



DATE: AUGUST 22, 1997

FROM: JDE ZOVINO

- Corporate Headquarters: Two Annabel Lane, Suite 220, San Ramon, CA 94583 Fax (510) 327-7347 Voice (510) 327-0200
- Clinical R&D : 3158 Des Plaines Avenue, Suite 10-14, Des Plaines, IL 60018 Fax: (847) 803-9341 Voice: (847) 803-9330
- Sales & Marketing: 1719 Route 10, Suite 310 Parsippany, NJ 07054 Fax: (201) 359-0313 Voice: (201) 359-0600

FAX TO: MS. M. LOGAN

COMPANY: ALAMEDA COUNTY HEALTH DEPARTMENT

FAX #: (510) 387-9335

PAGES (INCLUDING THIS SHEET): 9

HARD COPY TO FOLLOW: YES NO

COMMENTS :

NOTICE OF CONFIDENTIALITY

Information contained in this facsimile transmittal is privileged and confidential information of the addressed and intended for the use of the Intendee listed above. If you are neither the intended recipient nor the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any disclosure, copying, distribution or the taking of any action in reliance on the contents of this transmittal is strictly prohibited. If you have received this telecopy in error, please immediately notify us by telephone (510) 327-0200 to arrange for return of the original documents to us.

08-22-97 1:29:59 PM FROM: SPECTRUM QUALITY

TO: 201



Material Safety Data Sheet

| | | |
|-----------------|----------------|---|
| NFPA | HMS | Personal Protective Equipment See Section 15. |
|-----------------|----------------|---|

| Section 1. Chemical Product and Company Identification | | Page Number: 1 |
|--|---|--|
| Common Name/Trade Name | Mitomycin c | Code 6985M |
| Manufacturer | SPECTRUM CHEMICAL MFG. CORP. 14422 SOUTH SAN PEDRO STREET GARDENA, CALIFORNIA 90248 | CAS# 50-07-7 |
| Commercial Name(s) | Not available. | RTECS CN0700000 |
| Synonym | Not available. | TSCA On the TSCA list. |
| Chemical Name | Not available. | CI# Not available. |
| Chemical Family | Not available. | IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 Emergency phone: (310)518-8000 |
| Chemical Formula | C15H18N4O5 | |
| Supplier | SPECTRUM QUALITY PRODUCTS, INC. 14422 SOUTH SAN PEDRO STREET GARDENA, CA 90248 | |

| Section 2. Composition and Information on Ingredients | | | | | |
|---|---|--------------------------|---------------------------|---------------------------|-------------|
| Name | CAS # | Exposure Limits | | | % by Weight |
| | | TWA (mg/m ³) | STEL (mg/m ³) | CEIL (mg/m ³) | |
| Mitomycin c | 50-07-7 | | | | 100 |
| Toxicological Data on Ingredients | Mitomycin c: ORAL (LD50): Acute: 30 mg/kg (Rat), 23 mg/kg (Mouse). | | | | |

| Section 3. Hazards Identification | |
|---|--|
| Potential Acute Health Effects | Very dangerous in case of eye contact (Irritant), of ingestion. Slightly dangerous to dangerous in case of skin contact (Irritant, permeator), of inhalation. This product is an eye irritant. Severe over-exposure can result in death. Can be fatal if inhaled or ingested. This product may irritate eyes and skin upon contact. Inflammation of the eye is characterized by redness, watering, and itching. |
| Potential Chronic Health Effects | CARCINOGENIC EFFECTS: Classified 1 by IARC, + by OSHA/NIOSH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. The substance is toxic to blood, kidneys. Toxicity of the product to the reproductive system: Not available. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs. |

Continued on Next Page

08-22-97 1:29:58 PM FROM: SPECTRUM QUALITY TO: 201

PAGE 3

Page Number: 2

Mitomycin c**Section 4. First Aid Measures**

| | |
|-----------------------------|--|
| Eye Contact | Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention. |
| Skin Contact | If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and grain. COLD water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing. |
| Serious Skin Contact | Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention. |
| Inhalation | Allow the victim to rest in a well ventilated area. Seek immediate medical attention. |
| Serious Inhalation | Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention. |
| Ingestion | Remove dentures if any. Watch for an obstruction in the victim's mouth. Remove if possible what is causing the obstruction but do not force fingers or a hard object between the victim's teeth. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sticking finger in throat. Seek immediate medical attention. |
| Serious Ingestion | Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Remove dentures if any. Watch for an obstruction in the victim's mouth. Remove if possible what is causing the obstruction but do not force fingers or a hard object between the victim's teeth. If a soft pad can be inserted between the victim's teeth, it will protect the tongue from being bitten. A badly bleeding tongue immensely complicates the patient's problems. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. If convulsions occur, do not restrain the victim, but do remove objects with which he (she) might injure himself (herself) or orient the victim to prevent him (her) from striking fixed heavy objects. If the convulsions cease, turn the victim on the side or face down so that any fluid in the mouth will drain. Seek immediate medical attention. |

Section 5. Fire and Explosion Data

| | |
|--|--|
| Flammability of the Product | Combustible. |
| Auto-Ignition Temperature | Not available. |
| Flash Points | Not available. |
| Flammable Limits | Not available. |
| Products of Combustion | These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...). |
| Fire Hazards in Presence of Various Substances | No specific information is available in our database regarding the flammability of this product in presence of various materials. |
| Explosion Hazards in Presence of Various Substances | Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. No specific information is available in our database regarding the product's risks of explosion in the presence of various materials. |
| Fire Fighting Media and Instructions | SMALL FIRE: Use DRY chemicals, CO ₂ , water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. |
| Special Remarks on Fire Hazards | No additional remark. |
| Special Remarks on Explosion Hazards | No additional remark. |

Continued on Next Page

08/22/97 FRI 13:33 [TX/RX NO 8900]

08-22-97 1:29:59 PM FROM: SPECTRUM QUALITY TO: 201

PAGE 4

| Mitomycin c | | Page Number: 3 |
|---|--|----------------------|
| Section 6. Accidental Release Measures | | |
| Small Spill | Use appropriate tools to put the spilled solid in a convenient waste disposal container. | |
| Large Spill | Poisonous solid. Stop leak if without risk. 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. Eliminate all sources of ignition. Call for assistance on disposal. | |
| Section 7. Handling and Storage | | |
| Precautions | Keep locked up. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. DO NOT ingest. DO NOT breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. | |
| Storage | Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room. | |
| Section 8. Exposure Controls/Personal Protection | | |
| Engineering Controls | Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. | |
| Personal Protection | Splash goggles. Lab coat. Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Gloves (Impervious). Wear appropriate respirator when ventilation is inadequate. | |
| Personal Protection in Case of a Large Spill | Splash goggles. Full suit. Dust 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. | |
| Exposure Limits | Not available. | |
| Section 9. Physical and Chemical Properties | | |
| Physical state and appearance | Solid. (Powdered solid.) | Odor Not available. |
| Molecular Weight | 334.33 | Taste Not available. |
| pH (1% soln/water) | Not available. | Color Bluish-grey |
| Boiling Point | Not available. | |
| Melting Point | Decomposes. | |
| Critical Temperature | Not available. | |
| Specific Gravity | Not available. | |
| Vapor Pressure | Not available. | |
| Vapor Density | Not available. | |
| Volatility | Not available. | |
| Odor Threshold | Not available. | |
| Water/Oil Dist. Coeff. | Not available. | |
| Toxicity (in Water) | Not available. | |
| Dispersion Properties | See solubility in water. | |
| Solubility | Easily soluble in cold water. | |

Continued on Next Page

08/22/97 FRI 13:33 [TX/RX NO 8900]

08-22-97 1:29:59 PM FROM: SPECTRUM QUALITY TO: 201

PAGE 5

Page Number: 4

Mitomycin c**Section 10. Stability and Reactivity Data**

| | |
|---|--|
| Stability | The product is stable. |
| Instability Temperature | Not available. |
| Conditions of Instability | No additional remark. |
| Incompatibility with various substances | No specific information is available in our database regarding the reactivity of this material in presence of various other materials. |
| Corrosivity | Non-corrosive in presence of glass. |
| Special Remarks on Reactivity | No additional remark. |
| Special Remarks on Corrosivity | No additional remark. |
| Polymerization | No. |

Section 11. Toxicological Information

| | |
|--|--|
| Routes of Entry | Ingestion, Skin contact, Inhalation. |
| Toxicity to Animals | Acute oral toxicity (LD50): 23 mg/kg (Mouse). |
| Chronic Effects on Humans | CARCINOGENIC EFFECTS: Classified 1 by IARC, + by OSHA/NIOSH. The substance is toxic to blood, kidneys. Toxicity of the product to the reproductive system: Not available. |
| Other Toxic Effects on Humans | Very dangerous in case of eye contact (Irritant), of ingestion. Slightly dangerous to dangerous in case of skin contact (irritant, permeator), of inhalation. |
| Special Remarks on Toxicity to Animals | No additional remark. |
| Special Remarks on Chronic Effects on Humans | Causes sperm abnormalities in animal. |
| Special Remarks on other Toxic Effects on Humans | No additional remark. |

Section 12. Ecological Information

| | |
|---|--|
| Ecotoxicity | Not available. |
| BOD5 and COD | Not available. |
| Products of Biodegradation | These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...) |
| Toxicity of the Products of Biodegradation | The products of degradation are more toxic. |
| Special Remarks on the Products of Biodegradation | No additional remark. |

Section 13. Disposal Considerations

| | |
|----------------|--|
| Waste Disposal | Recycle to process, if possible. Consult your local or regional authorities. |
|----------------|--|

Section 14. Transport Information

| | |
|----------------------------------|------------------------------------|
| DOT Classification | DOT CLASS 6.1: Poisonous material. |
| Identification | |
| Special Provisions for Transport | No additional remark. |

Continued on Next Page

08-22-97 1:29:59 PM FROM: SPECTRUM QUALITY TO: 201

Page Number: 5

Mitomycin c

DOT (Pictograms)



Section 15: Other Regulatory Information and Pictograms

Federal and State Regulations

The following product(s) is (are) listed by the State of California: [Cancer] Mitomycin c
 The following product(s) is (are) listed by CERCLA: Mitomycin c
 The following product(s) is (are) listed on SARA 312: Mitomycin c
 The following product(s) is (are) listed by the State of Massachusetts: Mitomycin c
 The following product(s) is (are) listed by the State of Pennsylvania: Mitomycin c
 The following product(s) is (are) listed by the State of Florida: Mitomycin c
 The following product(s) is (are) listed by the State of Minnesota: Mitomycin c
 The following product(s) is (are) listed by the State of New Jersey: Mitomycin c
 The following product(s) is (are) listed on TSCA: Mitomycin c

California Proposition 65 Warnings

WARNING: This product contains a chemical known to the State of California to cause cancer.
 Chemical Ingredient(s) requiring this warning:
 Mitomycin c

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
 Chemical Ingredient(s) requiring this warning:
 NONE

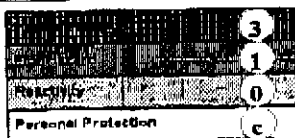
Other Regulations

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

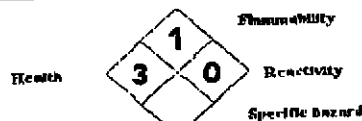
Other Classifications

WHMIS (Canada) WHMIS CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
 WHMIS CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
DSCL (EEC) R36- Irritating to eyes.
 R45- May cause cancer.
 R39/28- Very toxic: danger of very serious irreversible effects if swallowed.

HMIS (U.S.A.)



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



WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDC (Canada) (Pictograms)



ADR (Europe) (Pictograms)

Protective Equipment



Gloves (impervious).

Continued on Next Page

08-22-97 1:29:59 PM FROM: SPECTRUM QUALITY TO: 201

PAGE 7

Page Number: 6

Mitomycin c

Lab coat.



Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other information

Catalog Number(s) M1296

References Not available.

Other Special Considerations No additional remark.

Validated by E. Brull on 12/17/96.

Verified by E. Brull.

Printed 12/19/96.

Emergency phone: (310)516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, detergents, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.

