

SCHAUDINNS SOLUTION

Section 1 - Chemical Product and Company Identification

MSDS Name: Schaudinns SOlution

Catalog Numbers: SO-780-A

Company Identification: ROWLEY BIOCHEMICAL
10 ELECTRONICS AVENUE
DANVERS, MA 01923

For information, call: 978-739-4883

Emergency Number: 800-424-9300

For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications

Health Hazards

H303 **Acute Oral Toxicity:** 5

H312 **Acute Dermal Toxicity:** 4

H332 **Acute Inhalation Toxicity:** 4

H315 **Skin Corrosion/ Skin Irritation:** 2

H319 **Eye damage/ Irritation:** 2A

H334 **Respiratory Sensitization:** 1B

H317 **Skin Dermal Sensitization:** 1B

H341 **Germ Cell Mutagenicity:** 2

H361 **Reproductive Toxicity:** 2

H373 **Specific target Organ Toxicity:** 2

Physical Hazards

H225 **Flammability:** 2

Environmental Hazards

Aquatic acute environmental Hazards: Not Classified

Chronic environmental Hazards: Not Classified

Pictograms or Hazard symbols and Hazard statement.



Warning! ! Harmful if swallowed. Harmful if inhaled. Causes skin irritation. Causes severe eye irritation. May cause allergic skin reaction.



Danger! Highly flammable liquid and vapour.



Warning! May cause allergy or asthma symptoms or breathing difficulties if inhaled. Mutagenic for mammalian somatic cells. May effect genetic material. May cause birth defects and adverse reproductive effects. May cause damage to the following organs blood, kidneys, liver, brain, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), optic nerve and reproductive system through prolonged or repeated exposure.

Precautionary Statements

H303

P312 Call a physician if you feel unwell.

H312

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

P302 + P352 If on skin, wash with plenty of water. Remove contact lenses if present and easy to do so. Continue rinsing.

P363 Wash contaminated clothing before reuse.

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

H332

P261 Avoid breathing fumes/mist/vapors.

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

P304 + P340 If inhaled, remove person to fresh air and keep comfortable for breathing.

H315

P264 Wash thoroughly after handling.

P332 + P313 If skin irritation occurs, get medical advice/attention

P362 Take off contaminated clothing and wash before reuse.

H319

P305 + P351 + P338 If in eyes, rinse cautiously with water for several minutes.

P337 + P313 If eye irritation persists, get medical advice/attention.

H334**P261** Avoid breathing fumes/mist/vapors.**P285** In case of inadequate ventilation, wear respiratory protection.**P304 + P341** IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.**P342 + P311** If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.**H317****P272** Contaminated work clothing should not be allowed out of the work place.**P333 + P313** IF ON SKIN: Wash with plenty of soap and water.**H341 + H361****P201** Obtain special instructions before use.**P202** Do not handle until all safety precautions have been read and understood.**P281** Use personal protective equipment as required**P308 + P313** If exposed or concerned, get medical advice/attention.**P405** Store locked up.**H373****P260** Do not breathe fume/gas/mist/vapors.**P314** Get medical advice/attention if you feel unwell.**H225****P210** Keep away from heat, flames, and hot surfaces. No smoking.**P233** Keep container tightly closed.**P241** Use explosive-proof equipment.**P242** Use only non-sparking tools.**P243** Take precautionary measures against static discharge.**P303 + P361 + P353** If on skin (or hair) take off immediately all contaminated clothing. Rinse skin with water.**P403 + P235** Store in a well-ventilated place. Keep cool.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7487-94-7	Mercuric Chloride	4.36 w/v
64-19-7	Glacial Acetic Acid	5.39 v/v
64-17-5	Ethyl alcohol	24.07 v/v
67-56-1	Methyl alcohol	1.27 v/v
56-81-5	Glycerin	1.94 v/v
7732-18-5	Water	62.97 v/v

Section 4 - First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

Oral Exposure: If Swallowing seek immediate medical advice.

Inhalation Exposure: If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Section 5 - Fire Fighting Measures

NFPA HEALTH 1 FLAMMABILITY 3 REACTIVITY 0

General Information: Containers can build up pressure if exposed to heat and/or fire. 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. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.

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. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Flash Point: 16.6 deg C (61.88 deg F)

Autoignition Temperature: 363 deg C (685.40 deg F)

Explosion Limits, Lower:3.3 vol %

Upper: 19.0 vol %

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):

Wear protective gear eliminates all sources of ignition.

Methods for Cleaning up: Absorb with sand, earth or vermiculite. Carefully sweep up and containerize for proper disposal.

Section 7 - Handling and Storage

Use care when handling. Wash thoroughly after handling. Store capped at Room temperature. Keep away from incompatible materials. Protect from heat. Vapors are heavier than air, may travel considerable distance and ignite or explode.

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 - Final PELs
Ethanol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m ³ TWA 3300 ppm IDLH	1000 ppm TWA; 1900 mg/m ³ TWA

OSHA Vacated PELs: Ethanol: 1000 ppm TWA; 1900 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 a respirator's use.

Engineering Controls:

Mechanical exhaust

Personal Protective Equipment:

Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

Section 9 - Physical and Chemical Properties
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Physical State: Liquid

Appearance: Clear

Odor: Alcohol-like

pH: N/A

Vapor Pressure: N/A

Vapor Density: N/A

Evaporation Rate:N/A

Viscosity: N/A

Boiling Point: N/A

Freezing/Melting Point: N/A

Decomposition Temperature:N/A

Solubility: N/A

Specific Gravity/Density:N/A

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, oxidizers.

Incompatibilities with Other Materials: Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information
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CAS# 7487-94-7 Mercuric Chloride

RTECS:

LD50/LC50:

Oral (LD50): Acute 1 mg/kg [Rat]. 6 mg/kg [Mouse].

Dermal (LD50): Acute 41 mg/kg [Rat].

CAS# 64-19-7: Glacial Acetic Acid

Oral rat LD50: 3310 mg/kg.

Skin: rabbit LD50: 1.06 g/kg

Inhalation mouse LC50: 5620 ppm/1-hr; investigated as a mutagen, reproductive

CAS# 64-17-5 Ethyl Alcohol

RTECS: KQ6300000

Oral (LD50): Acute mg/kg [Rat]. 3450 mg/kg [Mouse].

Vapor (LC50): Acute: 20000 ppm 8 hrs [Rat]. 39000 mg/m 4 hours [Mouse]

CAS# 67-56-1 Methyl Alcohol

Oral (LD50): Acute: 5628 mg/kg [Rat]. Dermal (LD50): Acute: 15800 mg/kg [Rabbit].

Vapor (LC50): Acute: 64000 ppm 4 hours [Rat]

Route of exposure:

Multiple routes: May be harmful by inhalation, ingestion, or skin absorption.

Conditions aggravated by exposure:

The toxicological properties have not been thoroughly investigated.

Solution Carcinogenicity:

Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 56-81-5 Glycerin

Oral, mouse: LD50 = 4090 mg/kg;

Oral, rat: LD50 = 12600 mg/kg;

Dermal, rabbit: LC50 = 10000 mg/kg;

Dermal, rat: LD50 = 9000 mg/m 1 hour

Carcinogenicity:

CAS# 56-81-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Not Available

Teratogenicity: Not Available

Reproductive Effects: Oral, rat: TDL=100 mg/kg 1 day prior to mating

Oral, human TDL 1428 mg/kg

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: Oral, Human - woman: TDLo = 41 gm/kg (female 41 week(s) after conception) Effects on Newborn - Apgar score (human only) and Effects on Newborn - other neonatal measures or effects and Effects on Newborn - drug dependence.

Reproductive Effects: Intrauterine, Human - woman: TDLo = 200 mg/kg (female 5 day(s) pre-mating) Fertility - female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated).

Neurotoxicity: No information available.

Mutagenicity: DNA Inhibition: Human, Lymphocyte = 220 mmol/L.; Cytogenetic Analysis: Human, Lymphocyte = 1160 gm/L.; Cytogenetic Analysis: Human, Fibroblast = 12000 ppm.; Cytogenetic Analysis: Human, Leukocyte = 1 pph/72H (Continuous).; Sister Chromatid Exchange: Human, Lymphocyte = 500 ppm/72H (Continuous).

Other Studies: 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

CAS# 7487-94-7: Not Available

CAS# 64-19-7. This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

CAS# 64-17-5: Ecotoxicity in water (LC50): 14000 mg/l 96 hrs [Rainbow trout]. 11200 mg/l 24 hours [fingerling trout].

CAS#67-56-1: Ecotoxicity in water (LC50): 29400 mg/l 96 hours [Fathead Minnow].

CAS# 56-81-5: Ecotoxicity in water LC50: 58.5 ppm 96 hours (Trout)
(Methyl Alcohol) in water LC50: 29400 mg/l 96 hours (Fathead Minnow)

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products are less toxic than the product itself.

Section 13 - Disposal Considerations

Appropriate method of disposal of substance or preparation:

Handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved waste facility.

Section 14 – Transport Information

DOT

Class 6.1, 3

Toxic Liquids, Flammable, Organic, N.O.S. (Mercuric Chloride & SD Alcohol)

UN 2929

PG II

Section 15 - Regulatory Information

US Classification and label test

US Statements: Caution: Avoid contact and inhalation

United States Regulatory Information

SARA Listed: No

California Prop 65

WARNING: Ethanol, is a chemical known to the state of California to cause developmental reproductive toxicity.

California No Significant Risk Level: None of the chemicals in this product are listed

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: no

NDSL: no

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

F

Risk Phrases:

R11 Highly flammable.

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

R36/38 Irritating to eyes and skin

R42/43 May cause sensitization by inhalation and skin contact

R61 May cause harm to the unborn child

R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

Safety Phrases:

S37/39 Wear suitable gloves and eye/face protection

S20/21 When using do not eat, drink or smoke

S2 Keep out of the reach of children

S16 Keep away from sources of ignition - No smoking

S33 Take precautionary measures against static discharges

S7 Keep container tightly closed.

S9 Keep container in a well-ventilated place

S24/25 Avoid contact with skin and eyes

Section 16 - Additional Information

MSDS Creation Date: 10/13/10

Revision #1 5/2/14 YM

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