoms and or effects, acute and delayed**

The most important symptoms/effects are presented in Section 2 and or Section 11.

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

**5. FIRE-FIGHTING MEASURES**
**5.1 Suitable extinguishing media**

Carbon dioxide, dry chemical, water spray, alcohol-resistant foam.

**5.2 Specific hazards arising from the substance or mixture**

No data available

**5.3 Protective equipment and precautions for fire-fighters**

Wear a positive-pressure self-contained breathing apparatus if necessary. Wear chemical resistant clothing as recommended by clothing manufacturer.

Version 1.1

**NFPA Rating**

Health hazard:	Fire hazard:	Reactivity hazard:	0
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**6. ACCIDENTAL RELEASE MEASURES**
**6.1 Personal precautions, protective equipment and emergency procedures**

Apply personal protective equipment (see Section 8). Use in a properly ventilated area. Avoid breathing vapors. Avoid skin contact. Avoid eye contact. Wash hands after use. In case of large spill, remove personnel to a safe area.

**6.2 Methods and material for containment and cleaning up**

Apply personal protective equipment (see Section 8). Contain spill. Prevent further leakage if possible and safe to do so. Ensure proper ventilation. For small amounts, wipe or absorb spill using inert material and dispose of according to local regulations. For large amounts, evacuate area and limit access. Prevent entry of material into sewage drains and confined areas. Dispose of any contaminated materials according to local regulations.

**7. HANDLING AND STORAGE**
**7.1 Precautions for safe handling**

Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing.

**7.2 Conditions for safe storage, including any incompatibilities**

Refer to Section 2.2 for proper storage temperature. Store the tightly closed container in a cool, dry, well-ventilated area.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**8.1 Control Parameters**

Components with limit values that require monitoring at the workplace

Component	CAS-No.	Regulatory	Value	Parameters
Hydrochloric Acid	7647-01-0	OSHA PEL	C	5 ppm (7 mg/m <sup>3</sup> )
		NIOSH REL	C	5 ppm (7 mg/m <sup>3</sup> )
		NIOSH REL	IDLH	50 ppm (75 mg/m <sup>3</sup> )
		ACGIH TLV	C	2 ppm

Component	CAS-No.	Regulatory	Value	Parameters
Ferric Chloride	1310-73-2	NIOSH REL	TWA	1 mg/m <sup>3</sup>
		ACGIH TLV	TWA	1 mg/m <sup>3</sup>

**8.2 Exposure Controls**
**Appropriate engineering controls**

Use in a properly ventilated area. Remove/wash before reuse contaminated clothing. Wash hands upon exiting work premises. Use product in an appropriately designated fume hood. Take measures to keep concentrations below acceptable limits.

**8.3 Personal Protective Equipment**
**Eye/Face protection**

Wear chemical safety goggles and/or a full face shield if splashing is possible. Keep eye wash fountain nearby.

**Skin Protection**

Wear chemical-resistant gloves. Gloves should be resistant to components of product. Refer to glove manufacturer for appropriate type and glove thickness.

Version 1.1

**Body Protection**

No data available

**Respiratory Protection**

Respirators should only be used if the employer has implemented a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing, and medical exams, as described in the OSHA Respiratory Protection Standard (29 CFR 1910.134).

In case of emergency, entry into or escape from unknown concentrations, select the highest level approved respiratory protection available.

**Other Information**

None

**9. PHYSICAL AND CHEMICAL PROPERTIES**
**9.1 Information on basic physical and chemical properties**

Physical state	Colorless to pale yellow liquid
Odor	Faint pungent odor
Odor threshold	No data available
pH	No data available
Melting point/freezing point	ca. 0°C (ca. 32°F)
Initial boiling point and boiling range	ca. 100°C (ca. 32°F)
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	Non flammable liquid
Upper flammability or explosive limits	No data available
Lower flammability or explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	Similar to water
Solubility(ies)	Water soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

**10. STABILITY AND REACTIVITY**
**10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable in a closed container within label-specified storage temperature and expiration date.

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible materials**

Strong bases and metals

**10.6 Hazardous decomposition products**

No data available

**11. TOXICOLOGICAL INFORMATION**
**11.1 Information on toxicological effects**

Version 1.1

**Inhalation exposure**

Hydrochloric acid: It has been reported that 50 to 100 ppm for 1 hour is barely tolerable and that 35 ppm causes irritation of the throat. Acute inhalation exposure may cause coughing, hoarseness, inflammation and ulceration of the respiratory tract, chest pain, and pulmonary edema in humans.

**Oral exposure**

Hydrochloric acid: Acute oral exposure may cause corrosion of the mucous membranes, esophagus, and stomach, with nausea, vomiting, and diarrhea reported in humans.

**Dermal exposure**

Hydrochloric acid: Dermal contact may produce severe burns, ulceration, and scarring.

**Skin corrosion/irritation**

Hydrochloric acid is corrosive to the eyes, skin, and mucous membranes. Ferric chloride can severely burn and irritate the skin.

**Serious eye damage/irritation**

Hydrochloric acid is corrosive to the eyes, skin, and mucous membranes. Ferric chloride can severely burn and irritate the skin.

**Respiratory or skin sensitization**

No data available

**Germ Cell mutagenicity**

No data available

**Reproductive toxicity**

In rats exposed to hydrochloric acid by inhalation, severe dyspnea, cyanosis, and altered estrus cycles have been reported in dams, and increased fetal mortality and decreased fetal weight have been reported in the offspring.

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

Hydrochloric acid: Chronic occupational exposure to hydrochloric acid has been reported to cause gastritis, chronic bronchitis, dermatitis, and photosensitization in workers. Prolonged exposure to low concentrations may also cause dental discoloration and erosion. Chronic inhalation exposure caused hyperplasia of the nasal mucosa, larynx, and trachea and lesions in the nasal cavity in rats.

**Aspiration hazard**

No data available

**Acute toxicity**

Hydrochloric Acid:

LCLo human 1300 ppm/30 minutes

LC50 rat 3124 ppm/1 hour

LC50 mouse 1108 ppm/1 hour

Ferric Chloride:

LD50 rat 316 mg/kg

**Carcinogenicity**

IARC: Hydrochloric Acid: Group 3 Carcinogen - not classifiable as to its carcinogenicity to humans.

NTP: None of the components are listed

Version 1.1

OSHA: None of the components are listed

**Additional information**

RTECS: No data available

**12. ECOLOGICAL INFORMATION****12.1 Ecotoxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Other adverse effects**

No data available

**13. DISPOSAL CONSIDERATIONS****13.1 Waste disposal methods****Contents**

Dispose of contents in a safe manner to comply with local, state and federal regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of packaging in a safe manner to comply with local, state and federal regulations. Contact a licensed professional waste disposal service to dispose of this material.

**14. TRANSPORT INFORMATION****14.1 DOT (US)**

<b>UN-Number</b>	1170
<b>Proper shipping name</b>	Ethanol solutions
<b>Hazard class</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	No data available

**15. REGULATORY INFORMATION****15.1** No data available**16. OTHER INFORMATION**

Preparation Information

Newcomer Supply Inc.

800-383-7799

[www.newcomersupply.com](http://www.newcomersupply.com)

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## 1. PRODUCT AND COMPANY IDENTIFICATION

**1.1 Product Name:** Hematoxylin Stain Set, Weigert Iron, Sol'n B: Hematoxylin 1%, Alcoholic  
**Part Number:** 1409  
**CAS-No.:** Not applicable  
**SDS Number:** 3130

**1.2 Recommended Use:** Laboratory Chemicals

**1.3 Company:** Newcomer Supply  
 2505 Parview Road  
 Middleton, WI 53562 USA  
**Telephone:** 1-800-383-7799  
**Fax:** 1-608-831-0866  
**Website:** [www.newcomersupply.com](http://www.newcomersupply.com)  
**Email:** [newly@newcomersupply.com](mailto:newly@newcomersupply.com)

24 HOUR EMERGENCY CONTACT  
 CALL CHEMTREC: 1-800-424-9300  
 Contact CHEMTREC only in the event of an emergency involving a chemical spill, leak, fire, exposure or other accident.

## 2. HAZARD(S) IDENTIFICATION

**2.1 Classification of the substance or mixture**  
**GHS Classification**, (in accordance with 29 CFR1910.1200)  
 Flammable liquid, Category 2  
 Acute toxicity (oral), Category 4  
 Acute toxicity (dermal), Category 4  
 Acute toxicity (inhalation), Category 4  
 Serious Eye Damage/Eye irritation, Category 2A  
 Skin irritation, Category 2  
 Specific Target Organ Toxicity – Single exposure, Category 2

**2.2 GHS Label elements**

**Signal Word** DANGER

**Pictogram**



**Hazard Statement(s):**

- Highly flammable liquid and vapour
- Harmful if swallowed
- Harmful in contact with skin
- Harmful if inhaled
- Causes eye irritation
- Causes skin irritation
- Causes damage to organs through prolonged or repeated exposure
- May cause damage to organs

**Precautionary Statement(s):**

**Prevention:**

- Keep away from heat/sparks/open flames/hot surfaces – No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof fume hood/electrical/ventilating/light/.../equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Wear protective gloves/protective clothing/eye protection/face protection
- Wash skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Avoid breathing dust/fume/gas/mist/vapours/spray

**Response:**

Version 1.0

- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- In case of fire use carbon dioxide, dry chemical or alcohol-resistant foam.
- IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician
- Rinse mouth
- IF ON SKIN: Gently wash with plenty of soap and water
- Specific treatment is urgent (see ... on this label)
- Take off contaminated clothing and wash before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
- If eye irritation persists get medical advice/attention
- **Storage:**
- Store in a well ventilated place
- Store locked up
- **Disposal:**
- Dispose of contents/ container to an approved waste disposal plant.
- **Description of any hazards not otherwise classified**                      None
- 2.4 **>1% of mixture with unknown acute toxicity**                      None

**3. COMPOSITION/INFORMATION ON INGREDIENTS**
**3.1 Substances**
**Hazardous Components**

Component		Concentration
Name	Ethyl Alcohol	
CAS-No.	64-17-5	84-85%
Name	Methyl Alcohol	
CAS-No.	67-56-1	4-5%
Name	Isopropyl Alcohol	
CAS-No.	67-63-0	4-5%
Name	Hematoxylin	
CAS-No.	517-28-2	1%

**4.1 Description of necessary measures**
**Inhalation (breathing)**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

**Skin Contact**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a POISON CENTER or doctor/physician if you feel unwell.

**Eye Contact**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists get medical advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell.

**Ingestion (swallowed)**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

**4.2 Most important symptoms and or effects, acute and delayed**

The most important symptoms/effects are presented in Section 2 and or Section 11.

Version 1.0

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

**5. FIRE-FIGHTING MEASURES**
**5.1 Suitable extinguishing media**

Carbon dioxide, dry chemical, water spray, alcohol-resistant foam.

**5.2 Specific hazards arising from the substance or mixture**

No data available

**5.3 Protective equipment and precautions for fire-fighters**

Wear a positive-pressure self-contained breathing apparatus if necessary. Wear chemical resistant clothing as recommended by clothing manufacturer.

**NFPA Rating**

Health	Fire	Reactivity
hazard: 2	hazard: 3	hazard: 0

**6. ACCIDENTAL RELEASE MEASURES**
**6.1 Personal precautions, protective equipment and emergency procedures**

Apply personal protective equipment (see Section 8). Use in a properly ventilated area. Avoid breathing vapors. Avoid skin contact. Avoid eye contact. Wash hands after use. In case of large spill, remove personnel to a safe area. Keep product away from heat, flame, ignition sources, and reactive materials. Avoid accumulation of vapor to form explosive concentration. Pay particular attention to low areas where vapor accumulates more easily.

**6.2 Methods and material for containment and cleaning up**

Apply personal protective equipment (see Section 8). Contain spill. Prevent further leakage if possible and safe to do so. Ensure proper ventilation. For small amounts, wipe or absorb spill using inert material and dispose of according to local regulations. For large amounts, evacuate area and limit access. Prevent entry of material into sewage drains and confined areas. Dispose of any contaminated materials according to local regulations. Eliminate sources of ignition.

**7. HANDLING AND STORAGE**
**7.1 Precautions for safe handling**

Keep away from heat/sparks/open flames/hot surfaces – No smoking. Do not breathe dust/fume/gas/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection.

**7.2 Conditions for safe storage, including any incompatibilities**

Refer to Section 2.2 for proper storage temperature. Store the tightly closed container in a cool, dry, well-ventilated area.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**8.1 Control Parameters**

Components with limit values that require monitoring at the workplace

Component	CAS-No.	Regulatory	Value	Parameters
Ethyl Alcohol	64-17-5	OSHA PEL	TWA	1000 ppm (1900 mg/m <sup>3</sup> )
		ACGIH TLV	TWA	1000 ppm (1880 mg/m <sup>3</sup> )
		NIOSH REL	TWA	1000 ppm (1900 mg/m <sup>3</sup> )

Component	CAS-No.	Regulatory	Value	Parameters
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Version 1.0

Methyl Alcohol	67-56-1	OSHA PEL	TWA	200 ppm (980 mg/m <sup>3</sup> )
		ACGIH TLV	STEL	200 ppm (1,230 mg/m <sup>3</sup> )
		ACGIH TLV	STEL	50 ppm (1,230 mg/m <sup>3</sup> )
		NIOSH REL	TWA	200 ppm (980 mg/m <sup>3</sup> )
		NIOSH REL	STEL	250 ppm (980 mg/m <sup>3</sup> )

Component	CAS-No.	Regulatory	Value	Parameters
Isopropyl Alcohol	67-63-0	OSHA PEL	TWA	400 ppm (980 mg/m <sup>3</sup> )
		ACGIH TLV	TWA	400 ppm (983 mg/m <sup>3</sup> )
		ACGIH TLV	STEL	500 ppm (1,230 mg/m <sup>3</sup> )
		NIOSH REL	TWA	400 ppm (980 mg/m <sup>3</sup> )
		NIOSH REL	STEL	500 ppm (980 mg/m <sup>3</sup> )

## 8.2 Exposure Controls

### Appropriate engineering controls

Use in a properly ventilated area. Remove/wash before reuse contaminated clothing. Wash hands upon exiting work premises. Use product in an appropriately designated fume hood. Take measures to keep concentrations below acceptable limits.

## 8.3 Personal Protective Equipment

### Eye/Face protection

Wear chemical safety goggles and/or a full face shield if splashing is possible. Keep eye wash fountain nearby.

### Skin Protection

Wear chemical-resistant gloves. Gloves should be resistant to components of product. Refer to glove manufacturer for appropriate type and glove thickness.

### Body Protection

No data available

### Respiratory Protection

Respirators should only be used if the employer has implemented a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing, and medical exams, as described in the OSHA Respiratory Protection Standard (29 CFR 1910.134).

Ethyl Alcohol: Where the potential exists for exposure over 1,000 ppm: use a NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus or an emergency escape air cylinder.

Exposure to 3,300 ppm is immediately dangerous to life and health. If the possibility of exposure above 3,300 ppm exists, use a NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode equipped with an emergency escape air cylinder.

In case of emergency, entry into or escape from unknown concentrations select the highest level approved respiratory protection available.

### Other Information

None

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Version 1.0

**9.1 Information on basic physical and chemical properties**

Physical state	Brown tinted liquid
Odor	Alcoholic odor
Odor threshold	No data available
pH	No data available
Melting point/freezing point	ca. -114°C (-173.2°F)
Initial boiling point and boiling range	ca. 78°C (172-176°F)
Flash point	13°C (55.4°F) Closed cup (Ethyl Alcohol)
Evaporation rate	1.7 (Ethyl Alcohol)
Flammability (solid, gas)	Liquid is flammable
Upper flammability or explosive limits	19% (Ethyl Alcohol)
Lower flammability or explosive limits	3.3% (Ethyl Alcohol)
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility(ies)	Water soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

**10. STABILITY AND REACTIVITY**
**10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable in a closed container within label-specified storage temperature and expiration date.

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

Heat, sparks, open flame, and ignition sources.

**10.5 Incompatible materials**

Strong oxidizers, potassium dioxide, bromine pentafluoride, acetyl bromide, acetyl chloride, platinum, sodium concentrated sulfuric acid, potassium and hydrogen peroxides, platinum black, calcium hypochlorite, silver oxide, ammonia, nitric acid, mercuric nitrate, silver nitrate, magnesium perchlorate, isocyanates, mineral acids, and chloroform.

**10.6 Hazardous decomposition products**

Carbon dioxide and carbon monoxide may be released if product is heated to decomposition.

**11. TOXICOLOGICAL INFORMATION**
**11.1 Information on toxicological effects**
**Inhalation exposure**

Inhaling ethyl alcohol, methyl alcohol, and isopropyl alcohol can irritate the nose, throat and lungs causing coughing and/or shortness of breath.

**Oral exposure**

Oral exposure to ethyl alcohol, methyl alcohol, and isopropyl alcohol can cause headache, drowsiness, nausea and vomiting, and unconsciousness. It can also affect concentration and vision.

**Dermal exposure**

Contact can irritate the skin.

Version 1.0

**Skin corrosion/irritation**

Prolonged or repeated exposure can cause drying and cracking of the skin with peeling, redness and itching.

**Serious eye damage/irritation**

Contact can irritate the eyes.

**Respiratory or skin sensitization**

Inhaling ethyl alcohol, methyl alcohol, and isopropyl alcohol can irritate the nose, throat and lungs causing coughing and/or shortness of breath.

**Germ cell mutagenicity**

No data available

**Reproductive toxicity**

Repeated oral exposure to ethyl alcohol may cause spontaneous abortions, as well as birth defects and other developmental problems. This condition is referred to as "fetal alcohol syndrome." There is limited evidence that oral exposure to ethyl alcohol may decrease fertility in males.

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

Repeated high exposure may affect the liver and the nervous system.

**Aspiration hazard**

No data available

**Acute toxicity (Ethyl Alcohol)**

Ethyl Alcohol:

LD50 rat oral 3450 mg/kg

LD50 mouse oral 7060 mg/kg

LC50 rat inhalation 20000 ppm/10H

LC50 mouse inhalation 20363 ppm/4H

Hematoxylin:

LD50 rat oral 400 mg/kg

**Carcinogenicity**

IARC: None of the components are listed

NTP: None of the components are listed

OSHA: None of the components are listed

**Additional information**

RTECS: No data available

**12. ECOLOGICAL INFORMATION**
**12.1 Ecotoxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

Version 1.0

**12.5 Other adverse effects**

No data available

**13. DISPOSAL CONSIDERATIONS****13.1 Waste disposal methods****Contents**

Dispose of contents in a safe manner to comply with local, state and federal regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of packaging in a safe manner to comply with local, state and federal regulations. Contact a licensed professional waste disposal service to dispose of this material.

**14. TRANSPORT INFORMATION****14.1 DOT (US)**

<b>UN-Number</b>	1170
<b>Proper shipping name</b>	Ethanol solutions
<b>Hazard class</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	No data available

**15. REGULATORY INFORMATION****15.1** No data available**16. OTHER INFORMATION**

Preparation Information

Newcomer Supply Inc.

800-383-7799

[www.newcomersupply.com](http://www.newcomersupply.com)

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