Safety Data Sheet
MAY-GRUNWALD SOLUTION

Section 1 - Chemical Product and Company Identification

SDS Name: May-Grunwald Solution
Catalog Numbers: SO-367, D-250-1
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
H301-Acute toxicity, oral: 3
H311-Acute toxicity, dermal: 3
H319-Serious eye damage/eye irritation: 2A
H331-Acute toxicity, inhalation: 3
H361-Reproductive toxicity: 2
H370-Specific target organ toxicity, single exposure: 1
H372-Specific target organ toxicity, repeated exposure: 1

Pictograms or Hazard Symbols and Hazard Statement(s):

Signal Word: Danger

Hazard Statements:

H225-Highly flammable liquid and vapour
H301-Toxic if swallowed
H311-Toxic in contact with skin
H319-Causes serious eye irritation
H331-Toxic if inhaled
H361-Suspected of damaging fertility or the unborn child
H370-Causes damage to organs (target organs: 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/sparks/open flames/hot surfaces. -No smoking.
P233-Keep container tightly closed.
P240-Ground/Bond container and receiving equipment.
P241-Use explosion-proof electrical/ventilating/lighting/equipment.
P242-Use only non-sparking tools.
P243-Take precautionary measures against static discharge.
P260-Do not breathe dust/fume/gas/mist/vapours/spray.
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.
P264-Wash thoroughly after handling.
P270-Do not eat, drink, or smoke when using this product.
P271-Use only outdoors or in a well-ventilated area.
P280-Wear protective gloves/eye protection/face protection/protective clothing.
P281-Use personal protective equipment as required.
P301+P310-If swallowed: Immediately call a Poison Center or doctor/physician.
P302+P352-If on skin: Wash with plenty of soap and water.
P303+P361+P353-If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340-If inhaled: Remove victim to fresh air and keep at rest in a position 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.
P307+P311-If exposed: Call a Poison Center or doctor/physician.
P308+P313-If exposed or concerned: Get medical advice/attention.
P311-Call a Poison Center or doctor/physician.
P312-Call a Poison Center or doctor/physician if you feel unwell.
P314-Get medical advice/attention if you feel unwell.
P330-Rinse mouth.
P337+P313-If eye irritation persists: Get medical advice/attention.
P361-Remove/Take off immediately all contaminated clothing.
P363-Wash contaminated clothing before reuse.
P370+P378-In case of fire: Use alcohol-resistant foam, dry chemical, or carbon dioxide for extinction.
P403+P233-Store in a well-ventilated place. Keep container tightly closed.
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
N/A	May-Grunwald (prepared with non-polychromed (non-oxidized) Methylene Blue and Eosin Y	0.25 w/v
67-56-1	Methyl Alcohol	100 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. Get immediate medical attention. Wash clothing/shoes before reuse.

Oral Exposure: If swallowed, seek immediate medical advice. Do not induce vomiting unless directed by a physician.

Inhalation Exposure: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Immediate medical attention is required.

Section 5 - Fire Fighting Measures

General Information: Flammable liquid and vapor. Risk of ignition. 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.

Note: Keep away from heat, sparks, or flames. Sensitive to static discharge.

Extinguishing Media: For small fires, use alcohol-resistant foam, dry chemical, or carbon dioxide. 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. Do NOT use water jet.

Hazardous Combustion Products: Carbon oxides, sulfur oxides, nitrogen oxides, hydrogen chloride gas, formaldehyde, irritating toxic fumes and gases.

Flash Point: Not available
Autoignition Temperature: Not available
Explosion Limits, Lower: Not available

Upper: Not available
NFPA Rating: (estimated) Health: 1; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):
Wear personal protective equipment and NIOSH approved respirator. 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. Take precautionary measures against static discharges.

Methods for Cleaning up: Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. 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. Store capped at room temperature in dry and well-ventilated place. Keep away from incompatible materials. Protect from heat. Vapors heavier than air, may travel considerable distance and ignite or explode. Do not breath vapors or spray mist. Do not get in eyes, on skin, or on clothing. Use under a chemical fume hood. Do not ingest. Do not inhale. Keep away from direct sunlight, open flames, hot surfaces, and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

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	NIOSH	OSHA - Final PELs
May-Grunwald Stain	Not listed	Not listed	Not listed
Methyl Alcohol CAS#67-56-1	200 ppm TWA 250 ppm 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 250 ppm STEL 325 mg/m3 STEL

OSHA Vacated PELs: Methyl Alcohol: 200 ppm TWA; 260 mg/m3 TWA; 250 ppm STEL; 325 mg/m3 STEL

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: Dark Blue
Odor: Alcohol-like
Vapor Pressure: Not available
Odor threshold: Not available
Vapor Density: Not available
pH: Not available
Relative density: Not available
Melting point/freezing point: Not available
Solubility: Miscible 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
Auto-ignition 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. Note: Vapors may form explosive mixtures with air.
Conditions to Avoid: Incompatible materials, ignition sources, excess heat, hot surfaces, and oxidizers.
Incompatibilities with Other Materials: Strong oxidizing agents, acids, alkali metals, reducing agents, acid anhydrides, acid chlorides, peroxides, 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 oxides, sulfur oxides, nitrogen oxides, hydrogen chloride gas, formaldehyde, irritating toxic fumes and gases.

Section 11 - Toxicological Information

CAS#67-56-1 Methyl Alcohol: RTECS#: PC1400000

LD50 Oral: >1187-2769 mg/kg (rat)
LD50 Dermal: 17100 mg/kg (rabbit)
LC50 Inhalation: 128.2 mg/L (rat) 4h

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.

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
Inhalation, rat: 10000ppm/7h 7-15 D pregnant effects on embryo or fetus: fetotoxicity
Neurotoxicity: Not available
Mutagenicity: Not available
Other Studies: May affect behavior/central nervous system, urinary system, kidneys (renal failure), cardiovascular system, and liver.
Skin and eye irritation:
Eye, rabbit: 100 mg/24h moderate effect
Skin, rabbit: 20mg/24h moderate effect
Specific Target Organ Toxicity, Single Exposure: Optic nerve
Specific Target Organ Toxicity, Repeated Exposure: Kidney, liver, spleen, and blood.

Inhalation note: Toxic. An irritant to the mucous membranes. Toxic effects exerted upon nervous system, particularly the optic nerve. Once absorbed into the body, it is very slowly eliminated. Symptoms of overexposure may include headache, drowsiness, nausea, vomiting, blurred vision, blindness, coma, and death. A person may get better but then worse again up to 30 hours later.

Ingestion note: Toxic. Symptoms parallel inhalation. Can intoxicate and cause blindness. Usual fatal dose = 100-125 mL.

Skin contact note: Toxic. Methyl alcohol is a defatting agent and may cause skin to become dry and cracked. Skin absorption can occur. Symptoms parallel inhalation exposure.

Eye contact note: Serious eye irritant. Continued exposure may cause eye lesions.

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. May be harmful to aquatic life.

CAS# 67-56-1 Methyl Alcohol:
LC50, freshwater fish: >10000 mg/L 96h (pimephales promelas)(fathead minnow)
EC50, water flea: >10000 mg/L 24h
EC50, algae: 22000 mg/L 96h (pseudokirchneriella subcapitata)(green algae)
IC50, bacteria: >1000 mg/L 3h (activated sludge)

Persistence and degradability: Not available
Bio-accumulative potential: Not available
Mobility: The material will likely be mobile in the environment due to its 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: Methanol
UN1230
PG II
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: 2/2/12
Revision #1. 2/26/14 YM
Revision #2. 1-6-22

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