Thermo SCIENTIFIC

23900662

Material Safety Data Sheet

Creation Date 06-Mar-2009 **Revision Date** 06-Mar-2009 **Revision Number:** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Gomori Trichrome Stain Solution, Blue Collagen

Cat No. 88030

Synonyms No information available.

Company
Richard Allan Scientific
A Subsidiary of Thermo Fisher Scientific
4481 Campus Drive
Kalamazoo, MI 49008
Tel: (800) 522-7270

Emergency Telephone Number
Chemtrec US: (800) 424-9300
Chemtrec EU: (202) 483-7616

2. HAZARDS IDENTIFICATION

CAUTION!

Emergency Overview

May cause skin, eye, and respiratory tract irritation. The toxicological properties have not been fully investigated.

Appearance Blue. **Physical State** Liquid. **Odor** No information available

Target Organ Effects None known.

Potential Health Effects

Acute Effects
Principle Routes of Exposure

Eyes	May cause irritation.
Skin	May cause irritation.
Inhalation	May cause irritation of respiratory tract. May be harmful if inhaled.
Ingestion	May cause irritation. May be harmful if swallowed.

Chronic Effects None known.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Water	7732-18-5	95 - 100
Acetic acid	64-19-7	< 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

Disodium 4,5-dihydroxy-3-phenylazonaphthalene-2,7-disulphonate	4197-07-3	< 1
Phosphotungstic acid	12501-23-4	< 1
C.I. Acid blue 22	28631-66-5	< 1

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Ingestion Do not induce vomiting. Obtain medical attention.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point Not applicable
Autoignition Temperature No information available.
Flammability Limits in Air

Suitable Extinguishing Media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..

Unsuitable Extinguishing Media No information available.

Hazardous Combustion Products No information available.

Sensitivity to mechanical impact No information available.
Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors.

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

NFPA **Health** 1 **Flammability** 0 **Instability** 0 **Physical hazards** N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetic acid	TWA: 10 ppm STEL: 15 ppm	(Vacated) TWA: 10 ppm (Vacated) TWA: 25 mg/m^3 TWA: 10 ppm TWA: 25 mg/m^3	IDLH: 50 ppm TWA: 25 mg/m^3 TWA: 10 ppm STEL: 37 mg/m^3 STEL: 15 ppm
Phosphotungstic acid	= 1 mg/m^3 TWA W = 5 mg/m^3 TWA W = 10 mg/m^3 STEL W = 3 mg/m^3 STEL W	= 1 mg/m^3 TWA W = 5 mg/m^3 TWA W = 10 mg/m^3 STEL W = 3 mg/m^3 STEL W	= 5 mg/m^3 TWA W = 1 mg/m^3 TWA W = 3 mg/m^3 STEL W = 10 mg/m^3 STEL W

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Acetic acid	TWA: 10 ppm TWA: 25 mg/m^3 STEL: 15 ppm STEL: 37 mg/m^3	TWA: 10 ppm TWA: 25 mg/m^3 STEL: 37 mg/m^3 STEL: 15 ppm	TWA: 10 ppm TWA: 25 mg/m^3 STEL: 15 ppm STEL: 37 mg/m^3
Phosphotungstic acid	= 1 mg/m^3 TWAEV W = 5 mg/m^3 TWAEV W = 10 mg/m^3 STEV W = 3 mg/m^3 STEV W	= 5 mg/m^3 TWA W = 1 mg/m^3 TWA W = 3 mg/m^3 STEL W = 10 mg/m^3 STEL W	= 1 mg/m^3 TWAEV W = 5 mg/m^3 TWAEV W = 10 mg/m^3 STEV W = 3 mg/m^3 STEV W including tungstic acids and phosphotungstic acids

NIOSH IDLH: *Immediately Dangerous to Life or Health*

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Blue
Odor	No information available
pH	No information available.
Vapor Pressure	Vapor Pressure

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Density	No information available.
Viscosity	No information available.
Boiling Point/Range	Not applicable
Melting Point/Range	No information available.
Decomposition temperature °C	No information available.
Flash Point	Not applicable
Evaporation Rate	No information available.
Specific Gravity	No information available.
Solubility	No information available.

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products. Excess heat.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO_2)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions .	None under normal processing..

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90000 mL/kg (Rat)	Not listed	Not listed
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 1 h

Chronic Toxicity

Carcinogenicity	There are no known carcinogenic chemicals in this product
Mutagenic Effects	No information available
Reproductive Effects	No information available.
Developmental Effects	No information available.
Teratogenicity	No information available.
Endocrine Disruptor Information	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Acetic acid	Not listed	LC50= 75 mg/L Lepomis macrochirus 96 h LC50= 88 mg/L Pimephales promelas 96 h	EC50 = 8.8 mg/L 15 min EC50 = 8.8 mg/L 25 min EC50 = 8.8 mg/L 5 min	EC50 = 95 mg/L 24 h

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility

Component	log Pow
Acetic acid	-0.31

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

All of the components in the product are on the following Inventory lists: All of the components in the product are on the following Inventory lists:

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL

Water	Present	X	-	231-791-2	-		X	-	X	X	KE-35400 X
Acetic acid	Present	X	-	200-580-7	-		X	X	X	X	KE-00013 X
Disodium 4,5-dihydroxy-3-phenylazonaphthalene-2,7-disulphonate	-	-	-	224-085-0	-		-	-	X	-	-
Phosphotungstic acid	-	-	-	-	-		-	1-1079	Present	Present	-
C.I. Acid blue 22	Present	X	-	249-113-9	-		X	X	X	X	KE-06345 X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313
Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Acetic acid	X	5000 lb	-	-

Clean Air Act
Not applicable

OSHA
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Acetic acid	5000 lb	-

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Acetic acid	X	X	X	-	X

U.S. Department of Transportation
Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
Non-controlled

16. OTHER INFORMATION

Prepared By Regulatory Affairs

Creation Date 06-Mar-2009

Print Date 06-Mar-2009

Revision Summary "***", and red text indicates revision

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

Thermo SCIENTIFIC

Print Date: 10/31/07
Revision Date: 10/31/2007
Version: 10

Material Safety Data Sheet

Weigert's Iron Hematoxylin, Part A

Section 1 - Chemical Product and Company Identification

MSDS Name:

Weigert's Iron Hematoxylin, Part A

Catalog Numbers:

88028

Synonyms:

None.

Company Identification:

Richard Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008

Company Phone Number:

800-522-7270

Emergency Phone Number:

800-424-9300

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, Europe:

(202) 483-7616

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS	Hazard Symbols	Risk Phrases
64-17-5	Ethanol	79-80	200-578-6	F	11
7732-18-5	Water	8-11	231-791-2		
67-56-1	Methanol	4.4	200-659-6	F T	11 23/24/25 39/23/24/25
67-63-0	Isopropyl alcohol	4.4	200-661-7	F Xi	11 36 67
517-28-2	Hematoxylin	0.5-1.5	208-237-3		

Material Safety Data Sheet

Weigert's Iron Hematoxylin, Part A

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: No information found
Danger! Poison! Flammable liquid and vapor. May be fatal or cause blindness if swallowed. Harmful if swallowed, inhaled, or absorbed through the skin. Vapor harmful. Causes eye, skin, and respiratory tract irritation. This substance has caused adverse reproductive and fetal effects in humans. May cause central nervous system depression. May cause liver, kidney and heart damage. Cannot be made non-poisonous.
Target Organs: Kidneys, Heart, Liver, Eyes, Nervous system, Optic nerve

Potential Health Effects

Eye:

Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage. Inhalation, ingestion or skin absorption of methanol can cause significant disturbances in vision, including blindness.

Skin:

Causes moderate skin irritation. Harmful if absorbed through the skin. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. Methanol can be absorbed through the skin, producing systemic effects that include visual disturbances.

Ingestion:

May be fatal or cause blindness if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation:

Causes respiratory tract irritation. Methanol is toxic and can very readily form extremely high vapor concentrations at room temperature. Inhalation is the most common route of occupational exposure. At first, methanol causes CNS depression with nausea, headache, vomiting, dizziness and incoordination. A time period with no obvious symptoms follows (typically 8-24 hrs). This latent period is followed by metabolic acidosis and severe visual effects which may include reduced reactivity and/or increased sensitivity to light, blurred, doubl and/or snowy vision, and blindness. Depending on the severity of exposure and the promptness of treatment, survivors may recover completely or may have permanent blindness, vision disturbances and/or nervous system effects.

Chronic:

Prolonged or repeated skin contact may cause dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage. Methanol is only very slowly eliminated from the body. Because of this slow elimination, methanol should be regarded as a cumulative poison. Though a single exposure may cause no effect, daily exposures may result in the accumulation of a harmful amount.

Section 4 - First Aid Measures

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous sytem diseases may be at increased risk from exposure to this substance. Effects may be delayed.

Antidote:

Replace fluid and electrolytes.

Section 5 - Fire Fighting Measures

General Information:

Replace fluid and electrolytes. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Water may be ineffective. Do NOT use straight streams of water.

Autoignition Temperature:

Not applicable.

Explosion Limits:

Lower: Not available Upper: Not available

Flash Point:

15.4°C Ethanol

NFPA Rating:

(estimated) Health: 2; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Use water spray to disperse the gas/vapor. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Water spray may reduce vapor but may not prevent ignition in closed spaces.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Avoid use in confined spaces. Avoid breathing vapor or mist.

Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Ethanol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m3 TWA 3300 ppm IDLH	1000 ppm TWA; 1900 mg/m3 TWA;
Water	None listed	None listed	None listed
Methanol	200 ppm TWA;250 ppm STEL;Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA;
Isopropyl alcohol	200 ppm TWA;400 ppm STEL	400 ppm TWA; 980 mg/m3 TWA 2000 ppm IDLH	400 ppm TWA; 980 mg/m3 TWA;
Hematoxylin	None listed	None listed	None listed

OSHA Vacated PELs

Ethanol: 1000 ppm TWA; 1900 mg/m3 TWA

Methanol: 200 ppm TWA; 260 mg/m3 TWA
Isopropyl alcohol: 400 ppm TWA; 980 mg/m3 TWA

Personal Protective Equipment

Eyes:

Wear chemical splash goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	No information found
Odor:	No information found
pH:	No information found
Vapor Pressure:	No information found
Vapor Density:	No information found
Evaporation Rate:	No information found
Viscosity:	No information found
Boiling Point:	No information found
Freezing/Melting Point:	No information found
Decomposition Temperature:	No information found
Solubility in water:	No information found
Specific Gravity/Density:	No information found
Molecular Formula:	No information found
Molecular Weight:	No information found

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, ignition sources, excess heat, oxidizers, confined spaces

Incompatibilities with Other Materials

Strong oxidizing agents, acids, alkali metals, ammonia, peroxides, sodium, acid anhydrides, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, acid chlorides, uranium hexafluoride, iodine heptafluoride, acetyl bromide, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide, formaldehyde

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

RTECS:

CAS# 64-17-5: KQ6300000
CAS# 7732-18-5: ZC0110000
CAS# 67-56-1: PC1400000
CAS# 67-63-0: NT8050000
CAS# 517-28-2: MH7875000

LD50/LC50:

CAS# 64-17-5:
Draize test, rabbit, eye: 500 mg Severe
Draize test, rabbit, eye: 500 mg/24H Mild
Draize test, rabbit, skin: 20 mg/24H Moderate
Inhalation, mouse: LC50 = 39 gm/m3/4H
Inhalation, rat: LC50 = 20000 ppm/10H
Oral, mouse: LD50 = 3450 mg/kg
Oral, rabbit: LD50 = 6300 mg/kg
Oral, rat: LD50 = 7060 mg/kg
Oral, rat: LD50 = 9000 mg/kg.

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.

CAS# 67-56-1:
Draize test, rabbit, eye: 40 mg Moderate
Draize test, rabbit, eye: 100 mg/24H Moderate
Draize test, rabbit, skin: 20 mg/24H Moderate
Inhalation, rabbit: LC50 = 81000 mg/m3/14H
Inhalation, rat: LC50 = 64000 ppm/4H
Oral, mouse: LD50 = 7300 mg/kg
Oral, rabbit: LD50 = 14200 mg/kg
Oral, rat: LD50 = 5600 mg/kg
Skin, rabbit: LD50 = 15800 mg/kg.

CAS# 67-63-0:
Draize test, rabbit, eye: 100 mg Severe
Draize test, rabbit, eye: 10 mg Moderate
Draize test, rabbit, eye: 100 mg/24H Moderate
Draize test, rabbit, skin: 500 mg Mild
Inhalation, mouse: LC50 = 53000 mg/m3
Inhalation, rat: LC50 = 16000 ppm/8H
Inhalation, rat: LC50 = 72600 mg/m3
Oral, mouse: LD50 = 3600 mg/kg
Oral, mouse: LD50 = 3600 mg/kg
Oral, rabbit: LD50 = 6410 mg/kg
Oral, rat: LD50 = 5045 mg/kg
Oral, rat: LD50 = 5000 mg/kg
Skin, rabbit: LD50 = 12800 mg/kg.

CAS# 517-28-2:
No information found

Carcinogenicity:

CAS# 64-17-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 67-63-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 517-28-2: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

Ethanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals.Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome".

Teratogenicity:

There is no human information available. Methanol is considered to be a potential developmental hazard based on animal data. In animal experiments, methanol has caused fetotoxic or teratogenic effects without maternal toxicity.

Reproductive:

See actual entry in RTECS for complete information.

Mutagenicity:

See actual entry in RTECS for complete information.

Neurotoxicity:

No information found

Other:

Standard Draize Test(Skin, rabbit) = 20 mg/24H (Moderate) Standard Draize Test: Administration into the eye (rabbit) = 500 mg (Severe).

Section 12 - Ecological Information

Ecotoxicity:

Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3°C
Fish: Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified)
Bacteria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test
Fish: Fathead Minnow: 29.4 g/L; 96 Hr; LC50 (unspecified)
Fish: Goldfish: 250 ppm; 11 Hr; resulted in death
Fish: Rainbow trout: 8000 mg/L; 48 Hr; LC50 (unspecified)
Fish: Rainbow trout: LC50 = 13-68 mg/L; 96 Hr.; 12 degrees C
Fish: Fathead Minnow: LC50 = 29400 mg/L; 96 Hr.; 25 degrees C, pH 7.63
Fish: Rainbow trout: LC50 = 8000 mg/L; 48 Hr.; Unspecified
Bacteria: Phytobacterium phosphoreum: EC50 = 51,000-320,000 mg/L; 30 minutes; Microtox test

Environmental:

Dangerous to aquatic life in high concentrations. Aquatic toxicity rating: TLm 96>1000 ppm. May be dangerous if it enters water intakes. Methyl alcohol is expected to biodegrade in soil and water very rapidly. This product will show high soil mobility and will be degraded from the ambient atmosphere by the reaction with photochemically produced hyroxyl radicals with an estimated half-life of 17.8 days. Bioconcentration factor for fish (golden ide) < 10. Based on a log Kow of -0.77, the BCF value for methanol can be estimated to be 0.2.

Physical:

No information found

Other:

No information found

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

CAS# 67-56-1: waste number U154 (Ignitable waste).

Section 14 - Transport Information

	US DOT	Canadian TDG
Proper Shipping Name:	ALCOHOLS, N.O.S. (Ethanol, Methanol)	ALCOHOLS, N.O.S. (Ethanol, Methanol)
Hazard Class:	3	3(6.1)
UN Number:	UN1987	UN1987
Packing Group:	II	II

USA RQ: CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 64-17-5 is listed on the TSCA Inventory.
CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 67-56-1 is listed on the TSCA Inventory.
CAS# 67-63-0 is listed on the TSCA Inventory.
CAS# 517-28-2 is listed on the TSCA Inventory.

Health and Safety Reporting List

CAS# 67-63-0: Effective 12/15/86, Sunset 12/15/96

Chemical Test Rules

CAS# 67-63-0: 40 CFR 799.2325

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the components are on this list.

SARA Hazard Categories

CAS# 64-17-5: immediate, delayed, fire.
CAS# 67-56-1: immediate, fire.
CAS# 67-63-0: immediate, delayed, fire.

SARA Section 313

This material contains Methanol (CAS# 67-56-1, 4.4%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.
This material contains Isopropyl alcohol (CAS# 67-63-0, 4.4%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

Clean Air Act - Hazardous Air Pollutants (HAPs)

CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

None of the components are on this list.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

OSHA - Specifically Regulated Chemicals

None of the components are on this list.

US State

State Right to Know

Ethanol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
Methanol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
Isopropyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
No information found

California Prop 65

None of the components are on this list.

California No Significant Risk Level

None of the components are on this list.
None of the components are on this list.
None of the components are on this list.
None of the components are on this list.

None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: F XN
Risk Phrases: R 11 Highly flammable.
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R 68/20/21/22 Harmful : possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.
Safety Phrases: S 7 Keep container tightly closed.
S 16 Keep away from sources of ignition - No smoking.
S 36/37 Wear suitable protective clothing and gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

No information found

United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

Canadian DSL/NDSL

CAS# 64-17-5 is listed on Canada's DSL List.
CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 67-56-1 is listed on Canada's DSL List.
CAS# 67-63-0 is listed on Canada's DSL List.
CAS# 517-28-2 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product has a WHMIS classification of B2, D1B, D2B, D2A.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 64-17-5 is listed on the Canadian Ingredient Disclosure List.
CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.
CAS# 67-63-0 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

No information found
MSDS Creation Date: July 30, 1999
Revision Date: October 31, 2007

Revisions were made in Sections:

14

Material Safety Data Sheet

Weigert's Iron Hematoxylin, Part A

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.

Thermo SCIENTIFIC

Print Date: 5/09/08
Revision Date: 5/09/2008
Version: 1

Material Safety Data Sheet
Weigert's Iron Hematoxylin, Part B

Section 1 - Chemical Product and Company Identification

MSDS Name:

Weigert's Iron Hematoxylin, Part B

Catalog Numbers:

88029

Synonyms:

None Known.

Company Identification:

Richard Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008

Company Phone Number:

800-522-7270

Emergency Phone Number:

800-424-9300

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, Europe:

(202) 483-7616

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS	Hazard Symbols	Risk Phrases
7732-18-5	Deionized Water	97-99	231-791-2		
7705-08-0	Ferric chloride	1-2	231-729-4		
7647-01-0	Hydrogen chloride	<1.0	231-595-7	C	34 37

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Yellow liquid
Danger! Causes burns by all exposure routes.
Target Organs: Respiratory system, Eyes, Skin

Potential Health Effects

Eye:

Causes eye burns.

Skin:

Causes skin burns.

Ingestion:

Causes gastrointestinal tract burns.

Inhalation:

Causes chemical burns to the respiratory tract.

Chronic:

No information found.

Section 4 - First Aid Measures

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion:

If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature:

Not available

Explosion Limits:

Lower: Not available Upper: Not available

Flash Point:

Not available

NFPA Rating:

(estimated) Health: 3; Flammability: 0; Instability: 0

Material Safety Data Sheet
Weigert's Iron Hematoxylin, Part B

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling:

Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood. Discard contaminated shoes.

Storage:

Keep container closed when not in use.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Deionized Water	None listed	None listed	None listed
Ferric chloride	1 mg/m3 TWA (as Fe) (listed under Iron salts (soluble))	1 mg/m3 TWA (as Fe) (listed under Iron salts (soluble))	None listed
Hydrogen chloride	2 ppm Ceiling	50 ppm IDLH 5 ppm Ceiling; 7 mg/m3 Ceiling	5 ppm Ceiling; 7 mg/m3 Ceiling;

OSHA Vacated PELs

Ferric chloride 1 mg/m3 TWA (as Fe) (listed under Iron salts (soluble))

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Material Safety Data Sheet
Weigert's Iron Hematoxylin, Part B

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	Yellow
Odor:	Mild odor
pH:	No information found
Vapor Pressure:	No information found
Vapor Density:	No information found
Evaporation Rate:	approximately = water
Viscosity:	No information found
Boiling Point:	No information found
Freezing/Melting Point:	No information found
Decomposition Temperature:	No information found
Solubility in water:	Soluble.
Specific Gravity/Density:	1.005 @ 21°C
Molecular Formula:	Solution
Molecular Weight:	No information found

Section 10 - Stability and Reactivity

Chemical Stability:

No information found

Conditions to Avoid:

No information found

Incompatibilities with Other Materials

No information found

Hazardous Decomposition Products

No information found

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000
CAS# 7705-08-0: LJ9100000
CAS# 7647-01-0: MW4025000; MW4031000

LD50/LC50:

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.
CAS# 7705-08-0:
Oral, mouse: LD50 = 200 mg/kg
Oral, rat: LD50 = 316 mg/kg.
CAS# 7647-01-0:
Inhalation, mouse: LC50 = 1108 ppm/1H
Inhalation, mouse: LC50 = 20487 mg/m3/5M
Inhalation, mouse: LC50 = 3940 mg/m3/30M
Inhalation, mouse: LC50 = 8300 mg/m3/30M
Inhalation, rat: LC50 = 3124 ppm/1H
Inhalation, rat: LC50 = 60938 mg/m3/5M
Inhalation, rat: LC50 = 7004 mg/m3/30M
Inhalation, rat: LC50 = 45000 mg/m3/5M
Inhalation, rat: LC50 = 8300 mg/m3/30M
Oral, rabbit: LD50 = 900 mg/kg.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 7705-08-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 7647-01-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

No information found

Reproductive:

No information found

Mutagenicity:

No information found

Neurotoxicity:

No information found

Other:

See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:

Fish: Pseudomonas putida:

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

None of the components are on this list.

Section 14 - Transport Information

	US DOT	Canadian TDG
Proper Shipping Name:	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid, Ferric chloride)	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid, Ferric chloride)
Hazard Class:	8	8
UN Number:	UN1760	UN1760
Packing Group:	III	III

USA RQ: CAS# 7705-08-0: 1000 lb final RQ; 454 kg final RQ

USA RQ: CAS# 7647-01-0: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 7705-08-0 is listed on the TSCA Inventory.
CAS# 7647-01-0 is listed on the TSCA Inventory.

Health and Safety Reporting List

None of the components are on this list.

Chemical Test Rules

None of the components are on this list.

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

CAS# 7705-08-0: 1000 lb final RQ; 454 kg final RQ
CAS# 7647-01-0: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 7647-01-0: 500 lb TPQ (gas only)

SARA Hazard Categories

CAS# 7705-08-0: immediate.
CAS# 7647-01-0: immediate.

SARA Section 313

Hydrogen chloride is not at a high enough concentration to be reportable under Section 313.

Clean Air Act - Hazardous Air Pollutants (HAPs)

CAS# 7647-01-0 is listed as a hazardous air pollutant (HAP).

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

CAS# 7705-08-0 is listed as a Hazardous Substance under the CWA.
CAS# 7647-01-0 is listed as a Hazardous Substance under the CWA.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

CAS# 7647-01-0 is considered highly hazardous by OSHA.

OSHA - Specifically Regulated Chemicals

None of the components are on this list.

US State

State Right to Know

Ferric chloride can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, (listed as Iron salts (soluble)), Massachusetts.
Hydrogen chloride can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

None of the components are on this list.

California No Significant Risk Level

None of the components are on this list.
None of the components are on this list.
None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: C
Risk Phrases: R 34 Causes burns.
Safety Phrases: S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 28A After contact with skin, wash immediately with plenty of water.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

No information found

United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

Canadian DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 7705-08-0 is listed on Canada's DSL List.
CAS# 7647-01-0 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product has a WHMIS classification of E.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7705-08-0 (listed as Iron salts (soluble)) is listed on the Canadian Ingredient Disclosure List.
CAS# 7647-01-0 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

No information found
MSDS Creation Date: May 9, 2008
Revision Date: May 9, 2008

Revisions were made in Sections:

2, 3, 5, 6, 9, 14, 16

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.

ACC# 94631

Thermo SCIENTIFIC

Print Date: 5/09/08
Revision Date: 5/09/2008
Version: 1

Material Safety Data Sheet
1% Acetic acid solution

Section 1 - Chemical Product and Company Identification

MSDS Name:

1% Acetic acid solution

Catalog Numbers:

88039

Synonyms:

None Known.

Company Identification:

Richard Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008

Company Phone Number:

800-522-7270

Emergency Phone Number:

800-424-9300

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, Europe:

(202) 483-7616

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS	Hazard Symbols	Risk Phrases
	97-99		231-791-2		
64-19-7	Acetic acid	1.0	200-580-7		
Not available	Proclin 300	<0.1	Not available		

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Colorless liquid
Caution! May cause respiratory and digestive tract irritation. May cause eye and skin irritation.
Target Organs: Teeth

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause severe skin irritation.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation:

May cause respiratory tract irritation.

Chronic:

Chronic exposure to acetic acid may cause erosion of dental enamel, bronchitis, eye irritation, darkening of the skin, and chronic inflammation of the respiratory tract. Acetic acid can cause occupational asthma. One case of a delayed asthmatic response to glacial acetic acid has been reported in a person with bronchial asthma. Skin sensitization to acetic acid is rare, but has occurred.

Section 4 - First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Reacts with most metals to form highly flammable hydrogen gas which can form explosive mixtures with air.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature:

Not applicable.

Explosion Limits:

Lower: Not available Upper: Not available

Flash Point:

Not applicable.

Material Safety Data Sheet
1% Acetic acid solution

NFPA Rating:

(estimated) Health: 1; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Distilled Water	None listed	None listed	None listed
Acetic acid	10 ppm TWA;15 ppm STEL	10 ppm TWA; 25 mg/m3 TWA 50 ppm IDLH	10 ppm TWA; 25 mg/m3 TWA;
Proclin 300	None listed	None listed	None listed

OSHA Vacated PELs

Acetic acid: 10 ppm TWA; 25 mg/m3 TWA

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	Colorless
Odor:	None reported
pH:	No information found
Vapor Pressure:	No information found
Vapor Density:	No information found
Evaporation Rate:	No information found
Viscosity:	No information found
Boiling Point:	No information found
Freezing/Melting Point:	No information found
Decomposition Temperature:	No information found
Solubility in water:	No information found
Specific Gravity/Density:	No information found
Molecular Formula:	Solution
Molecular Weight:	No information found

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, excess heat

Incompatibilities with Other Materials

Metals, oxidizing agents, acids, bases, acetic anhydride, alcohols, amines, ammonium nitrate, bromine trifluoride, chlorine trifluoride, nitric acid, permanganates, sodium hydroxide, sodium peroxide, hydrogen peroxide, acetaldehyde, acid anhydrides, chlorosulfonic acid, oleum, potassium hydroxide, perchloric acid, potassium tert-butoxide, ethyleneimine, 2-aminoethanol, ethylene diamine, phosphorus trichloride, chromic acid anhydride, phosphorus isocyanate, diallyl methyl carbinol + ozone, nitric acid + acetone, xylene

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide

Hazardous Polymerization

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000
CAS# 64-19-7: AF1225000

LD50/LC50:

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.
CAS# 64-19-7:
Draize test, rabbit, skin: 50 mg/24H Mild
Inhalation, mouse: LC50 = 5620 ppm/1H
Oral, rat: LD50 = 3310 mg/kg
Skin, rabbit: LD50 = 1060 uL/kg.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 64-19-7: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

No information available.

Teratogenicity:

Effects on Newborn: behavioral, orl-rat TDLo=700 mg/kg for acetic acid.

Reproductive:

Fertility: male index, itt-rat TDLo=400 mg/kg for acetic acid.

Mutagenicity:

No information available.

Neurotoxicity:

No information available.

Other:

See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:

Fish: Bluegill/Sunfish: TLm = 100; Unspecified; CAS# 64-19-7 Fresh water
Fish: Goldfish: TLm = 75 ppm; 96 Hr; CAS# 64-19-7 Fresh water

Acetic acid: Bluegill (fresh water) TLm=75 ppm/96H Goldfish (fresh water) TLm=100 ppm/96H Shrimp (aerated water) LC50=100-330 ppm/48H

Environmental:

Acetic acid spreads on soil surface and penetrates at rate dependent on soil type and water content. It readily degrades in water and shows little potential for bioaccumulation.

Physical:

No information available.

Other:

None.

Material Safety Data Sheet
1% Acetic acid solution

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

None of the components are on this list.

Section 14 - Transport Information

	US DOT	Canadian TDG
Proper Shipping Name:	Not Regulated	Not Regulated
Hazard Class:		
UN Number:		
Packing Group:		

USA RQ: CAS# 64-19-7: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 64-19-7 is listed on the TSCA Inventory.
Proclin 300 is not listed on the TSCA Inventory. It is for research and development use only.

Health and Safety Reporting List

None of the components are on this list.

Chemical Test Rules

None of the components are on this list.

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

CAS# 64-19-7: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the components are on this list.

SARA Hazard Categories

CAS# 64-19-7: immediate, delayed, fire.

SARA Section 313

None of the components are on this list.

Clean Air Act - Hazardous Air Pollutants (HAPs)

None of the components are on this list.

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

CAS# 64-19-7 is listed as a Hazardous Substance under the CWA.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

OSHA - Specifically Regulated Chemicals

None of the components are on this list.

US State

State Right to Know

Acetic acid can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
No information found

California Prop 65

None of the components are on this list.

California No Significant Risk Level

None of the components are on this list.
None of the components are on this list.
None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: None listed
Risk Phrases: None listed
Safety Phrases: S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

No information found

United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

Material Safety Data Sheet
1% Acetic acid solution

Canadian DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 64-19-7 is listed on Canada's DSL List.

Canadian WHMIS Classifications

No information found
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 64-19-7 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

Color information has been
MSDS Creation Date: May 9, 2008
Revision Date: May 9, 2008

Revisions were made in Sections:

14

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.

Thermo
SCIENTIFIC

ACC# 93759

Print Date: 8/11/06
Revision Date: 9/30/2008
Version: 1

Material Safety Data Sheet
Bouin's Fluid

Section 1 - Chemical Product and Company Identification

MSDS Name:

Bouin's Fluid

Catalog Numbers:

57211, 88038, 572401

Synonyms:

None Known.

Company Identification:

Richard Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008

Company Phone Number:

800-522-7270

Emergency Phone Number:

800-424-9300

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, Europe:

(202) 483-7616

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS	Hazard Symbols	Risk Phrases
7732-18-5	Water	83-84	231-791-2		
50-00-0	Formaldehyde	8-9	200-001-8	Xi	43
64-19-7	Acetic acid	4-5	200-580-7		
67-56-1	Methyl alcohol	2-3	200-659-6	F T	11 23/24/25 39/23/24/25
88-89-1	Picric acid	<1.0	201-865-9		

Material Safety Data Sheet
Bouin's Fluid

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Clear yellow liquid
Danger! Causes irritation and possible burns by all routes of exposure. Contains formaldehyde which can cause cancer. May cause allergic respiratory and skin reaction. Harmful if swallowed, inhaled, or absorbed through the skin. This substance has caused adverse reproductive and fetal effects in animals. May cause liver and kidney damage.
Target Organs: Kidneys, Liver, Respiratory system, Eyes, Skin

Potential Health Effects

Eye:

Causes severe eye irritation and possible burns.

Skin:

Harmful if absorbed through the skin. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Causes severe skin irritation and possible burns.

Ingestion:

Harmful if swallowed. May cause liver and kidney damage. Causes digestive tract irritation with possible burns.

Inhalation:

Harmful if inhaled. May cause asthmatic attacks due to allergic sensitization of the respiratory tract. Causes respiratory tract irritation with possible burns.

Chronic:

Contains formaldehyde which can cause cancer in humans. There is sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries. There is limited evidence that formaldehyde causes cancer of the nasal cavity and paranasal sinuses and strong but not sufficient evidence for leukemia.

Section 4 - First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Treat symptomatically and supportively.

Material Safety Data Sheet
Bouin's Fluid

Section 5 - Fire Fighting Measures

General Information:

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

Not applicable.

Explosion Limits:

Lower: Not available Upper: Not available

Flash Point:

Not applicable.

NFPA Rating:

(estimated) Health: 3; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Provide ventilation.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use only with adequate ventilation.

Storage:

Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. See 29CFR 1910.1048 for regulatory requirements pertaining to all occupational exposures to formaldehyde, i.e., from formaldehyde gas, its solutions, and materials that release formaldehyde.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None listed	None listed	None listed
Formaldehyde	0.3 ppm Ceiling	0.016 ppm TWA 20 ppm IDLH 0.1 ppm Ceiling (15 min)	0.75 ppm TWA; 2 ppm STEL; 0.5 ppm Action Level (Irritant and potential cancer hazard - see 29 CFR 1910.1048);
Acetic acid	10 ppm TWA;15 ppm STEL	10 ppm TWA; 25 mg/m3 TWA 50 ppm IDLH	10 ppm TWA; 25 mg/m3 TWA;
Methyl alcohol	200 ppm TWA;250 ppm STEL;Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA;
Picric acid	0.1 mg/m3 TWA	0.1 mg/m3 TWA 75 mg/m3 IDLH	0.1 mg/m3 TWA; prevent or reduce skin absorption;

OSHA Vacated PELs

Formaldehyde: 3 ppm TWA (unless specified in 1910.1048)
Acetic acid: 10 ppm TWA; 25 mg/m3 TWA
Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA
Picric acid: 0.1 mg/m3 TWA

Personal Protective Equipment

Eyes:

Wear chemical splash goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: Clear yellow
Odor: Pungent odor
pH: No information found
Vapor Pressure: No information found
Vapor Density: No information found
Evaporation Rate: No information found

Material Safety Data Sheet

Bouin's Fluid

Viscosity: No information found
Boiling Point: No information found
Freezing/Melting Point: No information found
Decomposition Temperature: No information found
Solubility in water: Completely soluble in water.
Specific Gravity/Density: No information found
Molecular Formula: Solution
Molecular Weight: No information found

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Excess heat, confined spaces

Incompatibilities with Other Materials

Strong oxidizing agents

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide

Hazardous Polymerization

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000
CAS# 50-00-0: LP8925000
CAS# 64-19-7: AF1225000
CAS# 67-56-1: PC1400000
CAS# 88-89-1: TJ7875000

Material Safety Data Sheet
Bouin's Fluid

LD50/LC50:

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.
CAS# 50-00-0:
Draize test, rabbit, eye: 750 ug/24H Severe
Draize test, rabbit, eye: 750 ug Severe
Draize test, rabbit, eye: 10 mg Severe
Draize test, rabbit, eye: 37% Severe
Draize test, rabbit, skin: 2 mg/24H Severe
Draize test, rabbit, skin: 50 mg/24H Moderate
Inhalation, mouse: LC50 = 454 mg/m3/4H
Inhalation, mouse: LC50 = 505 mg/m3/2H
Inhalation, rat: LC50 = 203 mg/m3
Inhalation, rat: LC50 = 578 mg/m3/2H
Inhalation, rat: LC50 = 250 ppm/2H
Oral, mouse: LD50 = 42 mg/kg
Oral, mouse: LD50 = 385 mg/kg
Oral, mouse: LD50 = 500 mg/kg
Oral, rat: LD50 = 100 mg/kg
Oral, rat: LD50 = 500 mg/kg
Skin, rabbit: LD50 = 270 uL/kg
Skin, rabbit: LD50 = 270 mg/kg.
CAS# 64-19-7:
Draize test, rabbit, skin: 50 mg/24H Mild
Inhalation, mouse: LC50 = 5620 ppm/1H
Oral, rat: LD50 = 3310 mg/kg
Skin, rabbit: LD50 = 1060 uL/kg.
CAS# 67-56-1:
Draize test, rabbit, eye: 40 mg Moderate
Draize test, rabbit, eye: 100 mg/24H Moderate
Draize test, rabbit, skin: 20 mg/24H Moderate
Inhalation, rabbit: LC50 = 81000 mg/m3/14H
Inhalation, rat: LC50 = 64000 ppm/4H
Oral, mouse: LD50 = 7300 mg/kg
Oral, rabbit: LD50 = 14200 mg/kg
Oral, rat: LD50 = 5600 mg/kg
Skin, rabbit: LD50 = 15800 mg/kg.
CAS# 88-89-1:
Oral, rat: LD50 = 200 mg/kg.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 50-00-0
ACGIH: A2 - Suspected Human Carcinogen
California: carcinogen, initial date 1/1/88 (gas)
NTP: Suspect carcinogen
IARC: Group 1 carcinogen
CAS# 64-19-7: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 88-89-1: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

In June 2004 an expert IARC group determined that there is now sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries.

Teratogenicity:

musculoskeletal, ipr-mouse TDLo=240 mg/kg.

Reproductive:

Formaldehyde effects on fertility: male index, itt-rat TDLo=400 mg/kg; post- implantation mortality, ims-mouse TDLo=259 mg/kg. Paternal Effects: spermatogenesis, orl-rat TDLo=200 mg/kg; testes/sperm duct/epididymis, ipr-rat TDLo=80 mg/kg.

Mutagenicity:

Formaldehyde DNA Damage: human fibroblast 100 umol/L DNA Inhibition: human cell types 210 umol/L Unscheduled DNA Synthesis: rat cell types 50 umol/L Gene Mutation in Mammalian Cells: human lymphocyte 130 umol/L.

Neurotoxicity:

No information available.

Other:

See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:

No information found

Environmental:

Bioconcentration: Studies on various fish have shown little potential for bioconcentration of substance. Soil Adsorption: log octanol/water partition coefficient=0.35(indicates low potential for soil adsorption). Substance has a high biological oxygen demand, and is expected to have significant potential to affect secondary waste treatment microorganisms.

Physical:

No information found

Other:

No information found

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

CAS# 50-00-0: waste number U122. CAS# 67-56-1: waste number U154 (Ignitable waste).

Material Safety Data Sheet
Bouin's Fluid

Section 14 - Transport Information

	US DOT	Canadian TDG
Proper Shipping Name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S (Formaldehyde, Acetic acid)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S (Formaldehyde, Acetic acid)
Hazard Class:	8	8
UN Number:	UN3265	UN3265
Packing Group:	III	III

USA RQ: CAS# 50-00-0: 100 lb final RQ; 45.4 kg final RQ

USA RQ: CAS# 64-19-7: 5000 lb final RQ; 2270 kg final RQ

USA RQ: CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 50-00-0 is listed on the TSCA Inventory.
CAS# 64-19-7 is listed on the TSCA Inventory.
CAS# 67-56-1 is listed on the TSCA Inventory.
CAS# 88-89-1 is listed on the TSCA Inventory.

Health and Safety Reporting List

None of the components are on this list.

Chemical Test Rules

None of the components are on this list.

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

CAS# 50-00-0: 100 lb final RQ; 45.4 kg final RQ
CAS# 64-19-7: 5000 lb final RQ; 2270 kg final RQ
CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 50-00-0: 500 lb TPQ

SARA Hazard Categories

CAS# 50-00-0: immediate, delayed.

CAS# 64-19-7: immediate, delayed, fire.
CAS# 67-56-1: immediate, fire.
CAS# 88-89-1: immediate, delayed, fire, sudden release of pressure, reactive.

SARA Section 313

This material contains Formaldehyde (CAS# 50-00-0, 8-9%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.
This material contains Methyl alcohol (CAS# 67-56-1, 2-3%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.
Picric acid is not at a high enough concentration to be reportable under Section 313.

Clean Air Act - Hazardous Air Pollutants (HAPs)

CAS# 50-00-0 is listed as a hazardous air pollutant (HAP).
CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

CAS# 50-00-0 is listed as a Hazardous Substance under the CWA.
CAS# 64-19-7 is listed as a Hazardous Substance under the CWA.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

CAS# 50-00-0 is considered highly hazardous by OSHA.

OSHA - Specifically Regulated Chemicals

CAS# 50-00-0 is a specifically regulated chemical by OSHA.

US State

State Right to Know

Formaldehyde can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
Acetic acid can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
Methyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
Picric acid can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

WARNING: This product contains Formaldehyde, a chemical known to the State of California to cause cancer.

California No Significant Risk Level

None of the components are on this list.
CAS# 50-00-0: 40 æg/day NSRL
None of the components are on this list.
None of the components are on this list.
None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: XN
Risk Phrases: R 45 May cause cancer.
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R 34 Causes burns.
R 43 May cause sensitization by skin contact.
Safety Phrases: S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 28A After contact with skin, wash immediately with plenty of water.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

No information found

United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

Canadian DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 50-00-0 is listed on Canada's DSL List.
CAS# 64-19-7 is listed on Canada's DSL List.
CAS# 67-56-1 is listed on Canada's DSL List.
CAS# 88-89-1 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product has a WHMIS classification of E, D2A.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 50-00-0 is listed on the Canadian Ingredient Disclosure List.
CAS# 64-19-7 is listed on the Canadian Ingredient Disclosure List.
CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.
CAS# 88-89-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

Color information has been
MSDS Creation Date: December 9, 2005
Revision Date: September 30, 2008

Revisions were made in Sections:

14

Material Safety Data Sheet

Bouin's Fluid

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.