



MATERIAL SAFETY DATA SHEET

SECTION 1. Product Identity and Responsible Party

Product Name: ZINC DUST	Synonyms: Zinc Dust
Chemical Formula: Zn	Product Grades: All product grades
CAS number: 7440-66-6	

RESPONSIBLE PARTY: U. S. ZINC CORPORATION, A Votorantim Metais Company 6020 Esperson St., Houston, TX 77011	Use of the substance/preparation: Raw material chemical. Uses include paint & coating, and mining.
	Date Revised: September 2, 2011

Prepared By/Primary Contact: John Stourac, ESH & Tech Mgr.
e-mail: John.Stourac@USZinc.com Telephone: +1 713 924 4628 information or emergency.
(Alternate 24h phone answering service: +1 888 464 2958)

SECTION 2. Composition/Information on Ingredients

Occupational Exposure Limit(s), if available, are listed in Section 8.

Component	CAS No.	% Range
Zinc Metallic	7440-66-6	90.0 – 98.0
Zinc Oxide	1314-13-2	2.0 – 10.0
Lead (1)	7439-92-1	(1) Naturally occurring impurities. Trace levels vary with grade and specification.
Cadmium (1)	7440-43-9	

SECTION 3. Hazards

Route(s) Of Entry: 1. Inhalation. 2. Mechanical irritation to skin and eyes.

Carcinogens: Zinc Dust and Zinc Oxide are not NTP or IARC carcinogens.

Signs & Symptoms of Exposure: Dry throat, cough, dry itching skin.

Human: Excess bulk exposure may cause acute respiratory irritant or dry skin. Dust and fumes can cause nausea, gastric pain and irritation to the upper respiratory tract. No chronic hazards.

Metal Fume Fever: Excessive inhalation exposure within hours of ZnO formation (from burning zinc) may cause 'metal fume fever.' Symptoms are chills, metallic taste, severe headache. Symptoms often persist 24 hours. See Section 4, First Aid.

Environmental: Zn and ZnO are not water soluble.

SECTION 4. FIRST AID PROCEDURES

First Aid: Remove person from exposure.

Inhalation: Move to fresh air. Consult physician if acute symptoms persist.

Skin Contact: Wash with soap and water. Restore oil with lotion if necessary.

Ingestion: Drink water. Consult physician if complaints persist.

Eye Contact: Flush with water. Consult physician if acute symptoms persist.

Protection of First Responders: Wear suitable respirator if bulk dusty conditions exceed PEL levels listed in Section 8. Wear additional PPE for personal comfort as conditions warrant.

MSDS - ZINC DUST	U. S. ZINC, VOTORANTIM METAIS
Page 2 of 3	Revised: September 2, 2011

SECTION 5. FIRE, EXPLOSION AND FIRE FIGHTING DATA

Flash Point: N/A	Extinguishing Media: Dry Zinc Dust will not ignite spontaneously, but once ignited, may burn readily in air. DO NOT SPREAD MATERIAL. Smother and allow fire to go out. Wear self-contained breathing apparatus.
-------------------------	--

SECTION 6. ACCIDENTAL RELEASE MEASURES

If spilled, shovel or sweep spills into suitable labeled container. Vacuum small spills. Spills not mixed with other chemicals may be recyclable - contact U. S. Zinc. See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Storage: Keep dry. It is essential to store in well-ventilated dry areas to prevent formation and build-up of hydrogen-air mixtures. Failure to vent may cause explosive concentrations. Avoid open flames or sparks of any kind near wet material.

Handling: Follow good housekeeping practices to minimize dusting. See Section 8.

SECTION 8. EXPSURE CONTROLS, PERSONAL PROTECTION

Respiratory protection: Recommended. Use NIOSH approved dust filter respirator.

Ventilation: Local exhaust recommended.

Protective gloves: Yes. Breakthrough time = N/A. Wash well after exposure

Protective clothing: Recommended in bulk dust conditions.

Eye Protection: Yes

U. S. OSHA Occupational Exposure Limits/Recommendations

Hazardous Component	CAS	% Range	ACGIH TLV*	OSHA PEL*
Zinc	7440-66-6	90.0-98.0	5(fume)	5 (fume)
Zinc Oxide	1314-13-2	2.0-10.0	5 mg/m3#	5 mg/m3*
Lead	7439-92-1	(1)		50 ug/m3
Cadmium	7440-43-9	(1)		5 ug/m3
(1) Pb & Cd are naturally occurring impurities, % Range varies with grade.			*mg/m3.	#Respirable fraction

SECTION 9. PHYSICAL AND CHEMICAL CHARACTERICS

Boiling Point:	1665°F	Vapor Pressure:	@81095°F = 10mm Hg
Melting Point:	786°F	Evaporation Rate:	N/A (Butyl Acetate = 1)
Specific Gravity:	7.1 (H ₂ O = 1)	Solubility In Water:	Insoluble (negligible, <2mg/l)
Molecular Weight:	65.409	Soluble:	In bases and acids
Odor, smell:	Odorless.	Explosive:	Not explosive
Vapor Density:	Not applicable	Physical State:	Solid (powdery, dense)
Typical particle size:	2 to 8 micron	Appearance:	Silver/Grey powder

SECTION 10. STABILITY AND REACTIVITY DATA

Stability: Stable under normal conditions. **Incompatibility or Material To Avoid:** Water

Shelf Life: 8 months from date of manufacturing for all grades, except 'Superfine' series grades

Bulk dust in contact with water or damp air evolves hydrogen. The heat produced during this reaction could ignite the hydrogen. An explosive condition may exist if this happens in a confined space. Dry dust forms explosive mixtures with air, if ignited.

SECTION 11. TOXICOLOGICAL: No data

SECTION 12. ECOLOGICAL: No data

MSDS - ZINC DUST	U. S. ZINC, VOTORANTIM METAIS
Page 3 of 3	Revised: September 2, 2011

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose in a dry, closed container and away from ignition sources. Material may be recyclable, contact U. S. Zinc for more information. If disposed, follow regulations.

SECTION 14. TRANSPORT INFORMATION

If packaged in units of 1000 lbs or more, this product would be subject to the reportable quantity declaration under 49 CFR, part 172.101, Appendix A and it should be classified as:
“Environmentally Hazardous Substance Solid, N.O.S., Class 9, UN 3077, Packing Group III, RQ (Zinc)”

NAFTA HS Tariff Classification Number: 7903.10.0000 | Country of Origin: USA

THIS MATERIAL HAS BEEN TESTED AND PASSES ALL UN SERIES DIVISION 4 TESTING, INCLUDING CLASS 4.2 AND CLASS 4.3.

SECTION 15. REGULATORY INFORMATION

FDA: Listed as GRAS (Generally Recognized as Safe) at 21CFR182.8991. FDA approvals include Rubber 177.2600(c)(1), Food can linings: 175.300(b)(2), Food Color: 73.1991, 2991.

SARA 302: RQ=None, TPQ=None.	TSCA = Yes. on Inventory.
SARA 311/312: Yes (Acute).	Material is Compliant with TSCA.
SARA 313: Zn & Pb (Compounds).	
CERCLA 102/103: Name List, RQ=None.	DSL = Yes, NDSL = No
REACH = Yes. Pre-Registration number: 05-2114566679-27-0000	EINECS = Yes, ELINCS = No
	EINECS# = 231-175-3

SECTION 16. OTHER INFORMATION

HMIS Hazard Rating: (Paint & Coating Association)	Health 2	<u>Rating Definitions</u> 0 = Minimal 3 = Serious 1 = Slight 4 = Severe 2 = Moderate
	Flammability 0	
	Reactivity 2	
	Personal Protection E	

Personal Protective Index: E = Gloves + Mask + eye protection.

DISCLAIMER

The Material Safety Data listed on this sheet provides information on the hazards when working with this material, and is required by the Control of Substances Hazardous to Health (COSHH), and USOSHA Hazardous Communication (29CFR1919.1200). It does not cover risks associated with risks associated with specific actual uses of this material, which can only be carried out by the end-user.

The data listed on this sheet is believed to be accurate, complete, and up to date by the preparer utilizing reasonably available published studies or other publications. We are not responsible for any inadvertent error or omission.

End use of this product will include many factors beyond our control, and we cannot accept liability for any accident, injury or damage caused by its use.