



Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	Papanicolaou, EA-65, HARLECO ®	Product Code	7054X
Manufacturer	EMD Chemicals Inc. P.O. Box 70 480 Democrat Road Gibbstown, NJ 08027 Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc.	Effective Date	2/24/2004
		Print Date	9/7/2004

For More Information Call

856-423-6300 Technical Service
Monday-Friday: 8:00 AM - 5:00 PM

In Case of Emergency Call

800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Synonym None.

Material Uses Analytical reagent.

Chemical Family Solution.

Section 2. Composition and Information on Ingredients

Component	CAS #	% by Weight
Lithium Carbonate	554-13-2	0-1
Water	7732-18-5	0-20
Methanol	67-56-1	0-5
Ethanol	64-17-5	70-99

Section 3. Hazards Identification

Physical State and Appearance Liquid.

Emergency Overview DANGER !
POISON !
FLAMMABLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
MAY BE FATAL IF SWALLOWED.
MAY CAUSE BLINDNESS IF SWALLOWED.
CANNOT BE MADE NON-POISONOUS.
HARMFUL IF INHALED OR ABSORBED THROUGH SKIN.
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
BLOOD, REPRODUCTIVE SYSTEM, LIVER, GASTROINTESTINAL TRACT, RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.

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

Routes of Entry Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects

Eyes Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.

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Skin Hazardous in case of skin contact (permeator, irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation Hazardous in case of inhalation (lung irritant).

Ingestion Extremely hazardous in case of ingestion. MAY BE FATAL OF CAUSE BLINDNESS IF SWALLOWED.

Potential Chronic Health Effects

Carcinogenic Effects This material is not known to cause cancer in animals or humans.

Additional information See Toxicological Information (section 11)

Medical Conditions Aggravated by Overexposure:

Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Section 5. Fire Fighting Measures

Flammability of the Product Product will burn.

Auto-ignition Temperature The lowest known value is 398.9°C (750°F) (Ethanol).

Flash Points Open cup: 20.556°C (69°F).

Flammable Limits LOWER: 3.3% UPPER: 19%

Products of Combustion These products are carbon oxides (CO, CO₂). Some metallic oxides.

Fire Hazards in Presence of Various Substances Highly flammable in presence of open flames, sparks and static discharge, of heat, of oxidizing materials.
Slightly flammable to flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances

Risks of explosion of the product in presence of static discharge:
Highly flammable in presence of open flames, sparks and static discharge.
Slightly explosive in presence of open flames, sparks and static discharge.

Risks of explosion of the product in presence of mechanical impact:
Slightly flammable in presence of shocks.
Slightly explosive in presence of shocks.

Fire Fighting Media and Instructions SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Protective Clothing (Fire) Be sure to use an approved/certified respirator or equivalent.

Special Remarks on Fire Hazards Vapor may travel considerable distance to source of ignition and flash back. (Ethanol)

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Special Remarks on Explosion Hazards

Not available.

Section 6. Accidental Release Measures**Small Spill and Leak**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill and Leak

Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Spill Kit Information

The following EMD Chemicals Inc. SpillSolv (TM) absorbent is recommended for this product: SX1330 Solvent Treatment Kit

Section 7. Handling and Storage**Handling**

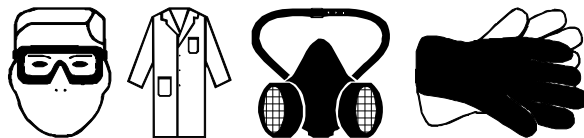
Keep away from heat, sparks and flame. Keep container closed. Avoid breathing vapors or spray mists. Do not get in eyes, on skin, or on clothing. Do not ingest.

Storage

Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection**Engineering Controls**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection**Eyes** Splash goggles.**Body** Lab coat.**Respiratory** Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.**Hands** Gloves.**Feet** Not applicable.**Protective Clothing (Pictograms)****Personal Protection in Case of a Large Spill**

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product NameLithium Carbonate
Water
Methanol**Exposure Limits**

Not available.

Not available.

ACGIH (United States, 1994). SkinTWA: 262 mg/m³STEL: 328 mg/m³**OSHA (United States, 1989). Skin**TWA: 260 mg/m³STEL: 325 mg/m³**ACGIH (United States, 1994). Skin**STEL: 328 mg/m³ 15 minute(s).

STEL: 250 ppm 15 minute(s).

TWA: 262 mg/m³ 8 hour(s).

TWA: 200 ppm 8 hour(s).

Ethanol

NIOSH REL (United States, 1994). SkinSTEL: 325 mg/m³ 15 minute(s).

STEL: 250 ppm 15 minute(s).

TWA: 260 mg/m³ 10 hour(s).

TWA: 200 ppm 10 hour(s).

OSHA Final Rule (United States, 1989). SkinSTEL: 325 mg/m³ 15 minute(s).

STEL: 250 ppm 15 minute(s).

TWA: 260 mg/m³ 8 hour(s).

TWA: 200 ppm 8 hour(s).

NIOSH REL (United States, 2000).TWA: 1900 mg/m³ 10 hour(s).

TWA: 1000 ppm 10 hour(s).

OSHA Final Rule (United States, 1989).TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

AUVA (Austria, 1995).Spitzenbegrenzung: 3800 mg/m³ 3 times per shift, 60 minute(s).

Spitzenbegrenzung: 2000 ML/M3 3 times per shift, 60 minute(s).

TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ML/M3 8 hour(s).

NOHSC (Australia, 1995).TWA: 1880 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

Lijst Grenswaarden (Belgium, 1998).VL: 1907 mg/m³ 8 hour(s).

VL: 1000 ppm 8 hour(s).

SUVA (Switzerland, 1997).MAK: 1900 mg/m³ 8 hour(s).

MAK: 1000 ML/M3 8 hour(s).

Ministry of Health (CL, 1992).TWA: 1500 mg/m³ 8 hour(s).

TWA: 800 ppm 8 hour(s).

MAK-Werte Liste (Germany, 1998).Spitzenbegrenzung: 1920 mg/m³ 4 times per shift, 30 minute(s).

Spitzenbegrenzung: 1000 ML/M3 4 times per shift, 30 minute(s).

TWA: 960 mg/m³ 8 hour(s).

TWA: 500 ML/M3 8 hour(s).

TRGS900 (Germany, 1999).Spitzenbegrenzung: 7600 mg/m³

Spitzenbegrenzung: 4000 ML/M3

TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ML/M3 8 hour(s).

Arbejdstilsynet (Denmark, 1996).GV: 1900 mg/m³ 8 hour(s).

GV: 1000 ppm 8 hour(s).

Tyterveyslaitos (Finland, 1998).STEL: 2500 mg/m³ 15 minute(s).

STEL: 1300 ppm 15 minute(s).

TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

INRS (France, 1999).VLE: 9500 mg/m³ 15 minute(s).

VLE: 5000 ppm 15 minute(s).

VME: 1900 mg/m³ 8 hour(s).

VME: 1000 ppm 8 hour(s).

EH40-OES (United Kingdom (UK), 2000).TWA: 1920 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

NAOSH (Ireland, 1999).OEL: 1900 mg/m³ 8 hour(s).

OEL: 1000 ppm 8 hour(s).

Ministry of Labour (KR, 1997).

TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

Secretary of Work and Social security (MX, 1994).CPT: 1900 mg/m³ 8 hour(s).

CPT: 1000 ppm 8 hour(s).

Nationale MAC-lijst (Netherlands, 2000).TGG 8 uur: 1000 mg/m³ 8 hour(s).

TGG 8 uur: 500 ppm 8 hour(s).

NZ OSH (NZ, 1994).TWA: 1880 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

AFS (Sweden, 1996).TGV: 1900 mg/m³

TGV: 1000 ppm

NGV: 1000 mg/m³ 8 hour(s).

NGV: 500 ppm 8 hour(s).

ACGIH TLV (United States, 2000).TWA: 1880 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

Section 9. Physical and Chemical Properties

Odor	Alcohol like.
Color	Green.
Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
pH	Not available.
Boiling/Condensation Point	The lowest known value is 64.55°C (148.2°F) (Methanol). Weighted average: 80.26°C (176.5°F)
Melting/Freezing Point	May start to solidify at -0.1°C (31.8°F) based on data for: Water. Weighted average: -101.7°C (-151.1°F)
Specific Gravity	Weighted average: 0.79 (Water = 1)
Vapor Pressure	The highest known value is 12.9 kPa (97 mmHg) (@ 20°C) (Methanol).
Vapor Density	The highest known value is 1.6 (Air = 1) (Ethanol). Weighted average: 1.59 (Air = 1)
Volatility	99.9% (v/v). (Methanol.)
Odor Threshold	The lowest known value is 100 ppm (Methanol)
Evaporation Rate	The highest known value is 5.91 (Methanol) Weighted average: 1.67 compared to (n-BUTYL ACETATE=1)
VOC	90 (%)
LogK_{ow}	Not available.
Solubility	Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Highly reactive with oxidizing agents.
Rem/Incompatibility	Not available.
Hazardous Decomposition Products	carbon oxides (CO, CO ₂) , Formaldehyde.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

RTECS Number:	Lithium Carbonate	OJ5800000
	Water	ZC0110000
	Methanol	PC1400000
	Ethyl Alcohol	KQ6300000
Toxicity	Acute oral toxicity (LD ₅₀): 3450 mg/kg [Mouse]. (Ethanol). Acute dermal toxicity (LD ₅₀): 15800 mg/kg [Rabbit]. (Methanol). Acute toxicity of the vapor (LC ₅₀): 64000 ppm 4 hour(s) [Rat]. (Methanol).	
Chronic Effects on Humans	DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN] [Ethanol].	
Acute Effects on Humans	Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Hazardous in case of skin contact (permeator, irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Hazardous in case of inhalation (lung irritant). Extremely hazardous in case of ingestion. May be fatal if swallowed.	
Synergetic Products (Toxicologically)	Not available.	
Irritancy	Draize Test: Not available.	
Sensitization	Not available.	
Carcinogenic Effects	This material is not known to cause cancer in animals or humans.	
Toxicity to Reproductive System	Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN] [Ethanol].	
Teratogenic Effects	Not available.	
Mutagenic Effects	Not available.	

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations

EPA Waste Number	D001
Treatment	Incineration, fuels blending or recycle. Contact your local permitted waste disposal site (TSD) for permissible treatment sites. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations..

Section 14. Transport Information

DOT Classification	Proper Shipping Name: ETHYL ALCOHOL SOLUTIONS Hazard Class: 3 UN number: UN1170 Packing Group: II RQ: Not applicable.
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TDG Classification Not available.

IMO/IMDG Classification Not available.

ICAO/IATA Classification Not available.

Section 15. Regulatory Information

U.S. Federal Regulations TSCA 8(b) inventory: Lithium Carbonate; Water; Methanol; Ethanol
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Lithium Carbonate; Methanol; Ethanol
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Lithium Carbonate: Delayed (Chronic) Health Hazard; Methanol: Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard; Ethanol: Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard
SARA 313 toxic chemical notification and release reporting: Methanol 2.5%
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: No products were found.
Clean air act (CAA) 112 regulated flammable substances: No products were found.
Clean air act (CAA) 112 regulated toxic substances: No products were found.

WHMIS (Canada) CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
Class D-2A: Material causing other toxic effects (VERY TOXIC).
Class D-2B: Material causing other toxic effects (TOXIC).

CEPA DSL: Lithium Carbonate; Water; Methanol; Ethanol

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.

International Regulations

EINECS	Lithium Carbonate	209-062-5
	Water	231-791-2
	Methanol	200-659-6
	Ethanol	200-578-6

DSCL (EEC) R11- Highly flammable.
R38- Irritating to skin.
R41- Risk of serious damage to eyes.

International Lists Australia (NICNAS): Lithium Carbonate; Water; Methanol; Ethanol

Germany water class: Ethanol

Japan (MITI): Lithium Carbonate; Water; Methanol; Ethanol

Korea (TCCL): Lithium Carbonate; Water; Methanol; Ethanol

Philippines (RA6969): Lithium Carbonate; Water; Methanol; Ethanol

China: No products were found.

State Regulations

Pennsylvania RTK: Methanol: (environmental hazard, generic environmental hazard); Ethanol: (generic environmental hazard)

Massachusetts RTK: Lithium Carbonate; Methanol; Ethanol

New Jersey: Lithium Carbonate; Methanol; Ethanol

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Lithium Carbonate

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Lithium Carbonate

Section 16. Other Information

**National Fire
Protection
Association
(U.S.A.)**



Other Special Considerations

Contains additional component(s) in quantities less than 1%.

Changed Since Last Revision

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Notice to Reader

The statements contained herein are based upon technical data that EMD Chemicals Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD CHEMICALS INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.