

# MATERIAL SAFETY DATA SHEET

<b>DATE ISSUED :</b>	5/5/2011
<b>MSDS REF. No :</b>	600A420

MIL-DTL-24441/19C Ty.III Form. 159 Epoxy Zinc Dust

## 1. PRODUCT AND COMPANY INFORMATION

**PRODUCT NAME:** MIL-DTL-24441/19C Ty.III Form. 159 Epoxy Zinc Dust  
**PRODUCT CODE:** 600A420

### MANUFACTURER INFORMATION

MACH-DYNAMICS  
494 Main Street  
Susquehanna, PA 18847  
**Phone:** (775) 278-9308  
**Fax:** (775) 599-4585  
**Contact :** Mark Gingerella

### 24 HR. EMERGENCY TELEPHONE NUMBER

**CHEMTREC (US Transportation):** 1(800)424-9300  
**CHEMTREC (International Transportation):** +1(202)483-7616

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE :** Liquid

**IMMEDIATE CONCERNS :** DANGER! Flammable liquid and vapor. May cause eye, skin and respiratory tract irritation. May cause asphyxiation, or brain, lung or other organ injury if inhaled, swallowed or absorbed by the skin.

### POTENTIAL HEALTH EFFECTS

**EYES :** Liquid is severely irritating to the eyes. High vapor concentrations are also irritating.

**SKIN :** Liquid is moderately irritating to the skin. Prolonged or repeated contact can result in drying of the skin which may result in skin irritation and dermatitis (rash). Liquid may be absorbed through the skin.

**INGESTION :** Ingestion may cause headache, dizziness, fatigue, and central nervous system depression along with gastrointestinal disturbances.

**INHALATION :** Vapors may be irritating to the nose, throat, and respiratory tract. Exposure to high vapor concentrations may cause central nervous system (CNS) depression. Aspiration of liquid may cause pneumonitis, pulmonary edema, and hemorrhaging.

**CHRONIC :** No chronic health concerns known.

**CARCINOGENICITY :** This material is not currently known to have carcinogenic properties.

**MUTAGENICITY :** This material is not know to have mutagenic effects on genetic material.

**IRRITANCY:** This material may cause irritation to the eyes, skin, and respiratory tract. Use correct PPE when handling this material.

**REPRODUCTIVE TOXICITY**

**REPRODUCTIVE EFFECTS** : This material is not known to cause any reproductive system damage.

**TERATOGENIC EFFECTS** : This material is not known to contain any teratogenic substances.

**3. COMPOSITION/CHEMICAL INFORMATION**

Chemical Name	CAS Number	Weight %
Zinc Metallic	7440-66-6	50% to 75%
Phenol, 4,4'-(1 - methylethylidene)bis-, polymer	25036-25-3	15% to 20%
*Xylenes, Mixed Isomers	1330-20-7	5% to 10%
*Butanol	71-36-3	1% to 5%
*Methyl Ethyl Ketone	78-93-3	1% to 5%
Zinc Oxide	1314-13-2	1% to 5%
*Aromatic Petroleum Distillates	64742-95-6	1% to 5%

\* Toxic chemical subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

**4. FIRST AID MEASURES**

**EYES** : Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Seek medical aid if irritation persists.

**SKIN** : Flush skin with soap and water while removing contaminated clothing. If irritation occurs, seek immediate medical attention. Do not reuse clothing or shoes until thoroughly cleaned.

**INGESTION** : Do not induce vomiting, and seek immediate medical attention. Do not attempt to give any liquids if victim is unconscious.

**INHALATION** : Immediately remove victim to fresh air. If victim is not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Seek immediate medical attention.

**NOTES TO PHYSICIAN:** If the victim is a child, give no more than 1 glass of water and 15cc (1 tablespoon) syrup of ipecac. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

**5. FIRE FIGHTING MEASURES**

**FLASH POINT AND METHOD** : 69 degrees Fahrenheit Tagliabue Closed Cup (TCC)

**FLAMMABLE LIMITS** : 1.5% to 7.0%

**AUTOIGNITION TEMPERATURE** : No data available.

**GENERAL HAZARD** : Carbon monoxide and unidentified organic compounds may be formed during combustion.

**EXTINGUISHING MEDIA** : Use water fog, "alcohol" foam, dry chemical, or CO2.

**FIRE FIGHTING PROCEDURES** : WARNING! Flammable Liquid. Clear the fire area of unprotected personnel. Do not enter confined fire space without full bunker gear; including a positive pressure NIOSH approved SCBA. Cool fire exposed containers with water. If water is used, fog nozzles are preferred

**EXPLOSION HAZARD** : When heated above the flash point, this material emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

## 6. ACCIDENTAL RELEASE MEASURES

**GENERAL PROCEDURES** : WARNING. Flammable. Ventilate area of leak or spill for at least 24 hours or until it has been declared safe. Remove all sources of ignition. Stop the leak if there is no risk involved. Clean-up personnel require protective clothing and respiratory protection from vapors. Absorb liquid with inert material. Only specially trained or qualified personnel should handle the emergency.

### ENVIRONMENTAL PRECAUTIONS

**WATER SPILL** : Keep material out of storm sewers and ditches which lead to waterways.

**LAND SPILL** : Contact applicable authorities and determine applicable regulations based on MSDS information.

**AIR RELEASE** : Contact applicable authorities and determine applicable regulations based on MSDS information.

## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES** : Keep away from heat, sparks, and flame. Surfaces that are hot may ignite liquid even in the absence of sparks or flame. Extinguish pilot lights, cigarettes, and turn off all other sources of ignition prior to use, and until all vapors are gone. Keep containers tightly closed and upright to prevent leakage.

**COMMENTS** : KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**EXPOSURE GUIDELINES** :  
OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

CHEMICAL NAME	EXPOSURE LIMITS				
		OSHA PEL		ACGIH TLV	
			ppm	mg/m <sub>3</sub>	ppm
Phenol, 4,4'-(1 - methylethylidene)bis-, polymer	TWA	5	19	5	19
	STEL	NL	NL	15.6	60
*Xylenes, Mixed Isomers	TWA	100	435	100	435
	STEL	NL	NL	150	635
*Butanol	TWA	100	300	50	150
	STEL	NL	NL	NL	NL
*Methyl Ethyl Ketone	TWA	200	590	200	590
	STEL	NL	NL	300	885
Zinc Oxide	TWA	N/A	5	N/A	10
	STEL	N/A	5	N/A	5
*Aromatic Petroleum Distillates	TWA	500	2000	350	1800
	STEL	NL	NL	NL	NL

**OSHA TABLE COMMENTS:**

NL = Not Listed

Ca = "WARNING: THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM."

**ENGINEERING CONTROLS:** Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYES AND FACE:** Use chemical safety goggles and/or full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.

**SKIN:** Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

**RESPIRATORY:** If exposure may or does exceed occupational exposure limits (Section 8) use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134, use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

**HYGIENIC WORK PRACTICES:** Use good personal hygiene when handling this product. Wash hands after use, before eating, drinking, smoking, or using the toilet.

**OTHER USE PRECAUTIONS:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**COMMENTS:** May be harmful or fatal if swallowed. May irritate body tissues. Use with adequate ventilation. Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE :** Liquid

**ODOR** : Typical paint odor.

**pH** : Not Applicable

**BOILING POINT** : 172 Degrees Fahrenheit to 295 Degrees Fahrenheit

**FREEZING POINT** : No data available

**VOLATILE ORGANIC COMPOUNDS**: 321 G/L (2.68 Lbs/Gal)  
(VOC Theoretical – As Packaged)

**SOLUBILITY IN WATER** : Soluble in most organic solvents. Not soluble in water.

**EVAPORATION RATE** : No data available

**DENSITY** : 20.75 (Lbs/Gal)

## 10. STABILITY AND REACTIVITY

**STABLE** : Yes

**HAZARDOUS POLYMERIZATION** : Will not occur

**CONDITIONS TO AVOID** : Avoid heat, sparks, flame and contact with strong oxidizing agents. Prevent vapor accumulation.

**POLYMERIZATION** : Avoid heat, flame, and other sources of ignition.

**HAZARDOUS DECOMPOSITION PRODUCTS**: Carbon monoxide and unidentified organic compounds may be formed during combustion.

**INCOMPATIBLE MATERIALS** : Strong oxidizers.

## 11. TOXICOLOGICAL INFORMATION

**GENERAL COMMENTS**: None identified.

## 12. ECOLOGICAL INFORMATION

**ECOTOXICOLOGICAL INFORMATION**: Keep out of waterways.

## 13. DISPOSAL INFORMATION

**DISPOSAL METHOD**: This material is a US EPA defined ignitable hazardous waste. The preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

**EMPTY CONTAINER**: KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition.

**RCRA/EPA WASTE INFORMATION**: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**14. TRANSPORT INFORMATION**

**DOT (DEPARTMENT OF TRANSPORTATION)**

**PROPER SHIPPING NAME :** UN1263, Paint, Class 3, PG II  
(UN#, Proper Shipping Name, Class, Packing Group)

\*\*\* TriCom Coatings verifies that the material was supplied and shipped in the proper packages in accordance with DOT and federal regulations that are applicable to the mode of transportation selected. The shipper must verify that the packaging supplied is acceptable to be re-shipped in per the federal regulations applicable to the mode of transportation for re-shipment. Regulations may change depending on mode of transportation selected.\*\*\*

**15. REGULATORY INFORMATION**

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**311/312 HAZARD CATEGORIES:** This product should be reported as an immediate (acute) health hazard, delayed (chronic) health hazard, and a fire hazard.

**FIRE :** Yes                      **PRESSURE GENERATING :** No

**REACTIVITY :** No      **ACUTE :** Yes      **CHRONIC :** Yes

**313 REPORTABLE INGREDIENTS:** To the best of our knowledge, this product is not listed as a toxic chemical.

**302/304 EMERGENCY PLANNING**

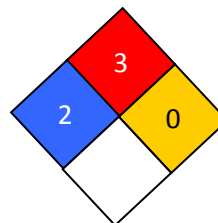
**EMERGENCY PLAN:** To the best of our knowledge, this material is not listed as an extremely hazardous substance.

**16. OTHER INFORMATION**

**APPROVED BY :** Mark Gingerella

**TITLE :** President / QC Manager

**NFPA CODES**



<b>HMIS RATING</b>	
Health :	2
Flammability :	3
Reactivity :	0
Personal Protection :	G

**MANUFACTURER DISCLAIMER :** The information contained herein is based on the data available to us and is believed to be accurate. However, MACH-DYNAMICS makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. MACH-DYNAMICS assumes no responsibility for injuries from the use of the product described herein.