



Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	Fuchsin Carbol Kinyoun Solution	Product Code	6033X
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	10/28/2004
		Print Date	12/22/2004

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 Not available.

Material Uses Laboratory Reagent

Chemical Family Dye Solution

Section 2. Composition and Information on Ingredients

Component	CAS #	% by Weight
Basic Fuchsin	569-61-9	3.125
Ethanol	64-17-5	14.47
Methanol	67-56-1	0.7296
Phenol	108-95-2	6.75
Water	7732-18-5	>75

Section 3. Hazards Identification

Physical State and Appearance Liquid.

Emergency Overview DANGER !
FLAMMABLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED.
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
CANCER HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE CANCER
POSSIBLE BIRTH DEFECT HAZARD.
CONTAINS MATERIAL WHICH MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
KIDNEYS, LUNGS, LIVER, SPLEEN, GASTROINTESTINAL TRACT, RESPIRATORY TRACT,
SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA, PANCREAS, BLOOD
REPRODUCTIVE SYSTEM.

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

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

Potential Acute Health Effects

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

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 Hazardous in case of ingestion. Do not take internally.

Potential Chronic Health Effects

Carcinogenic Effects Classified A1 (Confirmed for human.) by ACGIH [Basic Fuchsin]. Classified 2B (Possible for human.) by IARC [Basic Fuchsin].

Additional information See Toxicological Information (section 11)

Medical Conditions

Aggravated by

Overexposure:

Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. 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 362.78°C (685°F) (Ethanol).

Flash Points

Closed cup: 48.889°C (120°F).

Flammable Limits

The greatest known range is LOWER: 3.3% UPPER: 19% (ETHANOL)

Products of Combustion

These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...), halogenated compounds, hydrogen chloride.

Fire Hazards in Presence of Various Substances

Flammable in presence of open flames, sparks and static discharge, of shocks, of heat. Slightly flammable to flammable in presence of oxidizing materials.

Explosion Hazards in Presence of Various Substances

Risks of explosion of the product in presence of static discharge:
 Flammable in presence of open flames, sparks and static discharge.
 Explosive in presence of open flames, sparks and static discharge.

Risks of explosion of the product in presence of mechanical impact:
 Flammable in presence of shocks.
 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 Dangerous fire and explosion risk. Container explosion may occur under fire conditions or when heated. Vapor may travel considerable distance to source of ignition and flash back. (Methanol)

Special Remarks on Explosion Hazards Phenol yields a flammable vapor when heated, which will form explosive mixtures with air.

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 curtain to divert vapor drift. 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. Use only with adequate ventilation. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Storage Store in a segregated and approved area. Keep in a well-ventilated place.

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 Face shield.

Body Full suit.

Respiratory Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands Gloves.

Feet Boots.

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 Name

Exposure Limits

Basic Fuchsin

Ethanol

Not available.

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).

Methanol

NGV: 500 ppm 8 hour(s).
ACGIH TLV (United States, 2000).
 TWA: 1880 mg/m³ 8 hour(s).
 TWA: 1000 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).
ACGIH (United States, 1994). Skin
 TWA: 262 mg/m³
 STEL: 328 mg/m³
OSHA (United States, 1989). Skin
 TWA: 260 mg/m³
 STEL: 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).
NIOSH REL (United States, 1994). Skin
 STEL: 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).

Phenol

OSHA Final Rule (United States, 1989). Skin
 STEL: 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).
EH40-OES (United Kingdom (UK), 1997). Skin
 STEL: 39 mg/m³ 15 minute(s).
 STEL: 10 ppm 15 minute(s).
 TWA: 20 mg/m³ 8 hour(s).
 TWA: 5 ppm 8 hour(s).
ACGIH (United States, 1996). Skin
 TWA: 19 mg/m³ 8 hour(s).
 TWA: 5 ppm 8 hour(s).
NIOSH REL (United States, 1994). Skin
 CEIL: 60 mg/m³ 15 minute(s).
 CEIL: 15.6 ppm 15 minute(s).
 TWA: 19 mg/m³ 10 hour(s).
 TWA: 5 ppm 10 hour(s).
OSHA Final Rule (United States, 1989). Skin
 TWA: 19 mg/m³ 8 hour(s).
 TWA: 5 ppm 8 hour(s).

Water

Not available.

Section 9. Physical and Chemical Properties

Odor Alcohol like.

Color Purple.

Physical State and Appearance Liquid.

Molecular Weight Not applicable.

Molecular Formula Not applicable.

pH Not available.

Boiling/Condensation Point	The lowest known value is 78.333°C (173°F) (Ethanol). Weighted average: 96.44°C (205.6°F)
Melting/Freezing Point	May start to solidify at -0.1°C (31.8°F) based on data for: Water. Weighted average: -0.64°C (30.8°F)
Specific Gravity	Weighted average: 0.86 (Water = 1)
Vapor Pressure	The highest known value is 5.9 kPa (44 mmHg) (@ 20°C) (ETHANOL).
Vapor Density	The highest known value is 1.59 (Air = 1) (Ethanol).
Volatility	99.9% (v/v). (Methanol.)
Odor Threshold	The lowest known value is 5 ppm (Ethanol)
Evaporation Rate	The highest known value is 1.7 (Ethanol) Weighted average: 0.57 compared to (n-Butyl Acetate =1)
VOC	24 (%)
LogK_{ow}	Not available.
Solubility	Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Avoid all possible sources of ignition (spark or flame).
Incompatibility with Various Substances	Reactive with oxidizing agents, acids.
Rem/Incompatibility	Avoid all possible sources of ignition (spark or flame). Avoid Heat Incompatible with acetic anhydride, metal hydrides, calcium oxychloride. (Ethanol)
Hazardous Decomposition Products	These products are halogenated compounds, hydrogen chloride.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

RTECS Number:	Basic Fuchsin	CX9850100
	Ethanol	KQ6300000
	Methanol	PC1400000
	Phenol	SJ3325000
	Water	ZC0110000
Toxicity	Acute oral toxicity (LD ₅₀): 270 mg/kg [Mouse]. (Phenol). Acute dermal toxicity (LD ₅₀): 630 mg/kg [Rabbit]. (Phenol). Acute toxicity of the vapor (LC ₅₀): 20000 ppm 10 hour(s) [Rat]. (Ethanol).	
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH [Basic Fuchsin]. Classified 2B (Possible for human.) by IARC [Basic Fuchsin]. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED] [Ethanol]. Contains material which causes damage to the following organs: mucous membranes. Contains material which may cause damage to the following organs: blood, the reproductive system.	
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). Hazardous in case of ingestion.	

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Synergetic Products (Toxicologically)	Not available.
Irritancy	<u>Draize Test</u> : Not available.
Sensitization	Not available.
Carcinogenic Effects	Classified A1 (Confirmed for human.) by ACGIH [Basic Fuchsin]. Classified 2B (Possible for human.) by IARC [Basic Fuchsin].
Toxicity to Reproductive System	Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED] [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 as toxic as the product itself.

Section 13. Disposal Considerations

EPA Waste Number	D001
Treatment	Specified Technology - Incineration to a level below TCA (Total Constituent Analyses) levels. Contact your local permitted waste disposal site (TSD) for permissible treatment sites.

Section 14. Transport Information

DOT Classification	Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHANOL, METHANOL) Hazard Class: 3 UN number: UN1993 Packing Group: III RQ: Not applicable.	
TDG Classification	Not available.	
IMO/IMDG Classification	Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHANOL, METHANOL) Hazard Class: 3 UN number: UN1993 Packing Group: III RQ: Not applicable.	
ICAO/IATA Classification	Not available.	

Section 15. Regulatory Information

U.S. Federal Regulations	TSCA 8(b) inventory: Basic Fuchsin; SDA-3A; Phenol; Water TSCA 8(d) H and S data reporting: Phenol: 1987 SARA 302/304/311/312 extremely hazardous substances: Phenol SARA 302/304 emergency planning and notification: Phenol SARA 302/304/311/312 hazardous chemicals: Basic Fuchsin; SDA-3A; Phenol SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Basic Fuchsin: Delayed (Chronic) Health Hazard; SDA-3A: Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard; Phenol: Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard SARA 313 toxic chemical notification and release reporting: Phenol 6.75% Clean Water Act (CWA) 307: Phenol
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Clean Water Act (CWA) 311: Phenol

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-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°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).

CLASS E: Corrosive liquid.

CEPA DSL: Basic Fuchsin; Ethanol; Methanol; Phenol; Water

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**

Basic Fuchsin 209-321-2

Ethanol 200-578-6

Methanol 200-659-6

Phenol 203-632-7

Water 231-791-2

DSCL (EEC)

R10- Flammable.

R34- Causes burns.

International Lists

Australia (NICNAS): Ethanol; Methanol; Phenol; Water

Germany water class: Ethanol

Japan (MITI): Ethanol; Methanol; Phenol; Water

Korea (TCCL): Ethanol; Methanol; Phenol; Water

Philippines (RA6969): Basic Fuchsin; Ethanol; Methanol; Phenol; Water

China: No products were found.

State Regulations

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

Massachusetts RTK: Basic Fuchsin; Ethanol; Methanol; Phenol

New Jersey: Fuchsin Carbol Kinyoun Solution

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: Basic Fuchsin

California prop. 65 (no significant risk level): Basic Fuchsin

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Basic Fuchsin

Section 16. Other Information

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



Changed Since Last
Revision

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[Notice to Reader](#)

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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.