

MATERIAL SAFETY
DATA SHEET

3506

A2077 HSA ZnO

ZINC OXIDE

A. PRODUCT/COMPANY IDENTIFICATION

TRADE NAME (COMMON NAME OR SYNONYM) Zinc Oxide (French Process)		PRODUCT CODE# AZO, AZODOX, AZOFLO	
CHEMICAL NAME Zinc Oxide	FORMULA ZnO	MOLECULAR WEIGHT 81.38	
MANUFACTURER'S NAME: MIDWEST ZINC - HILLSBORO, INC. P. O. BOX 538 HILLSBORO, IL 62049		ISSUED DATE 3/9/94	REVISED DATE
TELEPHONE (24 HOUR EMERGENCY OR INFORMATION): (217)532-3931			

B. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL OR COMPONENT	C.A.S. #	WT. %	PERMISSIBLE AIR CONC.(mg/cu.m.)	
			OSHA	ACGIH
Zinc oxide	1314-13-2	99.7-100	5.0 Resp. Dust 10.0 Total Dust	10.0 dust
Lead	7439-92-1	< 0.003		
Cadmium	7440-43-9	< 0.002		

C. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY	INGESTION ☒ INHALATION ☒ SKIN ☐	CARCINOGENICITY Not listed as a carcinogen by IARC, NTP, OSHA.
ACUTE OVEREXPOSURE (SYMPTOMS AND EFFECTS) 1. Metal fume fever with symptoms of fever, chills, metallic taste, chest tightness or nausea may result from inhalation of zinc oxide fume or dust. 2. Zinc oxide is relatively non-toxic by mouth, but may cause fever, nausea, stomach cramps or diarrhea in large doses. 3. Dermatitis (papulopustular eczema) with intense itching may result from excessive skin contact.		
CHRONIC OVEREXPOSURE (SYMPTOMS AND EFFECTS) None reported.		
MEDICAL CONDITIONS POSSIBLY AGGRAVATED None reported.		

D. FIRST AID MEASURES

Inhalation: Remove from exposure; place individual under care of a physician.
Ingestion: Induce vomiting in conscious individual and call a physician.
Skin or Eyes: Flush with plenty of water. If symptoms develop, consult a physician.

E. FIRE FIGHTING MEASURES

FLASH POINT Not Applicable	AUTO IGNITION TEMPERATURE Not Applicable	FLAMMABLE LIMITS IN AIR (% BY VOL.) Not Applicable
UNUSUAL FIRE AND EXPLOSION HAZARDS Not Applicable	FIRE EXTINGUISHING AGENTS RECOMMENDED No specific agents recommended	FIRE EXTINGUISHING AGENTS TO AVOID No specific agents
SPECIAL FIRE FIGHTING PRECAUTIONS Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing if involved in fire.		

MATERIAL SAFETY DATA SHEET
For Coatings, Resins and Related Materials

Printed : 02/05/02

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SECTION I - PRODUCT IDENTIFICATION
*****Manufacturer: POLYMERIC INC.
2828 SECOND ST.Information Phone: 330-928-2210
Emergency Phone: 330-928-2210Product Class: RUBBER DISPERSION
Trade Name : ETU 70 HYDRIN SLAB
Product Code : 100072 2
C.A.S. Number: MIXTURE

OH 44221

Hazard Ratings: Health - 2*
| none -> extreme Fire - 1
| 0 ---> 4 Reactivity - 0

Personal Protection - B

TOXIC SUBSTANCE CONTROL ACT (TSCA): ALL THE COMPONENTS IN THIS
PRODUCT ARE LISTED ON THE TSCA 8(b) INVENTORY LIST OF CHEMICAL
SUBSTANCES.*****
SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	Weight %	Exposure Limits	VP
			ACGIH/TLV OSHA/PEL	mm HG
ETHYLENE THIOUREA (ETU)	96-45-7	70.		N/AP

ETU IS AN EXPERIMENTAL TERATOGEN AND CARCINOGEN.

SECTION III - PHYSICAL DATA

Boiling Range: N/A	Vapor Density: Non Volatile
Evap. Rate: Non Volatile	Liquid Density: Heavier than Water.
Volatiles vol % N/A	Wgt% 0.0
	Wgt per gallon: 10.72 Pounds.
	Spec. Gravity: 1.28691

Appearance: OFF-WHITE RUBBER SLAB
V.O.C.: NA

SECTION IV - FIRE AND EXPLOSION HAZARD DATA
*****Flammability Class: N Flash Point: NA F LEL: NA UEL: N
-EXTINGUISHING MEDIA:

WATER SPRAY, DRY CHEMICAL, FOAM

CO2 MAY BE INEFFECTIVE ON LARGER FIRES DUE TO LACK OF COOLING
CAPACITY WHICH MAY RESULT IN REIGNITION.

-SPECIAL FIREFIGHTING PROCEDURES:

FIREFIGHTERS AND OTHERS EXPOSED TO THE PRODUCTS OF COMBUSTION
SHOULD WEAR FULL PROTECTIVE CLOTHING INCLUDING SELF-CONTAINED
APPARATI.

-UNUSUAL FIRE & EXPLOSION HAZARDS:

DENSE BLACK SMOKE WILL RESULT FROM COMBUSTION ALONG WITH THE
GENERATION OF IRRITATING AND TOXIC GASES.

SECTION V - HEALTH HAZARD DATA

-PERMISSIBLE EXPOSURE LEVEL:

EXPOSURE LIMITS HAVE NOT BEEN ESTABLISHED FOR THIS PRODUCT. ATMOSPHERIC LEVELS SHOULD BE MAINTAINED AS LOW AS POSSIBLE BY USING ENGINEERING CONTROLS LIKE LOCAL EXHAUST VENTILATION. EXISTING EXPOSURE LIMITS FOR INDIVIDUAL COMPONENTS ARE LISTED IN SECTION II.

-EFFECTS OF OVEREXPOSURE:

INHALATION: NO EFFECTS HAVE BEEN REPORTED, BUT ARE EXPECTED TO BE SIMILAR TO THOSE FOUND FROM INGESTION. DOES IRRITATE THE MUSCULAR MEMBRANES OF THE RESPIRATORY.

SKIN CONTACT: MATERIAL IS IRRITATING TO THE SKIN AND ABSORPTION DOES TAKE PLACE THROUGH THE SKIN. BIRTH DEFECTS HAVE OCCURRED IN ANIMALS FOLLOWING SKIN ABSORPTION, THEREFORE, ETU IS CONSIDERED A TERATOGEN.

EYE CONTACT: MATERIAL IS IRRITATING TO THE EYES.

INGESTION: ACUTE EXPOSURES BY ANIMALS HAVE CAUSED FATAL PULMONARY EDEMA. CHRONIC EXPOSURES HAVE PRODUCED HYPOTHYROIDISM CHARACTERIZED BY OBESITY, DRY SKIN & HAIR, LOW BLOOD PRESSURE, AND GOITERS. OTHER SYMPTOMS INCLUDE TREMORS OF FINGER AND HAND MUSCLES, VOMITING, DIARRHEA, SWEATING, SKIN ERUPTIONS, AND HYPERGLYCEMIA. ETU IS READILY TRANSFERRED ACROSS THE PLACENTA, AND HAS CAUSED NERVOUS, UROGENITAL, OCULAR, AND SKELETAL SYSTEM DAMAGE TO THE FETUS. ETU ALSO HAS PRODUCED CANCERS OF THE THYROID AND LIVER IN ANIMAL STUDIES.

NOTE: THIS PRODUCT IS ENCAPSULATED IN A POLYMERIC BINDER WHICH REDUCES OR ELIMINATES AIRBORNE PARTICULATES AND MINIMIZES SKIN CONTACT. LIKEWISE, THE ADVERSE HEALTH EFFECTS ASSOCIATED WITH THESE ROUTES OF EXPOSURE ARE ALSO REDUCED OR ELIMINATED.

-FIRST AID:

INHALATION: REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY. KEEP AFFECTED PERSON WARM AND AT REST. GET MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

SKIN CONTACT: IMMEDIATELY REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA WITH SOAP AND LARGE AMOUNTS OF WATER. LAUNDER CLOTHING BEFORE REUSE.

EYE CONTACT: WASH EYES PROMPTLY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO GET MAXIMUM CLEANSING. IF IRRITATION PERSISTS, GET MEDICAL ATTENTION.

INGESTION: GIVE 1-2 GLASSES OF WATER TO DILUTE CHEMICAL. GET MEDICAL ATTENTION IMMEDIATELY.

SECTION VI - REACTIVITY DATA

STABILITY: ☐ Unstable ☒ Stable
HAZARDOUS POLYMERIZATION: ☐ May occur ☒ Will not occur

SECTION VI - REACTIVITY DATA (cont.)

-INCOMPATIBILITY

ACIDS, OXIDIZING AGENTS.

-CONDITIONS TO AVOID:

OVERHEATING DURING PROCESSING OR HIGH TEMPERATURES DURING
STORAGE.

-HAZARDOUS DECOMPOSITION PRODUCTS:

DECOMPOSES IN HEAT TO EMIT TOXIC FUMES LIKE NO_x, SO_x, AND
NITROGEN AMINES; HYDROCHLORIC AND CARBOXYLIC ACIDS; ALDEHYDES;
KETONES; UNSATURATED HYDROCARBONS; AND CHLORINATED HYDROCAR-
BONS.*****
SECTION VII - SPILL OR LEAK PROCEDURES

-STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

SWEEP UP AND COLLECT SPILLED MATERIAL IN ENCLOSED CONTAINERS.

-WASTE DISPOSAL METHOD:

INDUSTRIAL WASTE INCINERATION OR SPECIAL WASTE DISPOSAL UNDER
LOCAL, STATE, AND FEDERAL RCRA REGULATIONS.THIS MATERIAL IS CONSIDERED A RCRA HAZARDOUS WASTE ACCORDING
TO 40 CFR PART 261.33. EPA HAZARDOUS WASTE NUMBER U116.*****
SECTION VIII - SPECIAL PROTECTION INFORMATION:

-RESPIRATORY PROTECTION:

APPROPRIATE RESPIRATORY PROTECTION IS REQUIRED WHEN EXPOSURE TO
AN AIRBORNE CONTAMINANT IS LIKELY TO EXCEED ACCEPTABLE LIMITS.
RESPIRATORS SHOULD BE SELECTED AND USED IN ACCORDANCE WITH
OSHA, SUBPART I (29 CFR 1910.134) AND MANUFACTURER'S RECOM-
MENDATIONS. THE PRODUCT FORM AND ITS INTENDED USE SHOULD NOT
REQUIRE RESPIRATORY PROTECTION SOLELY AS A RESULT OF USING
THIS PRODUCT.

-VENTILATION:

EFFECTIVE EXHAUST VENTILATION WILL DRAW THE DUST, FUMES, AND
VAPORS AWAY FROM THE BREATHING ZONE OF THE WORKERS TO PREVENT
ROUTINE INHALATION. LOCAL EXHAUST VENTILATION AT THE PROCESS
UNIT HAVING A CAPTURE VELOCITY OF 150 TO 200 CFM IS RECOMMENDED.

-PROTECTIVE GLOVES:

ANY COATED GLOVES LIKE LATEX OR NEOPRENE SHOULD PROVIDE GOOD
PROTECTION. LATEX GLOVES MAY BE WORN UNDER CLOTH GLOVES AS A
GLOVE LINER.

-EYE PROTECTION:

WEAR PROTECTIVE GOGGLES WHILE PROCESSING IN HIGH CONCENTRATIONS;
OTHERWISE SAFETY GLASSES WILL PROVIDE ADEQUATE PROTECTION.
EYEWASH STATIONS SHOULD BE EASILY ACCESSIBLE.

-OTHER PROTECTIVE EQUIPMENT:

AS NEEDED TO MINIMIZE SKIN CONTACT.

SECTION IX - SPECIAL PRECAUTIONS

-PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

AVOID DIRECT SKIN CONTACT. WORK IN WELL VENTILATED AREA AND
AVOID INHALATION OF THE DUST AND VAPORS.
RECOMMENDED SHELF LIFE OF ONE YEAR IF STORED IN A COOL, DRY
ENVIRONMENT.

-OTHER PRECAUTIONS:

ETU IS A GOITROGEN, TERATOGEN, AND A CARCINOGEN.
ETU ACCUMULATES IN THE THYROID GLAND.
PREGNANT WOMEN ARE AT AN INCREASED RISK FROM EXPOSURE.
IT IS RECOMMENDED THAT WOMEN OF CHILD BEARING AGE BE EXCLUDED
WHERE INHALATION OR CONTACT WITH ETU IS POSSIBLE.

PROPOSITION 65

WARNING: THIS PRODUCT CONTAINS ETHYLENE THIOUREA (CAS# 96-45-
7) WHICH IS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BOTH
CANCER AND BIRTH DEFECTS AND OTHER REPRODUCTIVE HARM.

SECTION X - ADDITIONAL REGULATORY INFORMATION

-SARA TITLE III SECTION 313:

This product contains the following toxic chemicals subject to the
reporting requirements of section 313 of the Emergency Planning
and Community Right To Know Act of 1986 and of 40 CFR 372:

CAS#	Chemical Name	Percent by Weight
96-45-7	ETHYLENE THIOUREA (ETU)	< 75.

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POLYMERICS INC.

Material Safety Data Sheet for: ETU 70 HYDRIN SLAB(100072 2)

SECTION X - ADDITIONAL REGULATORY INFORMATION (cont.)

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