

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Formic Acid Decalcifier

SYNONYMS: None

PRODUCT CODES: ES731, ES732

MANUFACTURER: Azer Scientific, Inc.

ADDRESS: 701 Hemlock Rd, Morgantown, PA 19543

CHEMTREC PHONE: 800-424-9300

SUPPORT: 610-524-5810

FAX: 610-901-3046

PRODUCT USE: Laboratory reagent, Decalcification of bone

PREPARED BY: CB

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION: Skin Corrosion/Irritation Category 1B; Serious eye damage/irritation Category 1; Specific Target Organ Toxicity - single exposure Category 2; Carcinogenicity Category 1A; Skin Sensitization, Category 1; Corrosive to metals Category 1



Signal Word: Danger!

Hazard Phrases	
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H290	May be corrosive to metals.
H370	Causes damage to nervous system and eyes.

Precautionary Phrases	
P234	Keep in original container.
P260	Avoid breathing dust/fumes/gas/mist/vapors/spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P264	Wash hands thoroughly after handling.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P301+P330+P331	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor/physician.

SECTION 2 NOTES:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	CAS NO.	% WT
Formaldehyde	50-00-0	~10
Formic Acid	64-18-6	10
Methanol	67-56-1	< 4
Water	7732-18-5	<80

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

SKIN: In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

INGESTION: Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY OF THE PRODUCT:

FLASH POINT: Not available

AUTOIGNITION TEMPERATURE: Not available

NFPA HAZARD CLASSIFICATION

HEALTH:3 FLAMMABILITY: 0 REACTIVITY: 0
OTHER:

HMIS HAZARD CLASSIFICATION

HEALTH:3 FLAMMABILITY: 0 REACTIVITY: 0
PROTECTION:

EXTINGUISHING MEDIA: Use suitable media for the surrounding materials.

NOT SUITABLE: Do not use water jet.

SPECIAL FIRE FIGHTING PROCEDURES: Avoid contact with metal, hydrogen chloride gas can react with aluminum, tin, lead, zinc.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen gas can form in fire situation which is flammable.

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Small spill and leak: Stop spill at the source if it is safe to do so. Neutralize spill with soda ash, or acid neutralizer. Absorb with an inert material. Collect into a suitable container for disposal.

Large spill and leak: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING: Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

STORAGE: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container, protected from direct sunlight. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: General mechanical ventilation or laboratory fume hood. Ensure that eyewash stations and quick drench showers are close to the workstation.

RESPIRATORY PROTECTION: 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.

EYE PROTECTION: 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 or dusts. Recommended: splash goggles

SKIN PROTECTION: 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. Recommended: lab coat

HANDS: Chemical-resistant, impervious gloves complying with an approved standard should be worn always when handling chemical products if a risk assessment indicates this is necessary. Recommended: Neoprene

ENVIRONMENTAL EXPOSURE CONTROLS: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

WORK HYGIENIC PRACTICES: 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.

EXPOSURE GUIDELINES:

OSHA Permissible Exposure Limits (PELs):

Reagent	CAS#	OSHA PEL TWA
Formaldehyde	50-00-0	0.75 ppm (Ceiling)
Methyl Alcohol	67-56-1	200ppm (260 mg/m ³)
Formic Acid	64-18-6	5 ppm

ACGIH Threshold Limit values (TLVs):

Reagent	CAS#	ACGIH PEL TWA	ACGIH STEL
Formaldehyde	50-00-0	0.3 ppm (Ceiling)	2 ppm
Methyl Alcohol	67-56-1	200ppm (260 mg/m ³)	250ppm (328 mg/m ³)
Formic Acid	64-18-6	5 ppm	10 ppm

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, colorless
ODOR: Bitter odor
PHYSICAL STATE: liquid
pH AS SUPPLIED: <2
BOILING POINT: ~212°F
MELTING POINT: Not available
FREEZING POINT: Not available
VAPOR PRESSURE (mmHg): Not available
VAPOR DENSITY (AIR = 1): Not available
EVAPORATION RATE: Not available
SOLUBILITY IN WATER: Soluble in water
MOLECULAR WEIGHT: Mixture
VISCOSITY: Not established

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Product is stable under normal conditions of use.
CONDITIONS TO AVOID (STABILITY): Excessive heat
INCOMPATIBILITY (MATERIAL TO AVOID): Strong acids and oxidizing agents.
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Oxides of carbon
HAZARDOUS POLYMERIZATION: No hazardous polymerization
CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD50
Formic Acid - mouse: LD50 = 700 mg/kg; rat: LD50 = 1100 mg/kg
Formaldehyde - mouse: LD50 = 42 mg/kg; rat: LD50 = 100 mg/kg
Methyl Alcohol - rabbit: LD50 = 14200 mg/kg; rat: LD50 = 5628 mg/kg
Inhalation LC50
Formic Acid - mouse: LC50 = 6200 mg/m³/15M; rat: LC50 = 15 gm/m³/15M
Formaldehyde - mouse: LC50 = 454 gm/m³/4H; rat: LC50 = 203 mg/m³
Methyl Alcohol - rat: LC50 = 64000 ppm/4H
Dermal LD50
Formaldehyde - rabbit: LD50 = 270 uL/kg
Methyl Alcohol - rabbit: LD50 = 15800 mg/kg
Other information on acute toxicity: no data available
Skin corrosion/irritation: Corrosive to skin
Serious eye damage/eye irritation
Formic acid - Draize test, rabbit, eye: 122 mg Severe
Formaldehyde - Draize test, rabbit, eye: 750 ug/24H Severe
Methyl Alcohol - Draize test, rabbit, eye: 40 mg Moderate
Respiratory or skin sensitization: No data available for mixture. Vapors may be irritating to the respiratory system.
Germ cell mutagenicity: no data available
Carcinogenicity
Formaldehyde:

ACGIH: A2 - Suspected Human Carcinogen
NIOSH: occupational carcinogen
NTP: Suspect carcinogen
OSHA: Possible Select carcinogen
Formic Acid, Methyl Alcohol: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

Specific target organ toxicity - single exposure (Globally Harmonized System):

Exposure to high doses of formaldehyde (>100 ppm) showed salivation, acute dyspnea, vomiting, cramps and death in laboratory animals. Mice treated with formaldehyde on skin developed severe liver damage.

Specific target organ toxicity - repeated exposure (Globally Harmonized System):

Long term exposure to methanol has been found to cause visual and nervous system damage in studies with humans and animals.

Aspiration hazard: Will burn mouth, throat, and respiratory tract.

Potential health effects

Inhalation: Toxic if inhaled. Causes respiratory tract irritation. May cause respiratory sensitization.

Ingestion: Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system effects including dizziness, drowsiness, nausea, vomiting, visual disturbances and unconsciousness. May cause permanent blindness.

Skin: Toxic if absorbed through skin. May cause severe irritation or burns.

Eyes: May cause severe irritation or burns with redness, tearing, swelling and blurred vision.
Corneal injury may occur.

ROUTES OF ENTRY: Skin/eye contact, inhalation, and ingestion.

TARGET ORGANS: Eyes, Respiratory system

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:

Acute fish Toxicity

Formaldehyde: LC50 Pimephales Promelas (Fathead minnow) 24.1 mg/L/96hr

Methanol: LC50 Pimephales Promelas (Fathead minnow) 29,400 mg/L/96hr; LD50 Lepomis macrochirus: 15,400 mg/L/96hr

Formic Acid: LC50 Carassius auratus (goldfish) 46 mg/L/96hrs; EC50 daphnia magna 34mg/L/48hr

PERSISTENCE AND DEGRADABILITY: Biodegradation is expected

BIOACCUMULATIVE POTENTIAL: Bioaccumulation is unlikely.

MOBILITY IN SOIL: No data available

PBT and vPvB ASSESSMENT: Not required.

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Unused product: dispose as a regulated hazardous waste. Spent product or spill clean up-follow all provincial, local, state, and federal regulations.

RCRA HAZARD CLASS: Not classified

SECTION 13 NOTES:

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

UN No. UN1760

Proper Shipping Name Corrosive Liquid, n.o.s. (formaldehyde, formic acid)

Hazard Class 8
Packing Group II
Label Statement Corrosive liquid

(1 Liter or less can be shipped as Ltd Qty as per DOT)

TDG

UN No. UN1760
Proper Shipping Name Corrosive Liquid, n.o.s. (formaldehyde, formic acid)
Hazard Class 8
Packing Group II
Label Statement Corrosive liquid

IATA

UN No. UN1760
Proper Shipping Name Corrosive Liquid, n.o.s. (formaldehyde, formic acid)
Hazard Class 8
Packing Group II

IMDG/IMP

UN No. UN1760
Proper Shipping Name Corrosive Liquid, n.o.s. (formaldehyde, formic acid)
Hazard Class 8
Packing Group II
EMS-No: F-E, S-E

SECTION 15: REGULATORY INFORMATION

United States

HCS Classification: Corrosive, Target organ effects, Carcinogen, Sensitizer

U.S. Federal regulations:

United States inventory (TSCA 8b): Listed on inventory.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/311/312/313 hazardous chemicals: Hydrochloric Acid; Hazardous material; RQ 5000lbs, TPQ 500lbs gas

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Formaldehyde, Formic Acid, Methanol - Acute Health Hazard, Chronic health hazard

DEA List I & II Chemicals

(Precursor Chemicals): Not Listed

RTK STATES: Formaldehyde, CAS 50-00-0, Formic Acid, CAS 64-18-6, Methanol, CAS 67-56-1 Listed FL, MA, NJ, PA, RI

California Prop. 65

WARNING! This product contains the following chemicals which are known to the State of California to cause cancer, reproductive toxicity or birth defects (developmental toxicity): Formaldehyde <4% (cancer); Methanol <2% (developmental toxicity)

CANADA

WHMIS (Canada): Class D-2A: Very Toxic material causing other toxic effects.
Class E: Corrosive material.

Canadian lists:

CEPA Toxic substances: Formaldehyde
Canadian ARET: None of the components are listed.

Canadian NPRI: All of the components are listed.

CEPA DSL / CEPA NDSL:

All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists:

Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

SECTION 16: OTHER INFORMATION

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



DISCLAIMER: This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Azer Scientific be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.

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