



Safety Data Sheet

STEINER STAIN KIT OSHA

SECTION 1: Identification

1.1 GHS Product identifier

Product name	STEINER STAIN KIT
Product number	KT035
Brand	STEINER STAIN KIT

1.2 Other means of identification

Component 1: OXIDIZER SOLUTION
Component 2: 10% ZINC FORMALIN
Component 3: GUM MASTIC
Component 4: HYDROQUINONE
Component 5: SILVER NITRATE SOLUTION (0.2%)
Component 6: SILVER NITRATE (1%)

1.3 Recommended use of the chemical and restrictions on use

In Vitro Diagnostic Use

1.4 Supplier's details

Name	Diagnostic Biosystems
Address	6616 Owens Drive Pleasanton CA 94588 USA
Telephone	(888) 896-3350
email	customersupport@dbiosys.com

1.5 Emergency phone number

(925) 484-3350 (9AM-6PM, Monday - Friday, Pacific Standard Time)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Acute toxicity, dermal (C.4.2), Cat. 4
- Acute toxicity, inhalation (C.4.3), Cat. 4
- Acute toxicity, oral (C.4.1), Cat. 4
- Carcinogenicity (C.4.9), Cat. 1B

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- Germ cell mutagenicity (C.4.8), Cat. 2
- Skin corrosion/irritation (C.4.4), Cat. 1A
- Sensitization, skin (C.4.7), Cat. 1
- Specific target organ toxicity (single exposure) (C.4.11), Cat. 1

2.2 GHS label elements, including precautionary statements

Pictogram



1. Exclamation mark; 2. Health hazard; 3. Corrosion

Signal word

Danger

Hazard statement(s)

H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H332	Harmful if inhaled
H341	Suspected of causing genetic defects
H350	May cause cancer
H370	Causes damage to organs

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER /doctor/ if you feel unwell,
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
P330	Rinse mouth.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container to a licensed disposal company.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

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Component 1. Oxidizer Solution

1. Alcohol

Concentration 62 % (volume)

Other names / synonyms ABSOLUTE ETHANOL; ALCOHOL DEHYDRATED; ALCOHOL, ANHYDROUS; Alcoholum / ethanolum; ALGRAIN; ANHYDROL; COLOGNE SPIRIT; COLOGNE SPIRITS (ALCOHOL); Ethanol; ETHANOL 200 PROOF; ETHANOL SOLUTION; ETHYL ALCOHOL; ETHYL ALCOHOL ANHYDROUS; ETHYL HYDRATE; ETHYL HYDROXIDE; FERMENTATION ALCOHOL; GRAIN ALCOHOL; JAYSOL; JAYSOL S; METHYLCARBINOL; MOLASSES ALCOHOL; NCI-C03134; POTATO ALCOHOL; SD ALCOHOL 23-HYDROGEN; SPIRIT; SPIRITS OF WINE; TECSOL; UN 1170

EC no. 200-578-6

CAS no. 64-17-5

Index no. 603-002-00-5

- Flammable liquids (chapter 2.6), Cat. 2

H225 Highly flammable liquid and vapor

2. PHENOL

Concentration 5 % (weight)

EC no. 203-632-7

CAS no. 108-95-2

Index no. 604-001-00-2

- Germ cell mutagenicity (chapter 3.5), Cat. 2
- Acute toxicity, inhalation (chapter 3.1), Cat. 3
- Acute toxicity, dermal (chapter 3.1), Cat. 3
- Acute toxicity, oral (chapter 3.1), Cat. 3
- Specific target organ toxicity, repeated exposure (chapter 3.9), Cat. 2
- Skin corrosion/irritation (chapter 3.2), Cat. 1B

H301 Toxic if swallowed

H311 Toxic in contact with skin

H314 Causes severe skin burns and eye damage

H331 Toxic if inhaled

H341 Suspected of causing genetic defects

H373 May cause damage to organs through prolonged or repeated exposure

SCLs/M-factors/ATEs *

Skin Corr. 1B; H314: $C \geq 3 \%$

Skin Irrit. 2; H315: $1 \% \leq C < 3 \%$

Eye Irrit. 2; H319: $1 \% \leq C < 3 \%$

3. Hydrochloric acid

Concentration 1 % (volume)

Other names / synonyms Acidum hydrochloricum; hydrogen chloride; HYDROGEN CHLORIDE (gas)

EC no. 231-595-7

CAS no. 7647-01-0

Index no. 017-002-01-X

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- Skin corrosion/irritation (chapter 3.2), Cat. 1
- Eye damage/irritation (chapter 3.3), Cat. 1
- Acute toxicity, inhalation (chapter 3.1), Cat. 3

H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H331 Toxic if inhaled
SCLs/M-factors/ATEs Skin Corr. 1B; H314: C ≥ 25 %
Skin Irrit. 2; H315: 10 % ≤ C < 25 %
Eye Irrit. 2; H319: 10 % ≤ C < 25 %
STOT SE 3; H335: C ≥ 10 %

4. Formic acid

Concentration 1 % (volume)

Other names / synonyms Acidum formicum;
EC no. 200-579-1
CAS no. 64-18-6
Index no. 607-001-00-0

- Flammable liquids (chapter 2.6), Cat. 3
- Acute toxicity, oral (chapter 3.1), Cat. 4
- Acute toxicity, inhalation (chapter 3.1), Cat. 3
- Eye damage/irritation (chapter 3.3), Cat. 1
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 1A

H314 Causes severe skin burns and eye damage
SCLs/M-factors/ATEs Skin Corr. 1A; H314: C ≥ 90 %
Skin Corr. 1B; H314: 10 % ≤ C < 90 %
Skin Irrit. 2; H315: 2 % ≤ C < 10 %
Eye Irrit. 2; H319: 2 % ≤ C < 10 %

5. Isopropyl alcohol

Concentration 5 % (volume)

Other names / synonyms 2-HYDROXYPROPANE; 2-Propanol; 2-PROPYL ALCOHOL; ALCOJEL;
ALCOSOLVE; ALCOSOLVE 2; AVANTIN; AVANTINE; CHROMAR; COMBI-
SCHUTZ; DIMETHYLCARBINOL; HARTOSOL; IMSOL A; ISOHOL;
Isopropanol; LUTOSOL; N-PROPAN-2-OL; PETROHOL; PRO; PROPAN-2-
OL; Propan-2-ol, isopropanol; PROPOL; reaction mass of: bis(1S,2S,4S)-(1-
benzyl-4-tert-butoxycarboxamido-2-hydroxy-5-phenyl)pentylammonium
succinate; SEC-PROPYL ALCOHOL; SPECTRAR; STERISOL HAND
DISINFECTANT; TAKINEOCOL; UN 1219

EC no. 414-810-0
CAS no. 67-63-0
Index no. 607-403-00-6

- Flammable liquids (chapter 2.6), Cat. 2
- Eye damage/irritation (chapter 3.3), Cat. 2
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3
- Specific target organ toxicity, repeated exposure (chapter 3.9), Cat. 2
- Eye damage/irritation (chapter 3.3), Cat. 1

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- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H225	Highly flammable liquid and vapor
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Component 2. Zinc Formalin

1. Formaldehyde

Concentration	3.7 % (volume)
Other names / synonyms	Formaldehyde (gas)
EC no.	200-001-8
CAS no.	50-00-0
Index no.	605-001-00-5

- Carcinogenicity (chapter 3.6), Cat. 1B
- Germ cell mutagenicity (chapter 3.5), Cat. 2
- Acute toxicity, inhalation (chapter 3.1), Cat. 3
- Acute toxicity, dermal (chapter 3.1), Cat. 3
- Acute toxicity, oral (chapter 3.1), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Sensitization - skin (chapter 3.4), Cat. 1

H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H331	Toxic if inhaled
H341	Suspected of causing genetic defects
H350	May cause cancer
SCLs/M-factors/ATEs	STOT SE 3; H335: C ≥ 5 % Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 5 % ≤ C < 25 % Eye Irrit. 2; H319: 5 % ≤ C < 25 % Skin Sens. 1; H317: C ≥ 0,2 %

2. Zinc chloride

Concentration	10 % (weight)
Other names / synonyms	Zinc chloride (ZnCl ₂); Zinci chloridum
EC no.	231-592-0
CAS no.	7646-85-7
Index no.	030-003-00-2

- Acute toxicity, oral (chapter 3.1), Cat. 4
- Skin corrosion/irritation (chapter 3.2), Cat. 1B

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- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects
SCLs/M-factors/ATEs STOT SE 3; H335: C ≥ 5 %

3. Sodium acetate

Concentration 1 % (weight)

Other names / synonyms Acetic acid, sodium salt; Acetic acid, sodium salt (1:1); Natrii acetat; Sodium acetate, anhydrous

CAS no. 127-09-3

4. Methyl alcohol

Concentration 1 % (volume)

Other names / synonyms CARBINOL; COLONIAL SPIRIT; COLUMBIAN SPIRIT; Methanol; METHYL HYDROXIDE; METHYLALCOHOL; METHYLOL; MONOHYDROXYMETHANE; NA 1230 (DOT); PYROXYLIC SPIRIT; RCRA WASTE NUMBER U154; UN 1230 (DOT); WOOD ALCOHOL; WOOD NAPHTHA; WOOD SPIRIT

EC no. 200-659-6
CAS no. 67-56-1
Index no. 603-001-00-X

- Flammable liquids (chapter 2.6), Cat. 2
- Acute toxicity, inhalation (chapter 3.1), Cat. 3
- Acute toxicity, dermal (chapter 3.1), Cat. 3
- Acute toxicity, oral (chapter 3.1), Cat. 3
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 1

H225 Highly flammable liquid and vapor
H301 Toxic if swallowed
H311 Toxic in contact with skin
H331 Toxic if inhaled
H370 Causes damage to organs
SCLs/M-factors/ATEs *
STOT SE 1; H370: C ≥ 10 %
STOT SE 2; H371: 3 % ≤ C < 10 %

5. Acetic acid

Concentration 1 % (volume)

Other names / synonyms acetic acid; ACETIC ACID; ACETIC ACID, GLACIAL; ACETICACID; Acidum aceticum; ETHANOIC ACID; ETHYLIC ACID; GLACIAL ACETIC ACID; METHANECARBOXYLIC ACID; UN 2789; UN 2790; VINEGAR ACID

EC no. 200-580-7
CAS no. 64-19-7

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Index no. 607-002-00-6

- Flammable liquids (chapter 2.6), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 1A

H226 Flammable liquid and vapor
H314 Causes severe skin burns and eye damage
SCLs/M-factors/ATEs Skin Corr. 1A; H314: C ≥ 90 %
Skin Corr. 1B; H314: 25 % ≤ C < 90 %
Skin Irrit. 2; H315: 10 % ≤ C < 25 %
Eye Irrit. 2; H319: 10 % ≤ C < 25 %

Component 3. Gum Mastic

1. Alcohol

Concentration 95 % (volume)

Other names / synonyms ABSOLUTE ETHANOL; ALCOHOL DEHYDRATED; ALCOHOL, ANHYDROUS; Alcoholum / ethanolum; ALGRAIN; ANHYDROL; COLOGNE SPIRIT; COLOGNE SPIRITS (ALCOHOL); Ethanol; ETHANOL 200 PROOF; ETHANOL SOLUTION; ETHYL ALCOHOL; ETHYL ALCOHOL ANHYDROUS; ETHYL HYDRATE; ETHYL HYDROXIDE; FERMENTATION ALCOHOL; GRAIN ALCOHOL; JAYSOL; JAYSOL S; METHYLCARBINOL; MOLASSES ALCOHOL; NCI-C03134; POTATO ALCOHOL; SD ALCOHOL 23-HYDROGEN; SPIRIT; SPIRITS OF WINE; TECSOL; UN 1170

EC no. 200-578-6
CAS no. 64-17-5
Index no. 603-002-00-5

- Flammable liquids (chapter 2.6), Cat. 2

H225 Highly flammable liquid and vapor

2. Pistacia lentiscus gum water

Concentration 3 % (weight)

Other names / synonyms Mastic (resin);
CAS no. 61789-92-2

3. Isopropyl alcohol3

Concentration 5 % (volume)

Other names / synonyms 2-HYDROXYPROPANE; 2-Propanol; 2-PROPYL ALCOHOL; ALCOJEL; ALCOSOLVE; ALCOSOLVE 2; AVANTIN; AVANTINE; CHROMAR; COMBI-SCHUTZ; DIMETHYLCARBINOL; HARTOSOL; IMSOL A; ISOHOL; Isopropanol; LUTOSOL; N-PROPAN-2-OL; PETROHOL; PRO; PROPAN-2-OL; Propan-2-ol, isopropanol; PROPOL; reaction mass of: bis(1S,2S,4S)-(1-benzyl-4-tert-butoxycarboxamido-2-hydroxy-5-phenyl)pentylammonium

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succinate; SEC-PROPYL ALCOHOL; SPECTRAR; STERISOL HAND
DISINFECTANT; TAKINEOCOL; UN 1219

EC no. 414-810-0
CAS no. 67-63-0
Index no. 607-403-00-6

- Flammable liquids (chapter 2.6), Cat. 2
- Eye damage/irritation (chapter 3.3), Cat. 2
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3
- Specific target organ toxicity, repeated exposure (chapter 3.9), Cat. 2
- Eye damage/irritation (chapter 3.3), Cat. 1
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H225 Highly flammable liquid and vapor
H318 Causes serious eye damage
H319 Causes serious eye irritation
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H373 May cause damage to organs through prolonged or repeated exposure
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

Component 4. Hydroquinone

1. Hydroquinone

Concentration 0.1 % (weight)

Other names / synonyms 1,4 -Dihydroxybenzene (Hydroquinone), with the exception of entry 14 in Annex III; 1,4-Benzenediol; 1,4-DIHYDROXYBENZENE; AIDA; ALPHA-HYDROQUINONE; ARCTUVIN; BENZENE, P-DIHYDROXY-; BENZOHYDROQUINONE; BENZOQUINOL; BETA-QUINOL; BLACK AND WHITE BLEACHING CREAM; DIHYDROXYBENZENE; ELDOPAQUE; ELDOQUIN; HYDROQUINOL; HYDROQUINOLE; NCI-C55834; P-BENZENEDIOL; P-DIHYDROXYBENZENE; P-DIOXOBENZENE; P-HYDROQUINONE; P-HYDROXYPHENOL; QUINNONE; QUINOL; TECQUINOL; TENOX HQ; TEQUINOL; UN 2662; USAF EK-356

EC no. 204-617-8
CAS no. 123-31-9
Index no. 604-005-00-4

- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1
- Carcinogenicity (chapter 3.6), Cat. 2
- Germ cell mutagenicity (chapter 3.5), Cat. 2
- Acute toxicity, oral (chapter 3.1), Cat. 4
- Eye damage/irritation (chapter 3.3), Cat. 1
- Sensitization - skin (chapter 3.4), Cat. 1
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1

H302 Harmful if swallowed
H317 May cause an allergic skin reaction
H318 Causes serious eye damage
H341 Suspected of causing genetic defects

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H351 Suspected of causing cancer
H400 Very toxic to aquatic life
SCLs/M-factors/ATEs M=10

Component 5. Silver nitrate (0.2%)

1. Silver nitrate

Concentration 0.2 % (weight)

Other names / synonyms Argenti nitras; Nitric acid silver(1++) salt;
EC no. 231-853-9
CAS no. 7761-88-8
Index no. 047-001-00-2

- Oxidizing solids (chapter 2.14), Cat. 2
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H272 May intensify fire; oxidizer
H314 Causes severe skin burns and eye damage
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

Component 6. Silver nitrate (1%)

Concentration 1 % (weight)

Other names / synonyms Argenti nitras; Nitric acid silver(1++) salt;
EC no. 231-853-9
CAS no. 7761-88-8
Index no. 047-001-00-2

- Oxidizing solids (chapter 2.14), Cat. 2
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H272 May intensify fire; oxidizer
H314 Causes severe skin burns and eye damage
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

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If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
In case of skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
If swallowed	Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.
Personal protective equipment for first-aid responders	Ensure adequate ventilation. Use personal protective equipment. For personal protection see section 8.

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary

No data available

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use extinguishing media appropriate for surrounding fire.

5.2 Specific hazards arising from the chemical

Ethanol: Carbon oxides

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

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Ensure adequate ventilation. Use personal protective equipment. For personal protection see section 8.

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions

Should not be released into the environment. See Section 12 for additional ecological information.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

CAS: 108-95-2

Phenol

Cal/OSHA: 5 ppm PEL inhalation; NIOSH: 5 ppm, (C) 15.6 ppm [15-min] REL inhalation; OSHA: 5 ppm PEL inhalation; 19 mg/m³ PEL inhalation

CAS: 123-31-9

Hydroquinone

ACGIH: 1 mg/m³ PEL inhalation; Cal/OSHA: 2 mg/m³ PEL inhalation; NIOSH: (C) 2 mg/m³ [15-min] REL inhalation; OSHA: 2 mg/m³ PEL inhalation

CAS: 50-00-0 (EC: 200-001-8)

Formaldehyde

; ; 0.75 ppm; ACGIH: 0.3 ppm PEL-C inhalation; NIOSH: 0.1 ppm PEL-C inhalation; 0.016 ppm PEL-TWA inhalation

CAS: 500-00-0 (EC: 200-001-8)

Formaldehyde

CAS: 64-17-5

Alcohol

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ACGIH (USA): (ST) 1000 ppm TLV® inhalation; Cal/OSHA: 1000 ppm PEL inhalation; NIOSH: 1000 ppm REL inhalation; OSHA: 1000 ppm PEL inhalation; 1900 mg/m3 PEL inhalation

CAS: 64-18-6

Formic acid

ACGIH: 10 ppm (STEL) TLV® inhalation; 5 ppm TLV® inhalation; Cal/OSHA: 5 ppm, (ST) 10 ppm PEL inhalation; NIOSH: 5 ppm, 9 mg/m3 REL inhalation; OSHA: 5 ppm PEL inhalation; 9 mg/m3 PEL inhalation

CAS: 64-19-7 (EC: 200-580-7)

Acetic acid

ACGIH (USA): 15 ppm STEL inhalation; 10 ppm, (ST) 15 ppm TLV® inhalation; 10 ppm TWA inhalation; Cal/OSHA (USA): 40 ppm C inhalation; 10 ppm, (ST) 15 ppm, (C) 40 ppm PEL inhalation; 10 ppm, 25 mg/m3 PEL inhalation; 15 ppm, 37 mg/m3 STEL inhalation; NIOSH (USA): 10 ppm, (ST) 15 ppm REL inhalation; 15 ppm, 37 mg/m3 ST inhalation; 10 ppm, 25 mg/m3 TWA inhalation; OSHA (USA): 25 mg/m3 PEL inhalation; 10 ppm PEL inhalation; 10 ppm, 25 mg/m3 TWA inhalation

CAS: 67-56-1 (EC: 200-659-6)

Methyl alcohol

ACGIH: 200 ppm TLV® inhalation; 250 ppm (ST) TLV® inhalation; Cal/OSHA: 1000 ppm PEL-C inhalation; 250 ppm PEL-ST inhalation; 200 ppm PEL-TWA inhalation; NIOSH: 250 ppm PEL-ST inhalation; 200 ppm REL-TWA inhalation; OSHA: 200 ppm, 260 mg/m3 PEL-TWA inhalation

CAS: 67-63-0

Isopropyl alcohol

ACGIH (USA): 200 ppm, (ST) 400 ppm TLV® inhalation; Cal/OSHA: 400 ppm, (ST) 500 ppm PEL inhalation; NIOSH: 400 ppm, (ST) 500 ppm REL inhalation; OSHA: 400 ppm PEL inhalation; 980 mg/m3 PEL inhalation

CAS: 7646-85-7

Zinc chloride

Cal/OSHA: 1 mg/m3, (ST) 2 mg/m3 PEL inhalation; NIOSH: 1 mg/m3, (ST) 2 mg/m3 REL inhalation; OSHA: 1 mg/m3 PEL inhalation

CAS: 7647-01-0

Hydrochloric acid

ACGIH: 2 ppm (C) TLV® inhalation; NIOSH: 5 ppm, 7 mg/m3 REL-C inhalation; OSHA: 5 ppm, 7 mg/m3 PEL-C inhalation

8.2 Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection

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Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal hazards

No data available

Control banding approach

No data available.

Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Appearance	Clear
Color	Various
Odor	Alcohol, Acetic Acid
Odor threshold	No data available.
pH	Various
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	No data available.
Flash point	No data available.
Evaporation rate	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Vapor pressure	No data available.
Relative vapor density	No data available.
Density and/or relative density	No data available.
Solubility	No data available.
Partition coefficient n-octanol/water (log value)	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Kinematic viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

Particle characteristics

No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

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None under normal use conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal use conditions.

10.4 Conditions to avoid

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Heat, flames and sparks.

10.5 Incompatible materials

Ethanol: Alkali metals, Oxidizing agents, Peroxides

Formic acid: Strong oxidizing agents, Strong bases, Powdered metals

Isopropanol: Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids

Methanol: Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

Acetic acid: Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, e.g. potassium permanganate, Amines, Alcohols, Nitric acid

Hydroquinone: Strong bases, Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

Isopropanol: Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Ethanol: ACGIH: A3 Confirmed animal carcinogen with unknown relevance to humans.

The ATE (dermal) of the mixture is: 1492.54 mg/kg bw

Safety Data Sheet

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The ATE (gas inhalation) of the mixture is: 2681.99 ppmV

The ATE (oral) of the mixture is: 414.94 mg/kg bw

Acetic acid

LD50 Oral - Rat - 3,310 mg/kg

ETHANOL

LD50 Oral - Rat - 10,470 mg/kg

Formic acid

LD50 Oral - Rat - 730 mg/kg

Hydroquinone

LD50 Oral - Rat - 367.3 mg/kg

ISOPROPANOL

LD50 Oral - Rat - 5,045 mg/kg

Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Somnolence (general depressed activity).

Methanol

LD50 Oral - Rat - 1,187 - 2,769 mg/kg

Skin corrosion/irritation

Acetic acid

LD50 Skin - Rat - 1,112 mg/kg

ETHANOL

LD50 Skin - Rabbit - 15,800 mg/kg

ETHANOL

OECD Test Guideline 404 Skin - Rabbit - 24 h

Result: No skin irritation

Hydroquinone

LD50 Skin - Rabbit - > 2,000 mg/kg

ISOPROPANOL

LD50 Skin - Rabbit - 12,800 mg/kg

Methanol

LD50 Skin - Rabbit - 17,100 mg/kg

Serious eye damage/irritation

ETHANOL

OECD Test Guideline 405 Eyes - Rabbit

Result: Moderate eye irritation

Formic acid

- Rabbit

Result: Severe eye irritation

Respiratory or skin sensitization

Acetic acid

LC50 Inhalation - Mouse - 5620 ppm - 1 h

Safety Data Sheet

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Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other. Blood:Other changes.

ETHANOL

LD50 Inhalation - Rat - 30,000 mg/l - 4 h

Formic acid

LC50 Inhalation - Rat - 7.4 mg/l - 4 h

ISOPROPANOL

LC50 Inhalation - Rat - 16000 ppm - 8 h

Methanol

LD50 Inhalation - Rat - 128.2 mg/l - 4 h

Methanol

LD50 Inhalation - Rat - 87.6 mg/l - 6 h

Germ cell mutagenicity

Hydroquinone

- Mouse

Result: Laboratory experiments have shown mutagenic effects. Mutagenicity (micronucleus test). Result: positive

Carcinogenicity

Formaldehyde

Remarks: IARC: 1 - Group 1: Carcinogenic to humans (Formaldehyde)

NTP: Known to be human carcinogen (Formaldehyde)

OSHA: OSHA specifically regulated carcinogen (Formaldehyde)

Reproductive toxicity

Based on available data, classification data are not met

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

No data available.

SECTION 12: Ecological information

Toxicity

Acetic acid

LC50 - Oncorhynchus mykiss (rainbow trout) - >1,000 mg/l - 96 h

Citation: (OECD Test Guideline 203)

Acetic acid

EC50 - Daphnia magna (water flea) - >300.82 mg/l - 48 h

Citation: (OECD Test Guideline 202)

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ETHANOL

EC50 - *Chlorella vulgaris* (Fresh water algae) - 275 mg/l - 72 h

ETHANOL

LC50 - *Pimephales promelas* (fathead minnow) - 14,200 mg/l - 96 h

ETHANOL

LC50 - *Ceriodaphnia dubia* (water flea) - 5,012 mg/l - 48 h

Formic acid

LC50 - *Leuciscus idus* (golden orfe) - 46 - 100 mg/l - 96 h

Formic acid

EC50 - *Daphnia magna* (water flea) - 34.2 mg/l - 48 h

Formic acid

EC50 - *Pseudomonas putida* - 46.7 mg/l - 72 h

Hydroquinone

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0.04 - 0.1 mg/l - 96 h

Hydroquinone

EC50 - *Daphnia magna* (water flea) - 0.13 mg/l - 48 h

Hydroquinone

EC50 - *Pseudokirchneriella subcapitata* (green algae) - 0.335 mg/l - 72 h

ISOPROPANOL

EC50 - *Daphnia magna* (water flea) - 5,102.00 mg/l - 24 h

ISOPROPANOL

EC50 - *Daphnia magna* (water flea) - 6,851 mg/l - 24 h

ISOPROPANOL

EC50 - *Desmodesmus subspicatus* (chodat) - > 2,000.00 mg/l - 72 h

ISOPROPANOL

EC50 - Algae - > 1,000.00 mg/l - 24 h

Methanol

NOEC - *Oryzias latipes* - 7.900 mg/l - 200 h

Methanol

EC50 - *Daphnia magna* (water flea) - >10,000 mg/l - 48 h

Methanol

EC50 - *Selenastrum capricornutum* (green algae) - 22,000 mg/l - 96 h

Persistence and degradability

Formic acid

Result: Result: > 90 % - Readily biodegradable.

Bioaccumulative potential

No data available.

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Mobility in soil

No data available.

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Endocrine disrupting properties

No data available.

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Offer surplus and non-recyclable solutions to a licensed disposal company.

Packaging disposal

Dispose of as unused product.

Waste treatment

No data available

Sewage disposal

Do not let product enter drains

Other disposal recommendations

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

SECTION 14: Transport information

14.1 UN Number	UN1760
14.2 UN Proper Shipping Name	Corrosive liquids, n.o.s.
14.3 Transport hazard class(es)	8
14.4 Packing group	I

Environmental hazards

Marine pollutant

Special precautions for user

For professional users only.
Should not be released into the environment.

Transport in bulk according to IMO instruments

Not shipped in bulk

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

CAS-No. 64-17-5: Ethanol

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WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

CAS-No. 64-17-5: Ethanol

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Chemical name: Formaldehyde

CAS number: 50-00-0

01/01/1988 - Cancer

State of California to cause birth defects or other reproductive harm.

Methanol

CAS-No. 67-56-1

Chemical name: Methanol

CAS number: 67-56-1

03/16/2012 - Developmental toxicity

Canadian Domestic Substances List (DSL)

Chemical name: Ethanol

CAS: 64-17-5

Chemical name: Phenol

CAS: 108-95-2

Chemical name: Hydrochloric acid

CAS: 7647-01-0

Chemical name: Formic acid

CAS: 64-18-6

Chemical name: 2-Propanol

CAS: 67-63-0

Chemical name: Formaldehyde

CAS: 50-00-0

Chemical name: Zinc chloride (ZnCl₂)

CAS: 7646-85-7

Chemical name: Acetic acid, sodium salt

CAS: 127-09-3

Chemical name: Methanol

CAS: 67-56-1

Chemical name: Acetic acid

CAS: 64-19-7

Chemical name: Mastic (resin)

CAS: 61789-92-2

Chemical name: 1,4-Benzenediol

CAS: 123-31-9

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Chemical name: Nitric acid silver(1++) salt
CAS: 7761-88-8

Massachusetts Right To Know Components

Chemical name: Ethanol
CAS number: 64-17-5

Chemical name: Phenol
CAS number: 108-95-2

Chemical name: Hydrochloric acid
CAS number: 7647-01-0

Chemical name: Formic acid
CAS number: 64-18-6

Isopropyl alcohol
CAS number: 67-63-0

Chemical name: Formaldehyde
CAS number: 50-00-0

Chemical name: Zinc chloride
CAS number: 7646-85-7

Chemical name: Methanol
CAS number: 67-56-1

Acetic acid
CAS number: 64-19-7

Chemical name: Hydroquinone
CAS number: 123-31-9

Chemical name: Silver nitrate
CAS number: 7761-88-8

New Jersey Right To Know Components

Common name: ETHYL ALCOHOL
CAS number: 64-17-5

Common name: PHENOL
CAS number: 108-95-2

Common name: HYDROGEN CHLORIDE
CAS number: 7647-01-0

Common name: FORMIC ACID
CAS number: 64-18-6

Isopropyl alcohol
CAS number: 67-63-0

Common name: FORMALDEHYDE

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STEINER STAIN KIT OSHA

CAS number: 50-00-0

Common name: ZINC CHLORIDE
CAS number: 7646-85-7

Chemical name: Methanol
CAS number: 67-56-1

Acetic acid
CAS number: 64-19-7

Common name: HYDROQUINONE
CAS number: 123-31-9

Common name: SILVER NITRATE
CAS number: 7761-88-8

Pennsylvania Right To Know Components

Chemical name: Ethanol
CAS number: 64-17-5

Chemical name: Phenol
CAS number: 108-95-2

Chemical name: Hydrochloric acid
CAS number: 7647-01-0

Chemical name: Formic acid
CAS number: 64-18-6

Isopropyl alcohol
CAS number: 67-63-0

Chemical name: Formaldehyde
CAS number: 50-00-0

Chemical name: Zinc chloride
CAS number: 7646-85-7

Chemical name: Methanol
CAS number: 67-56-1

Acetic acid
CAS number: 64-19-7

Chemical name: Hydroquinone
CAS number: 123-31-9

Chemical name: Nitric acid, silver(1+) salt
CAS number: 7761-88-8

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards

Safety Data Sheet

STEINER STAIN KIT OSHA

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Isopropyl alcohol

CAS number: 67-63-0

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.2 Chemical Safety Assessment

The supplier of this product has not conducted any Chemical Safety Assessment

HMIS Rating

STEINER STAIN KIT	OSHA
HEALTH	* 2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	G

SECTION 16: Other information

SDS-0130, Rev. A

16.1 Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Diagnostic BioSystems be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Diagnostic BioSystems has been advised of the possibility of such damages.