

PM 32

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US ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF PESTICIDES PROGRAMS  
REGISTRATION DIVISION (TS-767)  
WASHINGTON, DC 20460

EPA REGISTRATION NO.

69632-1

DATE OF ISSUANCE

MAY 31 1996

TERM OF ISSUANCE

Conditional

NAME OF PESTICIDE PRODUCT

NASA/EMU Bacteriostatic  
Cartridge

NOTICE OF PESTICIDE: ☒ REGISTRATION  
☐ REREGISTRATION

(Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

NASA  
EC3/Johnson Space Center  
2101 NASA Road 1  
Houston, TX 77058

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the labeling changes listed below before you release the product for shipment:

a. At the top the right-hand column of the label, in heading in capital letters and bold print, insert the heading: "DIRECTIONS FOR USE".

b. Revise the text of the Precautionary Statements (upper left-hand column) to read: "CAUTION: This cartridge contains iodinated resin which causes irritation to skin and eyes.". (Please refer to the enclosed edited text of your proposed labeling.)

c. Delete the "Statement of Practical Treatment" (heading and text).

☐ ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

MAY 31 1996

d. In the center column, beneath the Signal word "Caution", delete the sentence: "Wear protective goggles and clothing when handling this product."

e. Delete the "Environmental Hazards" statement in the lower left-hand column of the label. (Refer to the enclosed edited text of your proposed labeling.)

f. In the Ingredient Statement (center column) align the percentages of listed ingredients to the same left-hand column, i.e.:

Active Ingredient	
Iodine.....	46.0%
Inert Ingredients.....	54.0%

g. In the text of the label attachment, considered part of the product labeling, revise "bacteria filter cartridge" to: "bacteriostatic filter cartridge", and "It provides the disinfection needed to prevent fouling ..." to: "It provides the bacteriostatic activity needed to prevent fouling ...".

3. Submit one copy of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,

*Walter C. Francis*

Walter C. Francis  
Acting Product Manager (32)  
Antimicrobial Program Branch  
Registration Division (7505C)

Enclosures

PRECAUTIONARY

STATEMENTS

HAZARDS TO HUMANS &  
DOMESTIC ANIMALS

CAUTION: May cause eye and skin irritation. Avoid direct contact with eyes, skin, or clothing. Wear goggles and plastic gloves when handling. Wash thoroughly after handling, including contaminated clothing.

STATEMENT OF PRACTICAL  
TREATMENT (FIRST AID)

IF SWALLOWED: If conscious, drink large quantities of milk or water, transport to hospital and observe for signs of iodine toxicity. If no hospital is available, induce vomiting, drink large quantities of milk or water and observe for adverse reaction. If unconscious or convulsing, transport to hospital immediately. Never give anything by mouth to an unconscious person.

IN CASE OF CONTACT WITH  
EYES:

Wash thoroughly with water for 15 minutes. If irritation persists, see a physician.

IN CASE OF CONTACT WITH  
SKIN:

Wash with mild soap and water. If irritation persists, see a physician. Contaminated clothing should be washed before reuse.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plan authority. For guidance contact your State Water Board or Regional Office of the EPA.

ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

MAY 31 1996

EMU

Bacteriostatic Cartridge  
SV 784967-1

For use in the NASA Space Shuttle  
Extravehicular Maneuvering Unit (EMU)  
Cooling Water System

Contains MCV® Iodinated Resin:

ACTIVE INGREDIENT:

Iodine\* .....46%

INERT INGREDIENTS:.....54%

\*Bound to strong base anion exchange resin

**KEEP OUT OF REACH OF  
CHILDREN  
CAUTION**

This product causes irritation to skin and eyes. In case of contact, flush thoroughly with water. If irritation persists, consult a physician. Wear protective goggles and clothing when handling this product.

**DO NOT CONTAMINATE  
DO NOT ALLOW TO FREEZE  
DO NOT EXPOSE TO DIRECT SUNLIGHT**

Manufactured By: Hamilton Standard SSI

1 Hamilton Road  
Windsor Locks, CT 06096

Phone: (203) 654-6351

EPA Establishment No. 068783-CT-001  
EPA Registration No. 6932-1

Net Contents: Contains 15 CC Iodinated Resin

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

The EMU Bacteria Cartridge provides bacteriostasis in water which is used in the NASA Space Shuttle EMU cooling system.

Installation: The EMU Bacteria Cartridge is installed within the Service and Cooling Umbilical Filter housing.

The EMU Bacteria Cartridge provides bacteriostatic activity (inhibiting bacterial growth for up to 35 EMU recharges).

STORAGE & DISPOSAL

STORAGE: Store this product in non-metallic containers resistant to the corrosive action of Iodine, such as glass or polyethylene containers. Keep moist (preferably with deionized water), by storing resin beads with a small layer of water above the settled resin. Keep away from direct sunlight or excessive heat. Do not allow resin to freeze. Do not store in open or unlabeled containers.

DISPOSAL OF UNUSED RESIN:

This resin contains Iodine (I<sub>2</sub>), which is corrosive to most metals. Do not dispose resin in sewers or storm drains. Place in non-metallic containers and dispose in sanitary landfill approved for pesticide disposal.

CONTAINER DISPOSAL: Glass or plastic containers: triple rinse or equivalent. Then, dispose of in a sanitary landfill, or by other approved state and local procedures.

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## ATTACHMENT

### EXTRAVEHICULAR MOBILITY UNIT (EMU) BACTERIASTATIC CARTRIDGE APPLICATION FOR SHUTTLE ORBITER SPACESUIT

Room temperature MCV iodinated resin is used in the Bacteria Filter Housing in the Shuttle Orbiter Servicing Cooling Umbilical (SCU) for servicing the Shuttle spacesuit EMU. The quantity of room temperature iodinated resin required in the SCU is 15 to 16 cc's (.08 - .10 lb). Iodine from the SCU bacteria filter is imparted into the EMU coolant water in the concentration range of 1 to 3 ppm. A quantity of up to 10 lb (4.5 liter) of water is used during an extravehicular activity (EVA) mission in space. The quantity of iodine placed in the bacteria filter ~~cartridge~~ provides sufficient iodine in the water for servicing up to 800 lbs (364 liter) of water. This is sufficient for 36 EVAs. The room temperature MCV iodinated resin provides control of any microbial contamination within the EMU cooling system. It provides the ~~disinfection~~ needed to prevent fouling of the fine orifices on the sublimator of the EMU and prevent microbial plugging of the spacesuit cooling lines. Any fouling of the plate or plugging of the lines would reduce cooling capacity within the EMU which would have an impact on EVAs.

*bacteriostatic*

*bacteriostatic activity*

ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

MAY 31 1996

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act as  
amended, for the pesticide  
registered under EPA Reg. No.  
69632-1

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