

Material Safety Data Sheet

Coulomat CK, AQUASTAR® , For Moisture Determination



Section 1. Product and Company Identification

Product name : Coulomat CK, AQUASTAR® , For Moisture Determination
Product code : AX1697F
Synonym : None.
Material uses : Other non-specified industry: Analytical reagent.
Manufacturer : EMD Chemicals Inc.
P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027
856-423-6300 Technical Service
Monday - Friday: 8:00 - 5:00 PM
Validation date : 7/17/2007.
Print date : 7/17/2007.
In case of emergency : 800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Section 2. Hazards Identification

Physical state : Liquid.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview : DANGER!
MAY BE FATAL IF INHALED OR SWALLOWED.
CAUSES EYE AND SKIN BURNS.
BIRTH DEFECT HAZARD.
CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.
HARMFUL IF ABSORBED THROUGH SKIN.
CAUSES RESPIRATORY TRACT IRRITATION.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
BLOOD, KIDNEYS, LUNGS, REPRODUCTIVE SYSTEM, LIVER, RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
SUSPECT CANCER HAZARD.
CONTAINS MATERIAL WHICH MAY CAUSE CANCER.
Warning: Contains Carbon Tetrachloride, a substance which harms public and environment by destroying ozone in the upper atmosphere.
WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.
Do not ingest. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure. Avoid exposure during pregnancy.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes : Corrosive to eyes.
Skin : Toxic in contact with skin. Corrosive to the skin.
Inhalation : Very toxic by inhalation. Irritating to respiratory system.
Ingestion : Very toxic if swallowed. May cause burns to mouth, throat and stomach.
Carcinogenic effects : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenic effects : No known significant effects or critical hazards.
Teratogenicity / Reproductive toxicity : Contains material which can cause birth defects.

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Section 2. Hazards Identification

Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

Section 3. Composition/Information on Ingredients

United States

<u>Name</u>	<u>CAS number</u>	<u>% by Weight</u>
2-Methoxyethanol	109-86-4	50 - 75
Imidazole	288-32-4	10 - 20
Carbon Tetrachloride	56-23-5	10 - 20
Sulfur Dioxide	7446-09-5	5 - 15
Iodine	7553-56-2	<1

Section 4. First Aid Measures

- Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.
- Skin contact** : Get medical attention immediately. Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Inhalation** : Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing or wear gloves.

Section 5. Fire Fighting Measures

Flammability of the product : No specific hazard.

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
Not suitable : None known.
Special exposure hazards : Not available.
Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Special remarks on explosion hazards : May form explosive peroxides especially when heated. (2-Methoxyethanol)

Section 6. Accidental Release Measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Methods for cleaning up : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and Storage

- Handling** : Do not ingest. Do not get in eyes or on skin or clothing. Keep container closed. Use only with adequate ventilation. Do not breathe vapor or mist. Wash thoroughly after handling.
Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Product name

United States

2-Methoxyethanol

Exposure limits

ACGIH TLV (United States, 1/2006). Skin

TWA: 0.1 ppm 8 hour/hours. Form: All forms

NIOSH REL (United States, 12/2001). Skin

TWA: 0.3 mg/m³ 10 hour/hours. Form: All forms

TWA: 0.1 ppm 10 hour/hours. Form: All forms

OSHA PEL (United States, 8/1997). Skin

TWA: 80 mg/m³ 8 hour/hours. Form: All forms

TWA: 25 ppm 8 hour/hours. Form: All forms

OSHA PEL 1989 (United States, 3/1989). Skin

TWA: 80 mg/m³ 8 hour/hours. Form: All forms

TWA: 25 ppm 8 hour/hours. Form: All forms

ACGIH (United States, 1996). Skin

TWA: 31 mg/m³

STEL: 63 mg/m³

OSHA (United States, 1989).

TWA: 12.6 mg/m³

STEL: 6543210.0123456 mg/m³

OSHA PEL Z2 (United States, 8/1997).

AMP: 200 ppm 5 minute/minutes. Form: All forms

CEIL: 25 ppm Form: All forms

TWA: 10 ppm 8 hour/hours. Form: All forms

ACGIH TLV (United States, 1/2006). Skin Notes: Substance

identified by other sources as a suspected or confirmed human carcinogen. 1996 Adoption Substances for which the TLV is higher

Carbon Tetrachloride

Section 8. Exposure Controls/Personal Protection

than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL. Refers to Appendix A

-- Carcinogens.

STEL: 63 mg/m³ 15 minute/minutes. Form: All forms

STEL: 10 ppm 15 minute/minutes. Form: All forms

TWA: 31 mg/m³ 8 hour/hours. Form: All forms

TWA: 5 ppm 8 hour/hours. Form: All forms

NIOSH REL (United States, 12/2001). Notes: See Appendix A - NIOSH Potential Occupational Carcinogen

STEL: 12.6 mg/m³ 60 minute/minutes. Form: All forms

STEL: 2 ppm 60 minute/minutes. Form: All forms

OSHA PEL 1989 (United States, 3/1989). Notes: See Table Z-2.

TWA: 12.6 mg/m³ 8 hour/hours. Form: All forms

TWA: 2 ppm 8 hour/hours. Form: All forms

ACGIH TLV (United States, 1/2005). Notes: 1996 Adoption Refers to Appendix A -- Carcinogens.

STEL: 13 mg/m³ 15 minute/minutes. Form: All forms

STEL: 5 ppm 15 minute/minutes. Form: All forms

TWA: 5.2 mg/m³ 8 hour/hours. Form: All forms

TWA: 2 ppm 8 hour/hours. Form: All forms

NIOSH REL (United States, 12/2001).

STEL: 13 mg/m³ 15 minute/minutes. Form: All forms

STEL: 5 ppm 15 minute/minutes. Form: All forms

TWA: 5 mg/m³ 10 hour/hours. Form: All forms

TWA: 2 ppm 10 hour/hours. Form: All forms

OSHA PEL (United States, 8/1997).

TWA: 13 mg/m³ 8 hour/hours. Form: All forms

TWA: 5 ppm 8 hour/hours. Form: All forms

OSHA PEL 1989 (United States, 3/1989).

STEL: 10 mg/m³ 15 minute/minutes. Form: All forms

STEL: 5 ppm 15 minute/minutes. Form: All forms

TWA: 5 mg/m³ 8 hour/hours. Form: All forms

TWA: 2 ppm 8 hour/hours. Form: All forms

Sulfur Dioxide

Consult local authorities for acceptable exposure limits.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Recommended: splash goggles , face shield

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Body: Recommended: safety apron

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Section 8. Exposure Controls/Personal Protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and Chemical Properties

Physical state : Liquid.
Color : Brownish-red.
Boiling/condensation point : The lowest known value is 76.72°C (170.1°F) (Carbon Tetrachloride). Weighted average: 115.13°C (239.2°F)
Melting/freezing point : May start to solidify at -22.75°C (-9°F) based on data for: Carbon Tetrachloride . Weighted average: -72.94°C (-99.3°F)
Critical temperature : The lowest known value is 282.9°C (541.2°F) (Carbon Tetrachloride).
Relative density : Weighted average: 1.08 (Water = 1)
Vapor pressure : The highest known value is 12.1 kPa (91 mm Hg) (at 20°C) (Carbon Tetrachloride). Weighted average: 2.99 kPa (22.43 mm Hg) (at 20°C)
Vapor density : The highest known value is 5.3 (Air = 1) (Carbon Tetrachloride). Weighted average: 3.14 (Air = 1)
Odor threshold : The lowest known value is 0.9 ppm (2-Methoxyethanol) Weighted average: 2.85 ppm
Evaporation rate : The highest known value is 7.52 (Carbon Tetrachloride) Weighted average: 1.88 compared with Butyl acetate.

Section 10. Stability and Reactivity

Stability and reactivity : The product is stable.
Incompatibility with various substances : Highly reactive or incompatible with the following materials: alkalis.
Reactive or incompatible with the following materials: oxidizing materials, moisture and acids.
Hazardous decomposition products : These products are halogenated compounds, hydrogen chloride.
Hazardous polymerization : Will not occur.
Conditions of reactivity : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Slightly flammable in the presence of the following materials or conditions: shocks and mechanical impacts.
Slightly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts.

Section 11. Toxicological Information

Toxicity data

United States

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
2-Methoxyethanol	LD50	2370 mg/kg	Oral	Rat
	LD50	2460 mg/kg	Oral	Rat
	LD50	890 mg/kg	Oral	Rabbit
	LD50	1280 mg/kg	Dermal	Rabbit
	LD50	2000 mg/kg	Dermal	Rabbit
	LDLo	143 mg/kg	Oral	human
	LDLo	3380 mg/kg	Oral	human
	LC50	1500 ppm (7 hour/hours)	Inhalation	Rat
	Imidazole	LD50	220 mg/kg	Oral
LD50		760 mg/kg	Oral	Guinea pig

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Section 11. Toxicological Information

Carbon Tetrachloride	LD50	880 mg/kg	Oral	Mouse
	LD50	2350 mg/kg	Oral	Rat
	LD50	5760 mg/kg	Oral	Rabbit
	LD50	5760 mg/kg	Oral	Guinea pig
	LD50	5070 mg/kg	Dermal	Rat
	LDLo	429 mg/kg	Oral	man

Chronic effects on humans : **CARCINOGENIC EFFECTS** Classified + (Proven.) by NIOSH [Carbon Tetrachloride]. Classified 2B (Possible for humans.) by IARC, 3 (Possible for humans.) by European Union [Carbon Tetrachloride]. Classified A2 (Suspected for humans.) by ACGIH, 2 (Reasonably anticipated to be human carcinogens.) by NTP [Carbon Tetrachloride]. Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [Sulfur Dioxide].
 Contains material which causes damage to the following organs: blood, kidneys, lungs, the reproductive system, liver, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Other toxic effects on humans : Extremely hazardous in case of ingestion, .
 Very hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive) , of inhalation (lung irritant).
 Hazardous in case of inhalation (lung corrosive).

Specific effects

Carcinogenic effects : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : Contains material which can cause birth defects.

Sensitization

Ingestion : May cause burns to mouth, throat and stomach.

Inhalation : Irritating to respiratory system.

Eyes : Corrosive to eyes.

Skin : Corrosive to the skin.

Section 12. Ecological Information

Ecotoxicity data

United States

<u>Product/ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
2-Methoxyethanol	Lepomis macrochirus (LC50)	96 hour/hours	>10000 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	16000 mg/l
Carbon Tetrachloride	Brachydanio rerio (LC50)	96 hour/hours	24.3 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	27 mg/l
	Pimephales promelas (LC50)	96 hour/hours	41.4 mg/l
	Pimephales promelas (LC50)	96 hour/hours	42.9 mg/l
	Pimephales promelas (LC50)	96 hour/hours	43.3 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	125 mg/l

Environmental precautions : No known significant effects or critical hazards.

Products of degradation : These products are carbon oxides (CO, CO₂) and water, nitrogen oxides (NO, NO₂ etc.), sulfur oxides (SO₂, SO₃ etc.), halogenated compounds.

Toxicity of the products of biodegradation : The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations


Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	UN2922	CORROSIVE LIQUID, TOXIC, N.O.S. (CONTAINS IMIDAZOLE & CARBON TETRACHLORIDE)	8	III		Not available.

PG* : Packing group

Section 15. Regulatory Information

United States

HCS Classification : Highly toxic material
Corrosive material
Carcinogen
Target organ effects

U.S. Federal regulations : TSCA 8(b) inventory: Listed
SARA 302/304/311/312 extremely hazardous substances: Sulfur Dioxide
SARA 302/304 emergency planning and notification: Sulfur Dioxide
SARA 302/304/311/312 hazardous chemicals: Sulfur Dioxide; Imidazole; 2-Methoxyethanol ; Carbon Tetrachloride
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sulfur Dioxide: reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard; Imidazole: Immediate (acute) health hazard; 2-Methoxyethanol : Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Carbon Tetrachloride : Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: Carbon Tetrachloride
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: Sulfur Dioxide
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: Sulfur Dioxide

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Section 15. Regulatory Information

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	: 2-Methoxyethanol Carbon Tetrachloride	109-86-4 56-23-5	50 - 75 10 - 20
Supplier notification	: 2-Methoxyethanol Carbon Tetrachloride	109-86-4 56-23-5	50 - 75 10 - 20

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : Pennsylvania RTK: Sulfur Dioxide: (environmental hazard, generic environmental hazard); Iodine: (generic environmental hazard); 2-Methoxyethanol : (environmental hazard, generic environmental hazard); Carbon Tetrachloride : (special hazard, environmental hazard, generic environmental hazard)
 Massachusetts RTK: Sulfur Dioxide; Iodine; 2-Methoxyethanol ; Carbon Tetrachloride
 New Jersey: Sulfur Dioxide; Iodine; 2-Methoxyethanol ; Carbon Tetrachloride
 WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
2-Methoxyethanol	No.	Yes.	No.	63 µg/day (ingestion)
Carbon Tetrachloride	Yes.	No.	Yes.	No.


Canada

WHMIS (Canada) : 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 material

CEPA DSL/CEPA NDSL : CEPA DSL: Sulfur Dioxide; Imidazole; 2-Methoxyethanol ; Carbon Tetrachloride

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

EU regulations

Hazard symbol/symbols : 

Risk phrases : R40- Limited evidence of a carcinogenic effect.
 R60- May impair fertility.
 R61- May cause harm to the unborn child.
 R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
 R48/23- Toxic: danger of serious damage to health by prolonged exposure through inhalation.
 R34- Causes burns.
 R37- Irritating to respiratory system.
 R59- Dangerous for the ozone layer.

Safety phrases : S53- Avoid exposure - obtain special instructions before use.
 S1/2- Keep locked up and out of the reach of children.
 S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S29- Do not empty into drains.
 S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
 S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 S59- Refer to manufacturer/supplier for information on recovery/recycling.
 S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

Section 15. Regulatory Information

S63- In case of accident by inhalation: remove casualty to fresh air and keep at rest.

International regulations

International lists

: Australia (NICNAS): Sulfur Dioxide; Imidazole; Iodine; 2-Methoxyethanol ; Carbon Tetrachloride

China: Sulfur Dioxide; Imidazole; Iodine; 2-Methoxyethanol ; Carbon Tetrachloride

Germany water class: Sulfur Dioxide; Imidazole; Iodine; 2-Methoxyethanol ; Carbon Tetrachloride

Japan (METI): Sulfur Dioxide; Imidazole; 2-Methoxyethanol ; Carbon Tetrachloride

Japan (MOL): Carbon Tetrachloride

Korea (TCCL): Sulfur Dioxide; Imidazole; Iodine; 2-Methoxyethanol ; Carbon Tetrachloride

Philippines (RA6969): Sulfur Dioxide; Imidazole; Iodine; 2-Methoxyethanol ; Carbon Tetrachloride

Section 16. Other Information

Label requirements

: DANGER!

MAY BE FATAL IF INHALED OR SWALLOWED.

CAUSES EYE AND SKIN BURNS.

BIRTH DEFECT HAZARD.

CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.

HARMFUL IF ABSORBED THROUGH SKIN.

CAUSES RESPIRATORY TRACT IRRITATION.

CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:

BLOOD, KIDNEYS, LUNGS, REPRODUCTIVE SYSTEM, LIVER, RESPIRATORY

TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.

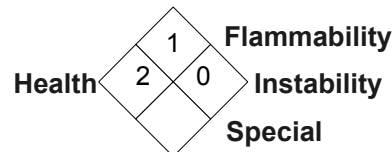
SUSPECT CANCER HAZARD.

CONTAINS MATERIAL WHICH MAY CAUSE CANCER.

Warning: Contains Carbon Tetrachloride, a substance which harms public and environment by destroying ozone in the upper atmosphere.

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

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



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.