



## SECTION 1 - PRODUCT IDENTIFICATION

Product Identifier: ZRC ZERO VOC Zinc Powder  
 Product Class: Water-based Galvanizing Compound  
 Product Identification Number (PIN): 40002-40004  
 Manufacturer's Name: ZRC Worldwide  
 Address: 145 Enterprise Drive, Marshfield, MA 02050  
 Emergency Telephone No.: 781-319-0400 Bus. Hrs.  
 Chemtrec 24 hrs. 800-424-9300  
 Date of Preparation: January 1, 2008

## SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	% (wt)	LEL	ACGIH TLV ppm (mg/M <sup>3</sup> )	OSHA PEL ppm (mg/M <sup>3</sup> )	VP
*Zinc (CAS # 7440-66-6)	97	na	Not Established	TWA (RF) 15 mppcf (5) TWA (TD) 50 mppcf (15)	na
Zinc Oxide (CAS # 1314-13-2)	3	na	TWA (RF) (2) STEL (RF) (10)	TWA (RF) (5) TWA (TD) (15)	na

RF = Respirable Fraction TD = Total Dust

\*This CAS No. is subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372.

## SECTION 3 - PHYSICAL DATA - FIRE AND EXPLOSION DATA

**Physical State:** Solid      **Water Solubility:** Insoluble      **Odor/Appearance:** Grey Powder  
**Vapor Pressure:** N/A      **Vapor Density:** N/A      **Evaporation Rate:** N/A  
**Boiling Point:** 906 °C      **Flash Point:** N/A      **Specific Gravity:** 7.1 @ 25 °C  
**Percent Volatile:** N/A      **Wgt./Gallon:** 59 Lbs. @ 25 °C.      **Autoignition Temp.:** 600 °C  
**Reactivity in Water:** See Sec.4      **Flammability Limits in Air:** UEL N/A LEL 480 g/m<sup>3</sup> % (vol)

**Shipping:** DOT, IMDGC, IATA - Not regulated (non-hazardous).**Extinguishing Media:** Approved Class D Fire Extinguisher, foam or dry chemical. DO NOT USE WATER! Use full protective equipment and self-contained breathing apparatus for respiratory protection in fighting fires in enclosures.**Unusual Fire and Explosion Hazards:** Keep containers closed tightly. Isolate from heat, electrical equipment, sparks and open flame. Zinc in a finely divided form is hazardous when atomized in air and, if sparked, explosion is possible. Application to hot surfaces requires special precautions.

Moisture and acid contamination can result in Hydrogen gas evolution, causing cans to bulge with increased pressure. Cans so deformed should not be moved, opened or punctured. Call (781) 319-0400. See also Sections 4 and 5.

**Special Fire Fighting Procedures:** DO NOT USE WATER IN ANY FORM.

Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat, but care should be taken to prevent water access to dust and spray residues. See also Section 7.

## SECTION 4 - PHYSICAL HAZARDS

**Stability:** Stable      **Hazardous Polymerization:** Will not occur**Materials and Conditions to Avoid:** This material is considered to be stable under its normal handling and storage conditions. It can react violently with strong oxidizing agents such as chlorine and oxygen, as well as water, halogen gases, weak acids and concentrated acids. Store in dry areas away from oxidizing agents (chlorine, oxygen), all acids, alkalis and water. Avoid dusting and accumulations of spray residues. Avoid moisture in any form and high humidity.**Hazardous Combustion Products:** Water and alkali contact will produce hydrogen with additional risks of explosion and fire. May produce fumes of zinc oxides when heated to decomposition.**Sensitivity to Impact:** Impact w/sparking may produce explosion hazard.**Sensitivity to Static Discharge:** Yes. Electrically interconnect and ground containers for transfer to avoid static spark.

## SECTION 5 - HEALTH HAZARD DATA

**Threshold Limit Value:** 10 mg/cu.m.      **OSHA PEL:** Mixture (See Section 2)**Routes of Entry:** Skin Contact, Eye Contact, Inhalation Acute and Ingestion.**Medical Conditions Generally Aggravated by Exposure:** Respiratory conditions, dermatitis and other skin afflictions.**Effects of Acute Exposure to Product:** Eye or skin contact may cause irritation. Ingestion may cause fever, stomach cramps and diarrhea and may be fatal; avoid aspiration if ingested. Do not induce vomiting. During welding and burning operations hazardous decomposition products may be evolved from the dried film, these may include but not be limited to Zinc Oxides. Excessive inhalation of these fumes may produce flu-like symptoms known as "Fume Fever" and "Zinc Shakes" among other effects. Consult Physician.**Effects of Chronic Overexposure to Product:** None reported**Irritancy of Product:** Eye and Skin irritant.**Sensitization to Product:** None Reported      **Carcinogenicity:** None      **Teratogenicity:** None**Mutagenicity:** None      **Reproductive Toxicity:** None      **Synergistic Products:** None known**EMERGENCY AND FIRST AID PROCEDURES:****Inhalation:** Remove to fresh air. Keep warm and quiet. Give artificial respiration if required. Get medical assistance.**Eyes:** Wash eyes immediately with large amounts of luke-warm gently-running water for at least 15 minutes. Take to physician for medical attention.**Skin:** Wash contact area promptly with soap and water. Promptly remove contaminated clothing. Consult physician if irritation persists.**Ingestion:** Do not induce vomiting without medical advice. Contact a physician, emergency room or Poison Center immediately. Observe all rules of good hygiene during and after use. Wash thoroughly before smoking or eating.

**SECTION 6 - SPECIAL PROTECTION INFORMATION****Personal Protective Equipment:**

**Gloves:** Neoprene gloves and aprons should be used to prevent prolonged or repeated skin contact.

**Respirator:** In outdoor or open areas, wear only properly fitted, NIOSH/MSHA approved respirators capable of filtering dust particulates during and after application unless air monitoring demonstrates vapor/mist levels are below acceptable limits. In areas of restricted ventilation, wear only properly fitted, NIOSH/MSHA approved respirators designed to remove a combination of organic vapors and dust particulates during and after application unless air monitoring demonstrates vapor/mist levels are below acceptable limits. In confined areas, use approved air line type respirators or hoods. Follow respirator manufacturer's directions for respirator use.

**Eye:** Safety goggles with unperforated side shields or face shield should be used where splashing into eyes is possible. An eye wash fountain should also be available in areas where splashing is possible. When large amounts of material are used, a safety shower should be available.

**Footwear:** Wear chemical resistant boots with steel toes.

**Clothing:** Wear neoprene apron over well fitting clothes. Loose fitting clothes should not be worn. Remove and wash or discard contaminated clothing.

**Ventilation Engineering Controls:** Work place areas require exhaust ventilation in accordance with OSHA regulation 29 CFR Part 1910.107d to maintain vapor levels below the TLV (especially during spraying, misting or heating). Use an approved high efficiency respirator of the full face canister type (for limited time and concentrations), air supplied type of self-contained respirators (for extended exposures involving high or unknown vapor concentrations or for non-routine or emergency conditions). Exhaust levels should be maintained at least at 100 fpm. All ventilation equipment should be explosion-proof, and any tools used in the area should be of the non-sparking type.

**SECTION 7 - SPECIAL PRECAUTIONS - SPILL OR LEAK PROCEDURES**

**Leak and Spill Procedure:** For massive spills, evacuate the area. For all spills, eliminate ignition sources. Dike and contain spills with dry, inert materials (sand, earth, etc.). Eliminate all sources of moisture and do not use water in clean-up operations. Recover as much of the free liquid as possible for disposal and use an absorbent to pick up the residue. Avoid discharging paint directly into a sewer or surface waters. Do not flush spills with water. Use non-sparking tools only. Spilled material may be slippery on floors.

**Waste Disposal:** Dispose of the absorbed material or the free waste liquid in dry containers according to Local, State and Federal regulations for Hazardous Wastes. Dispose of all materials including empty cans according to Local, State and Federal regulations. Do not incinerate. Do not flush into sewers. Containers may explode if heated even when empty. It is recommended that solid waste be landfilled only at approved hazardous disposal sites using approved contractors.

**Handling Procedures and Equipment:** Electrically interconnect and ground containers for transfer to avoid fire caused by static discharge. Use only non-sparking tools. Areas of use should have good ventilation and all sources of open flame and high heat should be excluded. Prohibit smoking in these areas. Material is electrically conductive. Do not apply by electrostatic spray equipment unless equipment has been designed for use with such coatings by the equipment manufacturer.

**Storage Requirements:** Store in a cool, clean, dry, well-ventilated, fire resistant storage room. Store only in totally closed cans with identifying labels that indicate the flammability and reactivity with water of the material. Store large quantities only in buildings in compliance with OSHA 1910.105. Areas of storage for this material should have good ventilation and all sources of open flame and high heat should be excluded. Prohibit smoking in these areas. Do not store above 40 °C. Do not puncture, drag or slide container.

**Other Precautions:** Any deformed cans should not be moved, opened or punctured. Call (781) 319-0400. Do not take internally. Keep away from children. Empty container may contain extremely residues that can explode if heated.

*Disclaimer: While the data and suggestions contained herein are based on information we believe to be reliable, it is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers. Use of this product on inappropriate surfaces or in inappropriate applications may create other unanticipated hazards.*

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