

# Material Safety Data Sheet

## Papanicolaou Stain OG-6

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Papanicolaou Stain OG-6

**Catalog Numbers:** 26048-05

**Synonyms:** None.

**Company Identification:**

Electron Microscopy Sciences  
1560 Industry Road  
Hatfield, PA 19440

**For information, call:** 800-412-8400

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
64-17-5	Ethanol	84	200-578-6
67-56-1	Methanol	4.4	200-659-6
1936-15-8	Orange G	<1.0	217-705-6
12067-99-1	Phosphotungstic Acid	<1.0	235-087-6
7732-18-5	Deionized Water	Balance	231-791-2

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: red liquid. Flash Point: 55 deg F.

**Danger!** Poison! Causes severe eye irritation. Causes respiratory tract irritation. May be fatal or cause blindness if swallowed. **Flammable liquid and vapor.** This substance has caused adverse reproductive and fetal effects in humans. May be absorbed through intact skin. May cause digestive tract irritation. May cause central nervous system depression. May cause liver, kidney and heart damage. Cannot be made non-poisonous. Causes moderate skin irritation.

**Target Organs:** Kidneys, heart, central nervous system, liver, eyes.

### Potential Health Effects

**Eye:** Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.

**Skin:** Causes moderate skin irritation. May be absorbed through the skin in harmful amounts. May cause cyanosis of the extremities.

**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:** Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation.

**Chronic:** 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.

## 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. Wash clothing before reuse.

**Ingestion:** Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. 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. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous system diseases may be at increased risk from exposure to this substance.

**Antidote:** Ethanol may inhibit methanol metabolism.

## 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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. 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. Water may be ineffective. Do NOT use straight streams of water.

**Flash Point:** 55e deg F ( 12.78 deg C)

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:**3.3 vol %

**Upper:** 1.9 vol %

**NFPA Rating:** (estimated) Health: 1; 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. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

## 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.

**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 - Final PELs
Ethanol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m <sup>3</sup> TWA 3300 ppm IDLH	1000 ppm TWA; 1900 mg/m <sup>3</sup> TWA
Methanol	200 ppm TWA; 250 ppm STEL; skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m <sup>3</sup> TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m <sup>3</sup> TWA
Orange G	none listed	none listed	none listed
Phosphotungstic Acid	5 mg/m <sup>3</sup> TWA (listed under Tungsten). 10 mg/m <sup>3</sup> STEL (listed under Tungsten).	5 mg/m <sup>3</sup> TWA (listed under Tungsten).	none listed
Deionized Water	none listed	none listed	none listed

**OSHA Vacated PELs:** Ethanol: 1000 ppm TWA; 1900 mg/m<sup>3</sup> TWA Methanol: 200 ppm TWA; 260 mg/m<sup>3</sup> TWA Orange G: No OSHA Vacated PELs are listed for this chemical. Phosphotungstic Acid: No OSHA Vacated PELs are listed for this chemical. Deionized Water: No OSHA Vacated PELs are listed for this chemical.

**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.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** red

**Odor:** pungent

**pH:** Not available.

**Vapor Pressure:** 40 mm Hg @ 19 deg C

**Vapor Density:** 1.59

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 95 deg C

**Freezing/Melting Point:** Not available.

**Decomposition Temperature:** Not available.

**Solubility:** Soluble.

**Specific Gravity/Density:** 1

**Molecular Formula:** Not available.

**Molecular Weight:** Not available.

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** High temperatures, 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, oxides of nitrogen, irritating and toxic fumes and gases, carbon dioxide, oxides of carbon.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 64-17-5: KQ6300000

**CAS#** 67-56-1: PC1400000

**CAS#** 1936-15-8: QJ6500000

**CAS#** 12067-99-1: TH5650000

**CAS#** 7732-18-5: ZC0110000

**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/m<sup>3</sup>/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; <BR.

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/m<sup>3</sup>/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; <BR.

CAS# 1936-15-8: <BR.

CAS# 12067-99-1:  
Oral, rat: LD50 = 3300 mg/kg; <BR.

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

**Carcinogenicity:**

CAS# 64-17-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 1936-15-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 12067-99-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 7732-18-5: Not listed 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:** CAS# 64-17-4: 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:** CAS# 64-17-4: 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:** CAS# 64-17-4: 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) S tandard 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 CAS# 64-17-4: When spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish.

**Environmental:** CAS# 64-17-4: When released to the atmosphere it will

photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.

**Physical:** No information available.

**Other:** No information available.

## 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 Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** CAS# 67-56-1: waste number U154 (Ignitable waste).

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	ETHANOL	ETHANOL SOLUTION
<b>Hazard Class:</b>	3	3
<b>UN Number:</b>	UN1170	UN1170
<b>Packing Group:</b>	II	II
<b>Additional Info:</b>		FLASHPOINT 13 C

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 64-17-5 is listed on the TSCA inventory.

CAS# 67-56-1 is listed on the TSCA inventory.

CAS# 1936-15-8 is listed on the TSCA inventory.

CAS# 12067-99-1 is listed on the TSCA inventory.

CAS# 7732-18-5 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**

None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

**SARA****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 chemicals in this product have a TPQ.

**SARA Codes**

CAS # 64-17-5: acute, chronic, flammable. CAS # 67-56-1: acute, flammable. CAS # 12067-99-1: acute, flammable.

**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 373.

**Clean Air Act:**

CAS# 67-56-1 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 64-17-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 1936-15-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 12067-99-1 can be found on the following state right to know lists: California, (listed as Tungsten), New Jersey, (listed as Tungsten), Pennsylvania, (listed as Tungsten), Minnesota, (listed as Tungsten), Massachusetts, (listed as Tungsten).

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

WARNING: This product contains Ethanol, 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.

**European/International Regulations****European Labeling in Accordance with EC Directives****Hazard Symbols:**

T F

**Risk Phrases:**

R 11 Highly flammable.

**Safety Phrases:**

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 7 Keep container tightly closed.

S 9 Keep container in a well-ventilated place.

**WGK (Water Danger/Protection)**

CAS# 64-17-5: 0

CAS# 67-56-1: 1

CAS# 1936-15-8: No information available.

CAS# 12067-99-1: No information available.

CAS# 7732-18-5: No information available.

**Canada - DSL/NDSL**

CAS# 64-17-5 is listed on Canada's DSL List.

CAS# 67-56-1 is listed on Canada's DSL List.

CAS# 1936-15-8 is listed on Canada's DSL List.

CAS# 12067-99-1 is listed on Canada's DSL List.

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

**Canada - WHMIS**

This product has a WHMIS classification of B2, D2B.

**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# 1936-15-8 is listed on the Canadian Ingredient Disclosure List.

CAS# 12067-99-1 (listed as Tungsten) is listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 7/30/1999

**Revision #3 Date:** 05/02/2008

*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 Electron Microscopy Sciences 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 Electron Microscopy Sciences has been advised of the possibility of such damages.*