Safety Data Sheet
Pollack's Trichrome Solution

Section 1 - Chemical Product and Company Identification

SDS Name: Pollack's Trichrome Solution
Catalog Numbers: G-472-3
Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.
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

H225-Flammable liquids: 2
H303-Acute toxicity, oral: 5
H315-Skin corrosion/irritation: 2
H319-Serious eye damage/eye irritation: 2A
H351-Carcinogenicity: 2
H370-Specific target organ toxicity, single exposure: 1
H372-Specific target organ toxicity, repeated exposure: 1

50.43% of the mixture consists of ingredients of unknown acute dermal toxicity.
1.93% of the mixture consists of ingredients of unknown acute inhalation toxicity.

Pictograms or Hazard symbols and Hazard statement(s):

Signal Word: Danger

Hazard Statements:

H225-Highly flammable liquid and vapour
H303-May be harmful if swallowed
H315-Causes skin irritation
H319-Causes serious eye irritation

H351-Suspected of causing cancer
H370-Causes damage to organs (target organs: respiratory system, central nervous system, and optic nerve)
H372-Causes damage to organs through prolonged or repeated exposure (target organs: kidney, liver, spleen, and blood)

Precautionary Statements:

P201-Obtain special instructions before use.
P202-Do not handle until all safety precautions have been read and understood.
P210-Keep away from heat, flames, sparks, open flames, and other ignition sources. No smoking.
P233-Keep container tightly closed.
P240-Ground and bond container and receiving equipment.
P241-Use explosion-proof electrical/ventilating/lighting equipment.
P242-Use non-sparking tools.
P243-Take action to prevent static discharges.
P260-Do not breathe dust/fume/gas/mist/vapours/spray.
P264-Wash thoroughly after handling.
P270-Do not eat, drink, or smoke when using this product.
P280-Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312-If swallowed: Call a Poison Center/doctor if you feel unwell.
P302+P352-If on skin: Wash with plenty of soap and water.
P303+P361+P353-If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P308+P313-If exposed or concerned: Get medical advice/attention.
P314-Get medical advice/attention if you feel unwell.
P332+P313-If skin irritation occurs: Get medical advice/attention.
P337+P313-If eye irritation persists: Get medical advice/attention.
P362+P364-Take off contaminated clothing and wash it before reuse.
P370+P378-In case of fire: Use dry chemical, carbon dioxide, dry sand, water spray or alcohol-resistant foam to extinguish.
P403+P235-Store in a well-ventilated place. Keep cool.
P405-Store locked up.
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
3244-88-0	Acid Fuchsin	0.17 w/v
3761-53-3	Xylidene Ponceau 2R	0.34 w/v
5141-20-8	Light Green SF Yellowish	0.15 w/v
1936-15-8	Orange G	0.25 w/v
12501-23-4	Phosphotungstic Acid Hydrate	0.51 w/v
51429-74-4	Phosphomolybdic Acid Hydrate	0.51 w/v
64-19-7	Glacial Acetic Acid	1.0 v/v
64-17-5	Ethyl Alcohol	47.5 v/v
67-56-1	Methyl Alcohol	2.5 v/v
7732-18-5	Water	Balance

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. Seek medical attention.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek medical attention.

Oral Exposure: If swallowed, seek immediate medical advice. Rinse mouth with water. Do not induce vomiting.

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

Section 5 - Fire Fighting Measures

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, dry sand, 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.

Hazardous Combustion Products: Carbon oxides, nitrogen oxides, sulfur oxides, sodium oxides, phosphorous oxides, molybdenum oxides, formaldehyde, irritating and toxic fumes and gases.

Flash Point: Not available
Autoignition Temperature: Not available
Explosion Limits, Lower: Not available
Upper: Not available
NFPA Rating: (estimated) Health: 2; Flammability: 4; Instability: 0

NOTE: Static discharge could act as an ignition source.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):
Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Keep away from heat. Eliminate all sources of ignition.

Methods for Cleaning up: Absorb with inert material such as sand, earth, or vermiculite. Do NOT absorb with combustible material such as saw dust or cellulosic material. Carefully sweep up and containerize for proper disposal. Use only non-sparking tools. Use explosion-proof equipment and take precautionary measures against static discharge. Do not release to the environment. Do not release to drains.

Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Keep in a tightly closed, non-metal container. Store in a cool, dry, and well-ventilated area. Use only non-sparking tools. Use explosion-proof electrical/ventilating/lighting equipment. Use proper grounding procedures to avoid static electricity. Keep away from incompatible materials. Protect from heat. Protect from direct sunlight. Vapors heavier than air may travel considerable distance and ignite or explode.

Note: Static discharge could act as an ignition source.

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.
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.

Exposure Limits:

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - Final PELs
Acid Fuchsin CAS#3244-88-0	Not listed	Not listed	Not listed
Xylidene Ponceau 2R CAS#3761-53-3	Not listed	Not listed	Not listed
Light Green SF Yellowish CAS#5141-20-8	Not listed	Not listed	Not listed
Orange G CAS#1936-15-8	Not listed	Not listed	Not listed
Phosphotungstic Acid Hydrate CAS#12501-23-4	3 mg/m3 TWA	5 mg/m3 TWA 10 mg/m3 STEL	5 mg/m3 TWA (vacated) 10 mg/m3 STEL (vacated)
Phosphomolybdic Acid Hydrate CAS#51429-74-4	0.5 mg/m3 TWA	1000 mg/m3 IDLH	5 mg/m3 TWA (vacated)
Glacial Acetic Acid CAS#64-19-7	10 ppm TWA 15 ppm STEL	10 ppm TWA 25 mg/m3 TWA 15 ppm STEL 37 mg/m3 STEL 50 ppm IDLH	10 ppm TWA 25 mg/m3 TWA
Ethyl Alcohol CAS#64-17-5	1000 ppm STEL	1000 ppm TWA 1900 mg/m3 TWA 3300 ppm IDLH	1000 ppm TWA 1900 mg/m3 TWA
Methyl Alcohol CAS#67-56-1	200 ppm TWA 250 ppm Skin STEL	200 ppm TWA 260 mg/m3 TWA 250 ppm STEL 325 mg/m3 STEL 6000 ppm IDLH	200 ppm TWA 260 mg/m3 TWA

OSHA Vacated PELs: Glacial Acetic Acid: 10 ppm TWA; 25 mg/m3 TWA
Ethyl Alcohol: 1000 ppm TWA; 1900 mg/m3 TWA
Methyl Alcohol: 200 ppm TWA; 260 mg/m3 TWA; 250 ppm STEL; 325 mg/m3 Skin STEL

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: Dark purple-maroon
Odor: Odorless
Vapor Pressure: Not available
Odor Threshold: Not available
Vapor Density: Not available
pH: Approx. 2.3
Relative Density: Not available
Melting point/freezing point: Not available
Solubility: Soluble in water
Boiling Point: Not available
Flash Point: Not available
Evaporation Rate: Not available
Flammability (solid, gas): Not available
Partition coefficient: n-octanol/water: Not available

Autoignition Temperature: Not available
Decomposition Temperature: Not available
Viscosity: Not available
Specific Gravity/Density: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Reacts violently with oxidizers: Risk of fire/explosion.
Conditions to Avoid: Avoid direct sunlight and extremely high or low temperatures. Avoid all possible sources of ignition (spark or flame). Keep away from hot surfaces and avoid incompatible materials.
Incompatibilities with Other Materials: Strong oxidizing agents, acids, strong bases, reducing agents, 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, metals, chromic acid, ethylene glycol, phosphorous trichloride, sodium peroxide, strong caustics, carbonates, hydroxides, oxides, phosphates, nitric acid, organic materials, finely powdered metals, combustible material, alkalis, and potassium dioxide.
Hazardous Decomposition Products: Carbon oxides, nitrogen oxides, sulfur oxides, sodium oxides, phosphorous oxides, molybdenum oxides, formaldehyde, irritating and toxic fumes and gases.

Section 11 - Toxicological Information

CAS#3244-88-0 Acid Fuchsin: RTECS#: DD4737000
LD50 Oral: Not available
LD50 Dermal: Not available
LC50 Inhalation: Not available

Carcinogenicity: Acid Fuchsin CAS#3244-88-0 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

CAS#3761-53-3 Xylidene Ponceau 2R: RTECS#: QJ6825000
LD50 Oral: 23160 mg/kg (rat)
LD50 Dermal: Not available
LC50 Inhalation: Not available

Carcinogenicity: Xylidene Ponceau 2R CAS#3761-53-3 is not listed by NTP, ACGIH, or OSHA. Xylidene Ponceau 2R is listed by IARC (Group 2B, Possibly Carcinogenic to Humans) and California Prop. 65 as a carcinogen. Tumorigenic in mouse.
Germ cell mutagenicity: Histidine reversion (Ames), mouse (intraperitoneal), sister chromatid exchange.

CAS#5141-20-8 Light Green SF Yellowish: RTECS#: BQ4900000
LD50 Oral: >2 g/kg (rat)
LD50 Dermal: Not available
LC50 Inhalation: Not available
Investigated as a tumorigen, mutagen, reproductive effecter per RTECS.

Carcinogenicity: Light Green SF Yellowish CAS#5141-20-8 is not listed by NTP, ACGIH, OSHA, or California Prop. 65. Light Green SF Yellowish is listed by IARC (Group 3, Not Classifiable as to its Carcinogenicity to Humans). Carcinogenic by RTECS criteria (Blood-lymphoma, including Hodgkin's disease). Tumorigenic-neoplastic by RTECS criteria.
Germ cell mutagenicity: Histidine reversion (Ames), mouse (lymphocyte), mutation in mammalian somatic cells.
Reproductive effects: Oral, spermatogenesis.

CAS#1936-15-8 Orange G: RTECS#: QJ6500000
LD50 Oral: Not available
LD50 Dermal: Not available
LC50 Inhalation: Not available

Carcinogenicity: Orange G CAS#1936-15-8 is not listed by NTP, ACGIH, OSHA, or California Prop. 65. Orange G is listed by IARC (Group 3, Not Classifiable as to its Carcinogenicity to Humans).
Germ cell mutagenicity: Cytogenetic analysis, hamster ovary.
Reproductive effects: Pig (oral) – testes, epididymis, sperm duct.

CAS#12501-23-4 Phosphotungstic Acid Hydrate:
LD50 Oral: 300-2000 mg/kg (rat) (femalO)
LD50 Dermal: Not available
LC50 Inhalation: Not available

Carcinogenicity: Phosphotungstic Acid Hydrate CAS#12501-23-4 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

CAS#51429-74-4 Phosphomolybdic Acid Hydrate:
LD50 Oral: Not available
LD50 Oral: Not available
LC50 Inhalation: Not available

Carcinogenicity: Phosphomolybdic Acid Hydrate CAS#51429-74-4 is not listed by IARC, NTP, OSHA, or California Prop. 65. Phosphomolybdic Acid Hydrate is listed by ACGIH (A3, Animal Carcinogen).

CAS#64-19-7 Glacial Acetic Acid: RTECS#: AF1225000
LD50 Oral: 3310 mg/kg (rat)
LD50 Dermal: 1060 mg/kg (rabbit)
LC50 Inhalation: 11.4 mg/L 4h (rat)
Investigated as a mutagen, reproductive effecter.

Skin corrosion/irritation: skin (rabbit), causes severe burns.
Serious eye damage/eye irritation: eyes (rabbit), corrosive to eyes, and causes serious eye damage.

Carcinogenicity: Glacial Acetic Acid CAS#64-19-7 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

Note: Acetic acid is extremely destructive to all body tissue. In concentrated form (glacial acetic acid), it is corrosive and flammable. Inhalation of concentrated vapors may cause serious damage to the lining of the nose, throat, and lungs. Breathing difficulties may occur. Ingestion of concentrated acetic acid causes severe swelling, severe damage to the tissue and danger of perforation. Contact with concentrated acetic acid may cause serious damage to the skin. Eye contact with concentrated acetic acid may cause severe eye damage followed by loss of sight. Exposure to vapor may cause intense watering and irritation to eyes.

CAS#64-17-5 Ethyl Alcohol: RTECS#: KQ6300000
LD50 Oral: 10470 mg/kg (rat)
LD50 Dermal: Not available
LC50 Inhalation: 124.7 mg/L 4h (rat)

Draize test, rabbit, eye: 500 mg/24h Mild Irritant.
Skin: Repeated exposure may cause skin dryness or cracking.
Ethyl Alcohol overexposure may lead to headache, dizziness, tiredness, nausea, and vomiting.

Carcinogenicity: Ethyl Alcohol CAS#64-17-5 is not listed by OSHA. Ethyl Alcohol is listed by IARC (Group 1, Carcinogenic to Humans), NTP (Known Carcinogen), and ACGIH (A3, Animal Carcinogen). Ethyl Alcohol is listed by California Prop. 65 as a developmental carcinogen (alcoholic beverages only).

CAS#67-56-1 Methyl Alcohol: RTECS#: PC1400000
LD50 Oral: 100.1 mg/kg (expert judgement)
LD50 Dermal: 300.1 mg/kg (expert judgement)
LC50 Inhalation: 3.1 mg/L 4h vapor (expert judgement)
Investigated as a mutagen, reproductive effecter.

Draize test, rabbit, eye: 100 mg/24h Moderate Irritant.
Draize test, rabbit, skin: 20 mg/24h Moderate Irritant.

Carcinogenicity: Methyl Alcohol CAS#67-56-1 is not listed by IARC, NTP, ACGIH, or OSHA. Methyl Alcohol is listed by California Prop. 65 as a developmental carcinogen.

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, and eye.

Epidemiology: Not available.
Teratogenicity: Not available.
Reproductive Effects: No specific data available for mixture, but reproductive effects were found with individual components.
Developmental Effects: Not available
Neurotoxicity: Not available.
Mutagenicity: No specific data available for mixture, but mutagenic effects were found with individual components.
Specific Organ Toxicity, Single Exposure: Respiratory system, central nervous system, and optic nerve.
Specific Organ Toxicity, Repeated Exposure: Kidney, liver, spleen, and blood.

Symptoms associated with exposure: Prolonged or repeated exposure can defat the skin and lead to irritation, cracking, and/or dermatitis. Eye contact may result in corneal damage, blindness, pain, irritation, watering, redness, blurred or double vision. Causes damage to organs if in contact with skin, if inhaled or if swallowed. Overexposure may cause stomach irregularities, cough, shortness of breath, headache, nausea, vomiting.

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains. Toxic to aquatic life. May cause long-term adverse effects to the environment.

CAS#5141-20-8 Light Green SF Yellowish:
LC50, freshwater fish: 1000 mg/L 48h (oryzias latipes)(orange-red killifish)

CAS#12501-23-4 Phosphotungstic Acid Hydrate:
EC50, algae: 7.8 mg/L 72h static (pseudokirchneriella subcapitata)(green algae)
EC50, water flea: 70.8 mg/L 48h static (daphnia magna)
EC50, bacteria: >1000 mg/L 3h static (activated sludge)

CAS#64-19-7 Glacial Acetic Acid:
LC50, freshwater fish: 88 mg/L 96h (pimephales promelas)(fathead minnow)
LC50, freshwater fish: 75 mg/L 96h (lepomis macrochirus)(bluegill)
EC50, water flea: 95 mg/L 24h
EC50, microtox: 8.8 mg/L 5min (photobacterium phosphoreum)

CAS#64-17-5 Ethyl Alcohol:
LC50, freshwater fish: 14200 mg/L 96h (pimephales promelas)(fathead minnow)
EC50, freshwater algae: 275 mg/L 72h (chlorella vulgaris)
EC50, water flea: 9268 mg/L 48h
EC50, water flea: 10800 mg/L 24h
EC50, microtox: 34634 mg/L 30min (photobacterium phosphoreum)
EC50, microtox: 35470 mg/L 5min (photobacterium phosphoreum)

CAS#67-56-1 Methyl Alcohol:
LC50, freshwater fish: 15400 mg/L 96h flow-through (lepomis macrochirus)(bluegill)
LC50, freshwater fish: 19000 mg/L 96h (oncorhynchus mykiss)(rainbow trout)
EC50, water flea: 18260 mg/L 96h semi-static (daphnia magna)
ErC50, algae: 22000 mg/L 96h static (pseudokirchneriella subcapitata)(green algae)
IC50, bacteria: >1000 mg/L 3h static (activated sludge)

Persistence and degradability: Not available.
Bio-accumulative potential: Not available.
Mobility: Will likely be mobile in the environment due to its water solubility and volatility.

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 – Transport Information

DOT
Proper shipping name: Alcohols, N.O.S.
UN1987
PG ll
Hazard class 3 (flammable)

Section 15 - Regulatory Information

Canada Regulatory Information

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

Section 16 - Additional Information

SDS Creation Date: 10-13-23

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 investigations to determine the suitability of the information for their particular purposes. In no event shall Rowley Biochemical, Inc. 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, howsoever arising, even if Rowley Biochemical, Inc. has been advised of the possibility of such damages.