



MSDS FOR NANO-FINE ZINC OXIDE: ZINVISIBLE™

ZC-X035

SECTION I - GENERAL INFORMATION

NAME: ZINC OXIDE

MANUFACTURER:
HORSEHEAD CORPORATION
300 Frankfort Road
Monaca, PA 15061
724-774-1020

TRANSPORTATION EMERGENCY:
CHEMTREC: 800-424-9300

CHEMICAL FAMILY: Nonferrous Metal Oxide

CAS NO.: 1314-13-2

FORMULA: ZnO

DOT HAZARD CLASS: Not listed **UN NO.:** NAIF* **NA NO.:** NAIF*

SARA SECTION 313: This product is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40 CFR 372. The materials underlined below are present in quantities above the applicable deminimis concentrations and are listed as Toxic Chemicals in 40 CFR 372.65.

ISSUE DATE: 1/11/01

REVISION DATE: 1/18/05

* NAIF - No applicable information found.

SECTION II - INGREDIENTS

<u>MATERIAL</u>	<u>CAS NO.</u>	<u>%</u>
<u>ZINC OXIDE</u>	1314-13-2	99.9
<u>LEAD</u>	7439-92-1	0.0021 max
<u>CADMIUM</u>	7440-43-9	0.0017 max

LEAD AND CADMIUM ARE INHERENT IN THE MANUFACTURE OF ZINC AND ARE NOT PHYSICALLY ADDED IN THE MANUFACTURE OF ZINC OXIDE.

EFFECTS OF SHORT TERM OVEREXPOSURE:

ZINC OXIDE: Inhalation of high levels of zinc oxide may result in tightness of chest, metallic taste, cough, dizziness, fever, chills, headache, nausea, and dry throat. Overexposure may produce symptoms known as metal fume fever or "zinc shakes"; an acute, self-limiting condition without recognized complications. Symptoms of metal fume fever include: chills, fever, muscular pain, nausea and vomiting. Like any finely divided particulate matter, zinc oxide may cause mechanical irritation to skin and eyes.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Inhalation of dust may be an irritant to pre-existing respiratory conditions.

EMERGENCY AND FIRST AID PROCEDURES: Symptoms resulting from inhalation overexposure usually disappear within 24 hours. Symptomatic treatment, such as bed rest and possibly aspirin is recommended to provide relief from fever and chills. Skin contact - flush areas with large amounts of water. Eye contact - flush eyes with copious amounts of water. Ingestion - Give water to dilute, at least ten (10) volumes of the amount consumed. In all cases, consult physician for medical attention.

EFFECTS OF LONG TERM OVEREXPOSURE:

ZINC OXIDE: Chronic exposure to zinc oxide may cause respiratory tract irritation with nasopharyngitis and laryngitis. Long term oral ingestion may cause gastric irregularities.

CARCINOGENIC ASSESSMENT:

NTP? No **IARC MONOGRAPH?** No **OSHA?** No

SECTION VI - REACTIVITY DATA

STABILITY: () Unstable
 (X) Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (MATERIALS TO AVOID): None known. (It has been reported that under certain circumstances zinc oxide may react explosively with chlorinated rubber.)

HAZARDOUS DECOMPOSITION PRODUCTS: Temperatures above 1300°C generate metallic zinc that converts to fumed zinc oxides which can lead to metal fume fever.

HAZARDOUS POLYMERIZATION: () May occur
 (X) Will not occur

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Shovel, sweep or vacuum spilled material. As with any nuisance dust, avoid excessive dusting.

WASTE DISPOSAL METHOD: Dispose in a closed container or heavy bag. Material may be recycled or disposed of in accordance with Federal, State and Local Environmental Regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): Use respirator above 50 mg/cu m and supplied air respirator above 125 mg/cu m zinc oxide as dust or fume.

VENTILATION: Local exhaust or other ventilation that will reduce dust concentrations to less than permissible exposure limits.

PROTECTIVE GLOVES: Recommended to prevent skin irritation in hypersensitive individuals.

EYE PROTECTION: Use safety eyewear for protection against airborne particulate matter.

OTHER PROTECTIVE EQUIPMENT: Barrier creams may help prevent skin irritation in hypersensitive individuals.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: None

OTHER PRECAUTIONS: Practice good personal hygiene when working in areas where this material is used.

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