

Gray, Jeff

From: Dixon, Melisa D
Sent: Wednesday, October 18, 2006 10:08 AM
To: Gray, Jeff
Cc: Lennon, Kendal R; Dixon, Melisa D; Shaffer, Douglas P; Handagama, Nareshkumar B; Knight, Tony Alan
Subject: RE: KIF Ash Pond PH Treatment
Attachments: Acetic Acid 56% MSDS.pdf

Hey Jeff,

I noticed that the below link appears to have "timed out" regarding viewing of the document. Attached is a PDF of the Subject Acetic Acid 56% MSDS. Please advise if you need additional information.

Lisa

From: Gray, Jeff
Sent: Tuesday, October 17, 2006 2:06 PM
To: Gray, Jeff; Purkey, Ronald E; Johnson, Linden Printz; Campbell, Linda F; Knight, Tony Alan; Dixon, Melisa D; Lennon, Kendal R; Quinn, James Roy III; McDonald, Cathy L; Varner, Arthur L; Carter, James C Jr; Nelson, Gary R; Rehberg, Robert L; Smith, Mark Allen; Waldrep, Roger T; Lankford, Brian Scott; Shaffer, Douglas P; Thomas, John F; Phillips, Matthew Allen; Hethcoat, Charles Keenon; Pruitt, Terry L; Cross, James; Iserman, Randall
Cc: Olmstead, Chadwick Regan; Hedgecoth, Melissa A; Thompson, Melissa A; Cahill, Donald Patrick; Petty, Harold L; Kammeyer, John C; Handagama, Nareshkumar B
Subject: KIF Ash Pond PH Treatment

The attached is for your information and use.

Thanks,
Jeff L. Gray
EDS Civil Engineering
423-751-7693

10/18/2006

TVA-00006295

EASTMAN CHEMICAL
DILUTE ACETIC ACID, 56% Revised: 08/16/1999

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MATERIAL SAFETY DATA SHEET

100004712/F/USA
REVISION DATE: 08/16/1999

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: "EASTMAN" DILUTE ACETIC ACID, 56%

PRODUCT IDENTIFICATION NUMBER(S): P1178510

MANUFACTURER/SUPPLIER: EASTMAN CHEMICAL COMPANY, KINGSPORT, TENNESSEE 37662

MSDS PREPARED BY: EASTMAN PRODUCT SAFETY AND STEWARDSHIP, EASTMAN CHEMICAL COMPANY, KINGSPORT, TN 37662

FOR EMERGENCY HEALTH, SAFETY & ENVIRONMENTAL INFORMATION, CALL 800-EASTMAN

FOR EMERGENCY TRANSPORTATION INFORMATION, CALL CHEMTREC AT 800-424-9300 OR CALL 800-EASTMAN

FOR OTHER INFORMATION, CALL YOUR EASTMAN REPRESENTATIVE OR THE EASTMAN OPERATOR AT 423-229-2000 (USA)

CHEMICAL NAME: NOT APPLICABLE

SYNONYM(S): NOT APPLICABLE

MOLECULAR FORMULA: NOT APPLICABLE

MOLECULAR WEIGHT: NOT APPLICABLE

PRODUCT USE: SOLVENT

2. COMPOSITION/INFORMATION ON INGREDIENTS

(TYPICAL COMPOSITION IS GIVEN AND IT MAY VARY. A CERTIFICATE OF ANALYSIS CAN BE PROVIDED.)

WEIGHT % - COMPONENT - (CAS REGISTRY NUMBER)

50-80	ACETIC ACID (000064-19-7)
20-50	WATER (007732-18-5)

3. HAZARDS IDENTIFICATION

DANGER!

CAUSES SEVERE SKIN AND EYE BURNS
HARMFUL IF SWALLOWED
VAPOR IRRITATING TO THE EYES AND RESPIRATORY TRACT
COMBUSTIBLE LIQUID AND VAPOR

HMIS HAZARD RATINGS:

HEALTH -	3
FLAMMABILITY -	2
CHEMICAL REACTIVITY -	0

NFPA HAZARD RATINGS:

HEALTH -	2
FLAMMABILITY -	2
INSTABILITY -	0

NOTE:

HMIS AND NFPA RATINGS INVOLVE DATA AND INTERPRETATIONS THAT MAY VARY FROM COMPANY TO COMPANY. THEY ARE INTENDED ONLY FOR RAPID, GENERAL IDENTIFICATION OF THE MAGNITUDE OF THE SPECIFIC HAZARD. TO DEAL ADEQUATELY WITH THE SAFE HANDLING OF THIS MATERIAL, ALL THE INFORMATION CONTAINED IN THIS MSDS MUST BE CONSIDERED.

4. FIRST-AID MEASURES

INHALATION: MOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION IMMEDIATELY.

EYES: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF EASY TO DO, REMOVE CONTACT LENSES. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

SKIN: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. GET MEDICAL ATTENTION IMMEDIATELY. WASH CONTAMINATED CLOTHING BEFORE REUSE. DESTROY OR THOROUGHLY CLEAN CONTAMINATED SHOES.

INGESTION: DO NOT INDUCE VOMITING. IF VICTIM IS FULLY CONSCIOUS, GIVE A CUPFUL OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE (CO₂), ALCOHOL FOAM

SPECIAL FIRE-FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING. USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS COOL.

HAZARDOUS COMBUSTION PRODUCTS: CARBON DIOXIDE, CARBON MONOXIDE

UNUSUAL FIRE AND EXPLOSION HAZARDS: COMBUSTIBLE.

6. ACCIDENTAL RELEASE MEASURES

USE PERSONAL PROTECTIVE EQUIPMENT. (SEE EXPOSURE CONTROLS/PERSONAL PROTECTION.)
ELIMINATE ALL IGNITION SOURCES.

NEUTRALIZE WITH:

SODA ASH, LIME. ABSORB SPILL WITH VERMICULITE OR OTHER INERT MATERIAL, THEN PLACE IN A CONTAINER FOR CHEMICAL WASTE.

FOR LARGE SPILLS: USE WATER SPRAY TO DISPERSE VAPORS AND FLUSH SPILL AREA.
PREVENT RUNOFF FROM ENTERING DRAINS, SEWERS, OR STREAMS.

7. HANDLING AND STORAGE

PERSONAL PRECAUTIONARY MEASURES: DO NOT GET IN EYES, ON SKIN, ON CLOTHING. DO NOT TASTE OR SWALLOW. AVOID BREATHING VAPOR. USE ONLY WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.

PREVENTION OF FIRE AND EXPLOSION: KEEP AWAY FROM HEAT AND FLAME. KEEP FROM CONTACT WITH OXIDIZING MATERIALS.

STORAGE: KEEP CONTAINER CLOSED.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

ACGIH THRESHOLD LIMIT VALUE (TLV):

ACETIC ACID: 10 PPM TWA; 15 PPM STEL

OSHA (USA) PERMISSIBLE EXPOSURE LIMIT (PEL, 1989 TABLE Z-1-A VALUES OR SECTION-SPECIFIC STANDARDS):

ACETIC ACID: 10 PPM TWA

VENTILATION: GOOD GENERAL VENTILATION (TYPICALLY 10 AIR CHANGES PER HOUR) SHOULD BE USED. VENTILATION RATES SHOULD BE MATCHED TO CONDITIONS. USE PROCESS

ENCLOSURES, LOCAL EXHAUST VENTILATION, OR OTHER ENGINEERING CONTROLS TO MAINTAIN AIRBORNE LEVELS BELOW RECOMMENDED EXPOSURE LIMITS.

RESPIRATORY PROTECTION: IF ENGINEERING CONTROLS DO NOT MAINTAIN AIRBORNE CONCENTRATIONS BELOW RECOMMENDED EXPOSURE LIMITS, AN APPROVED RESPIRATOR MUST BE WORN. RESPIRATOR TYPE: ORGANIC VAPOR. IF RESPIRATORS ARE USED, A PROGRAM SHOULD BE INSTITUTED TO ASSURE COMPLIANCE WITH OSHA STANDARD 63 FR 1152, JANUARY 8, 1998.

EYE PROTECTION: WEAR SAFETY GLASSES WITH SIDE SHIELDS (OR GOGGLES) AND A FACE SHIELD. WEAR A FULL-FACE RESPIRATOR, IF NEEDED.

SKIN PROTECTION: WEAR CHEMICAL-RESISTANT GLOVES, BOOTS, AND PROTECTIVE CLOTHING APPROPRIATE FOR THE RISK OF EXPOSURE. CONTACT GLOVE MANUFACTURER FOR SPECIFIC INFORMATION.

RECOMMENDED DECONTAMINATION FACILITIES: EYE BATH, WASHING FACILITIES, SAFETY SHOWER

9. PHYSICAL AND CHEMICAL PROPERTIES

- PHYSICAL FORM: LIQUID
- COLOR: COLORLESS
- ODOR: PUNGENT, VINEGAR
- ODOR THRESHOLD: 0.48 PPM - DATA FOR ACETIC ACID
- SPECIFIC GRAVITY (WATER = 1): >1.0
- VAPOR PRESSURE AT 20OC (68OF): 15.2 MBAR (11.4 MM HG) - DATA FOR ACETIC ACID
- VAPOR DENSITY (AIR = 1): 2.1 - DATA FOR ACETIC ACID
- EVAPORATION RATE: NOT AVAILABLE
- BOILING POINT: 102-118OC (224-244OF)
- MELTING POINT: NOT AVAILABLE
- VISCOSITY AT AMBIENT TEMPERATURE: NOT AVAILABLE
- SOLUBILITY IN WATER AT AMBIENT TEMPERATURE: COMPLETE
- PH: 2.4 (AT 60 G/L WATER) - DATA FOR ACETIC ACID
- OCTANOL/WATER PARTITION COEFFICIENT: LOG P = -0.31, P = 0.49 - DATA FOR ACETIC ACID
- FLASH POINT (OPEN CUP): 71-91OC (159-196OF)
- LOWER FLAMMABLE LIMIT AT 59OC (139OF): 6.6 VOLUME % - DATA FOR ACETIC ACID
- UPPER FLAMMABLE LIMIT AT 93OC (199OF): 19.3 VOLUME % - DATA FOR ACETIC ACID
- AUTOIGNITION TEMPERATURE: NOT AVAILABLE

- SENSITIVITY TO MECHANICAL IMPACT: INSENSITIVE
- SENSITIVITY TO STATIC DISCHARGE: MATERIAL IS UNLIKELY TO ACCUMULATE A STATIC CHARGE WHICH COULD ACT AS AN IGNITION SOURCE.

10. STABILITY AND REACTIVITY

STABILITY: STABLE

INCOMPATIBILITY: MATERIAL CAN REACT WITH STRONG OXIDIZING AGENTS, METALS, STRONG BASES, AMINES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

EFFECTS OF EXPOSURE:

INHALATION: VAPOR IRRITATING.

EYES: CAUSES SEVERE BURNS. VAPOR IRRITATING.

SKIN: CAUSES SEVERE BURNS.

INGESTION: MAY CAUSE BURNS OF THE GASTROINTESTINAL TRACT IF SWALLOWED.

ACUTE TOXICITY DATA:

DATA FOR ACETIC ACID:

ORAL LD-50 (RAT): 3310-3530 MG/KG
ORAL LD-50 (MOUSE): 4960 MG/KG
INHALATION LC-50 (MOUSE): 5620 PPM/1 HOUR(S)
DERMAL LD-50 (RABBIT): 1060 MG/KG
SKIN IRRITATION (RABBIT): SEVERE
EYE IRRITATION (RABBIT): SEVERE

12. ECOLOGICAL INFORMATION

INTRODUCTION:

THIS ENVIRONMENTAL EFFECTS SUMMARY IS WRITTEN TO ASSIST IN ADDRESSING EMERGENCIES CREATED BY AN ACCIDENTAL SPILL WHICH MIGHT OCCUR DURING THE SHIPMENT OF THIS MATERIAL, AND, IN GENERAL, IT IS NOT MEANT TO ADDRESS DISCHARGES TO SANITARY SEWERS OR PUBLICLY OWNED TREATMENT WORKS.

DATA FOR THE MAJOR COMPONENT OF THIS MATERIAL HAVE BEEN USED TO ESTIMATE THE ENVIRONMENTAL IMPACT OF THIS MATERIAL. THIS MATERIAL IS A STRONGLY ACIDIC AQUEOUS SOLUTION, AND THIS PROPERTY MAY CAUSE ADVERSE ENVIRONMENTAL EFFECTS. IT IS EXPECTED TO HAVE THE FOLLOWING PROPERTIES:
A HIGH BIOCHEMICAL OXYGEN DEMAND AND A POTENTIAL TO CAUSE OXYGEN DEPLETION IN

AQUEOUS SYSTEMS, A LOW POTENTIAL TO AFFECT AQUATIC ORGANISMS, A LOW POTENTIAL TO AFFECT SECONDARY WASTE TREATMENT MICROBIAL METABOLISM, A MODERATE POTENTIAL TO AFFECT THE GERMINATION AND/OR EARLY GROWTH OF SOME PLANTS, A LOW POTENTIAL TO AFFECT THE GROWTH OF SOME PLANT SEEDLINGS, A HIGH POTENTIAL TO BIODEGRADE (LOW PERSISTENCE) WITH UNACCLIMATED MICROORGANISMS FROM ACTIVATED SLUDGE, A LOW POTENTIAL TO BIOCONCENTRATE. AFTER DILUTION WITH A LARGE AMOUNT OF WATER, FOLLOWED BY SECONDARY WASTE TREATMENT, THIS MATERIAL IS NOT EXPECTED TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS.

DATA FOR ACETIC ACID

OXYGEN DEMAND DATA:

BOD-5: 0.34-0.88 G OXYGEN/G
COD: 1.0 G OXYGEN/G

ACUTE AQUATIC EFFECTS DATA:

96-H LC-50 (FATHEAD MINNOW): >100 MG/L
96-H LC-50 (DAPHNID): 100 MG/L
48-H LC-50 (MOSQUITO FISH): 251 MG/L
48-H LC-50 (GOLDEN ORFE): 410 MG/L

SECONDARY WASTE WATER TREATMENT EFFECTS: 5-HOUR IC-50: >5000 MG/L

7-DAY PLANT GERMINATION EFFECTS - NO-ADVERSE-EFFECT CONCENTRATION:

RYEGRASS: 1 MG/L
RADISH: 10 MG/L
LETTUCE: 10 MG/L

7-DAY PLANT SEEDLING EFFECTS - NO-ADVERSE-EFFECT CONCENTRATION:

CORN: 100 MG/L
MARIGOLD: 100 MG/L
RADISH: 100 MG/L
LETTUCE: 100 MG/L

13. DISPOSAL CONSIDERATIONS

DISCHARGE, TREATMENT, OR DISPOSAL MAY BE SUBJECT TO NATIONAL, STATE, OR LOCAL LAWS. INCINERATE.

SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUE, FOLLOW LABEL WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

14. TRANSPORT INFORMATION

- DOT (USA) STATUS: REGULATED
- CLASS 8, PACKING GROUP II
- DOT REPORTABLE QUANTITY: 6250 LB (2837 KG)
- AIR - INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)
- ICAO STATUS: REGULATED

- CLASS 8, PACKING GROUP II
- SEA - INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)
- IMDG STATUS: REGULATED
- CLASS 8, PACKING GROUP II

15. REGULATORY INFORMATION

- THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE MSDS REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200.
- OSHA CLASSIFICATION: HAZARDOUS
- CALIFORNIA PROPOSITION 65 (SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986): MATERIAL(S) KNOWN TO THE STATE TO CAUSE CANCER: NONE KNOWN TO EASTMAN
- CALIFORNIA PROPOSITION 65 (SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986): MATERIAL(S) KNOWN TO THE STATE TO CAUSE ADVERSE REPRODUCTIVE EFFECTS: NONE KNOWN TO EASTMAN
- THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE MSDS REQUIREMENTS OF THE WHMIS CONTROLLED PRODUCTS REGULATION.
- WHMIS (CANADA) STATUS: CONTROLLED
- WHMIS (CANADA) HAZARD CLASSIFICATION: B/3, E
- CARCINOGENICITY CLASSIFICATION (COMPONENTS PRESENT AT 0.1% OR MORE):
 - INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC): NOT LISTED
 - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH): NOT LISTED
 - NATIONAL TOXICOLOGY PROGRAM (NTP): NOT LISTED
 - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA): NOT LISTED
- CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OR TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 AND 40 CFR PART 372: NONE
- SARA (U.S.A.) SECTIONS 311 AND 312 HAZARD CLASSIFICATION(S): FIRE HAZARD, IMMEDIATE (ACUTE) HEALTH HAZARD
- US TOXIC SUBSTANCES CONTROL ACT (TSCA): ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY. ANY IMPURITIES PRESENT IN THIS PRODUCT ARE EXEMPT FROM LISTING.
- CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) AND DOMESTIC SUBSTANCES LIST (DSL): ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE DSL. ANY IMPURITIES PRESENT IN THIS PRODUCT ARE EXEMPT FROM LISTING.
- EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON EINECS.
- AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) AND NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS): ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON AICS OR OTHERWISE COMPLY WITH NICNAS.
- JAPANESE HANDBOOK OF EXISTING AND NEW CHEMICAL SUBSTANCES: ALL COMPONENTS OF THIS PRODUCT ARE LISTED IN THE HANDBOOK OR HAVE BEEN APPROVED IN JAPAN BY NEW SUBSTANCE NOTIFICATION.

16. OTHER INFORMATION

LABEL STATEMENTS:

-DANGER!
CAUSES SEVERE SKIN AND EYE BURNS
HARMFUL IF SWALLOWED
VAPOR IRRITATING TO THE EYES AND RESPIRATORY TRACT
COMBUSTIBLE LIQUID AND VAPOR

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
DO NOT TASTE OR SWALLOW.
AVOID BREATHING VAPOR.
KEEP AWAY FROM HEAT AND FLAME.
KEEP CONTAINER CLOSED.
USE ONLY WITH ADEQUATE VENTILATION.
WASH THOROUGHLY AFTER HANDLING.

FIRST AID: IF INHALED, MOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION IMMEDIATELY. IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES AND SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. IF EASY TO DO, REMOVE CONTACT LENSES. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. WASH CLOTHING BEFORE REUSE. DESTROY OR THOROUGHLY CLEAN CONTAMINATED SHOES. IF SWALLOWED, DO NOT INDUCE VOMITING. IF VICTIM IS FULLY CONSCIOUS, GIVE A CUPFUL OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

IN CASE OF FIRE: USE WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE (CO₂), ALCOHOL FOAM. USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS COOL.

IN CASE OF SPILL: WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. ELIMINATE ALL IGNITION SOURCES. USE WATER SPRAY TO DISPERSE VAPORS AND FLUSH SPILL

AREA. NEUTRALIZE SPILL AREA AND WASHINGS WITH SODA ASH OR LIME. PREVENT RUNOFF FROM ENTERING DRAINS, SEWERS, AND STREAMS.

SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUE, FOLLOW LABEL WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

CAUTION: FOR MANUFACTURING, PROCESSING OR REPACKING BY TRAINED PERSONNEL

THE INFORMATION CONTAINED HEREIN IS BASED ON CURRENT KNOWLEDGE AND EXPERIENCE; NO RESPONSIBILITY IS ACCEPTED THAT THE INFORMATION IS SUFFICIENT OR CORRECT IN ALL CASES. 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 AND DISPOSAL OF THESE MATERIALS AND THE SAFETY AND HEALTH OF EMPLOYEES AND CUSTOMERS AND THE PROTECTION OF THE ENVIRONMENT.

THE SYMBOL ">" IN THE LEFT MARGIN DENOTES A REVISION IN THIS SECTION.

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