LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File: EHA/HEER Office
09-091LA

February 24, 2009

State of Hawaii
Bridge Design: Attention Paul Santo
601 Kamokila Blvd., Rm. 611
Kapolei, Hawaii 96707-2021

Corrosion COPS
94-463 Alapine Street
Waipahu, Hawaii 96797-4515
Attn: Richard Moran

Dear Sirs:

This letter concerns your inquiry, asking for comments on the possible toxicity of open-atmosphere spray of the product named CORTEC MCI-2020. The product is a water-based corrosion inhibitor that is applied to the surface of steel-reinforced concrete, after which it penetrates the concrete and prevents corrosion of the steel.

The State of Hawaii Department of Transportation (DOT) wants to know if there are public health or environmental concerns with an open-atmosphere spray to various concrete bridges in the State of Hawaii.

MCI-2020's ingredients and scientific evidence on the environmental fate of the ingredients were provided by CORTEC Laboratories to Mr. Leslie Au of the Department of Health's Hazard Evaluation and Emergency Response (HEER) Office. Based on this evidence, no hazard to human health or the environment is anticipated. There is no objection to the DOT's use of MCI-2020, provided that its application method is carefully chosen to minimize odor complaints from residential areas. With the catastrophic collapse during rush hour of the Interstate 35W bridge in Minneapolis, Minnesota on August 2, 2007, in mind, a product that improves a bridge's durability is a benefit to public safety.

If anyone has further questions, please call Mr. Au at (808)586-7539.

Sincerely,

Leslie K.L. Au

Leslie K.L. Au, M.Sc.
Toxicologist, HEER Office

C: Clean Air Branch, Jill Stensrud

LA: la

State of Hawaii
Department of Health
Toxicity Branch
Leslie K.L. Au

May 15, 2008

Dear Leslie,

In discussions with Paul Santo, Bridge Design Hawaii State Department of Transportation has requested us to have the State of Hawaii Department of Health conduct a review of CORTEC MCI 2020 product information where CORTEC MCI 2020 is being considered for use in open atmosphere spray.

CORTEC MCI 2020 is used to treat concrete structures with a water based corrosion inhibitor that is designed to penetrate concrete to provide protection to concrete encased reinforcing steel within the concrete structure.

CORTEC MCI 2020 is envisioned to be sprayed, rolled and/or brushed to surfaces where protection of steel reinforcement within the concrete is desired.

CORROSION COPS is the representatives for CORTEC MCI 2020 and understand that all sections of the MSDS will be adhered to for best personal and environmental protection.

The State of Hawaii Department of Transportation is seeking to discover if there perhaps are personal and or environmental concerns and is asking for input and authorization to conduct open atmosphere spray to various concrete bridges in the State of Hawaii.

Thank you for your help,

Richard Moran
President

MATERIAL SAFETY DATA SHEET
THE CORTEC CORPORATION
4119 WHITE BEAR PARKWAY
ST. PAUL, MINNESOTA 55110
PHONE: 651-429-1100 OR TOLL FREE 1-800-4-CORTEC
FAX: 651-429-1122

EMERGENCY PHONE NO.: CHEMTREC (FOR SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT): 1-800-424-9300 (DAY OR NIGHT)
********** MCI-2020 **********

SECTION I - PRODUCT IDENTIFICATION
PRODUCT NAME: ***MCI-2020***
PRODUCT DESCRIPTION: A proprietary blend of corrosion inhibitors in a water carrier.

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT NAME(S)	WEIGHT (%)	OCCUPATIONAL EXPOSURE LIMITS	
		TLV OR PEL	ORAL LD-50
N.A.	-	-	-

Carcinogenic: **OSHA** = no **NTP** = no **IARC** = no

SECTION III - PHYSICAL DATA
COLOR: Clear to slightly hazy amber
PHYSICAL FORM: Liquid
NON-VOLATILE (weight): 20-27% ODOR: Characteristic
FREEZING POINT: N.E. BOILING RANGE: N.E.
pH: 9.0-9.7 (Neat) MELTING RANGE: N.A.
EVAPORATION RATE: N.E. VAPOR PRESSURE: N.E.
VAPOR DENSITY: N.E.
DENSITY: 8.6-8.8 lb/gal (1.03-1.05 kg/l)

SECTION IV - FIRE AND EXPLOSION DATA
HMIS FLAMMABILITY RATING: 1
FLASH POINT: >212°F (>100°C)
FLAMMABLE LIMITS: LEL: N.E. UEL: N.E.
EXTINGUISHING MEDIA: Water, carbon dioxide or other dry chemical fire fighting agents.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None.
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear self-contained breathing apparatus.

SECTION V - HEALTH HAZARD DATA
EMERGENCY AND FIRST AID PROCEDURES:
Eye Contact: Flush eyes with large amounts of water. Consult a physician. Skin Contact: Wash affected area with soap and water. If irritation persists, consult a physician. Inhalation: Remove to an uncontaminated area, administer oxygen if necessary. If victim has stopped breathing begin CPR. Get medical attention. Ingestion: If swallowed, give water or milk and induce vomiting. Get immediate medical attention.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: None known
PRIMARY ROUTES OF ENTRY: Inhalation, skin and eye contact.
HEALTH HAZARDS (acute and chronic) / EFFECTS OF OVEREXPOSURE:
1. Contact of eye tissues with liquid and/or high vapor concentrations may be irritating.
2. Repeated or prolonged contact with liquid may cause mild skin irritation.
3. Inhalation of product vapors and/or particle mists resulting from the use of this product should be avoided.
4. Ingestion of this product may be harmful.

SECTION VI - REACTIVITY DATA
STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and nitrogen.
INCOMPATIBILITY: Strong acids, alkalis and oxidizing agents.
CONDITIONS TO AVOID: Contact with incompatible materials.

SECTION VII - SPILL OR LEAK PROCEDURES
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb on sweeping compound or other absorbent material.
WASTE DISPOSAL: Dispose of in accordance with existing Federal, State and Local environmental regulations.

SECTION VIII - SAFE HANDLING AND USE INFORMATION
RESPIRATORY PROTECTION: A NIOSH approved respirator if necessary.
PROTECTIVE GLOVES: Chemical resistant rubber or plastic.
EYE PROTECTION: Safety goggles.
OTHER PROTECTIVE EQUIPMENT: Not required.

SECTION IX - SPECIAL PRECAUTIONS AND STORAGE DATA
PRECAUTIONS TO BE TAKEN IN HANDLING: Avoid contact with eyes. Workers should thoroughly wash hands with soap and water prior to eating, drinking, smoking and using lavatory.
PRECAUTIONS TO BE TAKEN IN STORING: Keep containers tightly closed.

SECTION X - SHIPPING DATA
DOT/IMDG/IATA SHIPPING NAME: N.A.
U.N. / N.A. NUMBER: N.A.
DOT/IMDG/IATA HAZARD CLASS.: N.A.
T.S.C.A. STATUS: Listed
DOT/IMDG/IATA REQUIRED LABELS: N.A.
TECHNICAL SHIPPING NAME: N.A.
FREIGHT CLASS BULK: Same as above
LTL: 65 TL: 35 MW: 36

PREPARED BY: Margarita Kharshan, Laboratory Director
APPROVED BY: Boris Miksic, President/CEO
DATE PREPARED: 5/15/03 SUPERSEDS: 3/12/02

N.E. = NOT ESTABLISHED N.A. = NOT APPLICABLE

CORTEC Laboratories

Confidential

4119 White Bear Parkway, St. Paul, MN 55110 USA
Phone (651) 429-1100, Fax (651) 429-1122
Toll Free (800) 4-CORTEC, E-mail info@cortecvci.com
Internet http://www.cortecvci.com

May 22, 2008

Leslie Au, toxicologist
Hawaii Dept. of Health
Hazard Evaluation (HEER) Office

Dear Ms. Au:

Per your request, enclosed you will find the CONFIDENTIAL chemical composition of our product MCI-2020:

	CAS	%
MCI-2020		
1. Water	7732-18-5	65-70
2. Ethanol	64-17-5	1-3
3. Ammonium benzoate	1863-63-4	3-5
4. Cyclohexylammonium benzoate	3129-92-8	5-10
5. Ethanolammonium benzoate	4337-66-0	12-18
6. Dimethylethanolamine	108-01-0	2-5
7. Sodium glucoheptonate	31138-65-5	<0.5

Please keep in mind that the above information is highly CONFIDENTIAL and to use the utmost care when handling it.

Sincerely,

THE CORTEC CORPORATION

Boris A. Miksic
President/CEO
/cgj

CORTEC Laboratories

4119 White Bear Parkway, St. Paul, MN 55110 USA
Phone (651) 429-1100, Fax (651) 429-1122
Toll Free (800) 4-CORTEC, E-mail info@cortecvci.com
Internet http://www.cortecvci.com

November 26, 2008

Leslie K.L. Au, M.Sc.
Toxicologist
Hazard Evaluation and Emergency Response Office
Hawaii Department of Health

We appreciate your study of the MCI-2020 chemical. However we feel it important to point out several pieces of information that you may not have had during your study. MCI-2020 has been tested by Underwriters Laboratory for contact with drinking water and has been tested every year for the past ten years as acceptable for use in concrete tanks greater than 3,000 gallons holding such water. (Please see attached certification.) Also the aquatic toxicity has been determined by Environmental Enterprises for several species as listed below:

D. pulex – 48-hr data
80% survival at 1000ppm & 0% survival at 5000ppm

P. promelas – 49-hr data
100% survival at 1000ppm & 0% survival at 5000ppm

M. bahia – 48-hr data
87.5% survival at 100ppm & 0% survival at 1000ppm

M. beryllina – 48-hr data
100% survival at 1000ppm & 0% survival at 5000ppm

We agree that while spraying, although in an environment that provides fresh air, a NIOSH respirator, which includes a full face shielded cartridge respirator or SCBA respirator should be worn, even though sprayers should keep upwind of the material when using. And although a small percentage of chemical used may be flammable on its own, this chemical should be considered as a whole. The flashpoint for MCI-2020 has been tested to be >212°F (>100°C), which is outside both the flammable and combustible range for liquid products. Also, although one small component may have a high pH (corrosive), the pH of the entire product is between 9.0 and 9.7.

Finally, this and other similar products have been approved for many outdoor bridge/building projects throughout the U.S., where no adverse affects to personnel have been reported.

Sincerely,

Andrea Hansen

Andrea Hansen
Technical Service Engineer
Cortec Corporation

ISO 9001 CERTIFIED QUALITY SYSTEM REGISTERED

ENVIRONMENTAL ISO 14001 CERTIFIED SYSTEM REGISTERED

ONLINE CERTIFICATIONS DIRECTORY

FDNP.MH25692
Drinking Water System Components

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Drinking Water System Components

See General Information for Drinking Water System Components

CORTEC CORP MH25692
4119 WHITE BEAR PKY
ST PAUL, MN 55110 USA

ANSI/NSF STANDARD 61

Barrier Materials

Trade Dsg	Water Contact Temp	Water Contact Mtl	Surface Area to Volume Ratio
Cement Admixtures			
MCI-2005 (a) (b)	23	Cement	25.8sq cm/L
MCI-2005 NS (a) (c)	23	Cement	25.8sq cm/L
MCI-2006 (a) (d)	23	Cement	25.8sq cm/L
MCI-2006 NS (a) (d)	23	Cement	25.8sq cm/L
Cement Coatings			
MCI-2020 (a) (e)	23	Cement	25.8sq cm/L
MCI-2020 Modified (a) (e)	23	Cement	25.8sq cm/L
MCI-2120 MBT (a) (e)	23	Cement	25.8sq cm/L

(a) - For use in tanks greater than 3,000 gal.

(b) - Maximum use level of 0.6L/m3 of cement

(c) - Maximum use level of 1L/m3 of cement

(d) - Maximum use level of 0.6kg/m3 of cement

(e) - Maximum Coverage rate: 3.68 m2/L product (1 coat) or 7.36m2/L of product (2 coats). Re-coat/Cure Time: 7 hours/ 7 hours.

NOTE - Manufacturer's instructions for application must be followed.

Last Updated on 2006-11-20

Questions? Notice of Disclaimer Page Top