

**JAI RADHE SALES**

An ISO 9001 : 2008 Certified Co.

MATERIAL SAFETY DATA SHEET**CALAMINE**

| | | | | | |
|---|--|---------------------------|---------------------------|--------------------------|-------------|
| SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION | | | | | |
| Comon/Trade Name | CALAMINE | | | | |
| Commercial name(s) | Not available | | | | |
| Synonym | Calamine Powder, Zinc white, Flowers of zinc, Chinese white | | | | |
| Chemical Name | Zinc Oxide + Ferric Oxide | | | | |
| Chemical Family | Not available | | | | |
| Chemical Formula | ZnO+FE2-O3 | | | | |
| Supplier | Head Office JAI RADHE SALES 309-310, Haikrupa Tower, Nr. Old Sharda Mandir Cross Road, Ellisbridge, Ahmedabad-380 006. Tel No: 91 79 26431096, 55255722 Fax No: 91 79 26569884 E-mail : info@jairadhesales.com, exports@jairadhesales.com | | | | |
| SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS | | | | | |
| | Exposure Limits | | | | |
| Name | CAS # | TWA (mg/m ³) | STEL (mg/m ³) | CEIL(mg/m ³) | % by weight |
| 1) Zinc oxide | 1314-13-2 | 5 | 10 | 25 | 98-100.5 |
| 2) Ferric oxide | 1309-37-1 | 5 | | | 0.5 |
| Toxicological Data on Ingredients | Zinc Oxide | | | | |
| | ORAL (LD50) | Acute: 7950 mg/kg [Mouse] | | | |
| SECTION 3: HAZARDS IDENTIFICATION | | | | | |
| Potential Acute Health Effects: | Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. | | | | |
| Potential Chronic Health Effects | CARCINOGENIC EFFECTS : Not available MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available DEVELOPMENTAL TOXICITY : Not available Repeated or prolonged exposure is not known to aggravate medical condition | | | | |
| SECTION 4 : FIRST AID MEASURES | | | | | |
| Eye Contact : | Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs. | | | | |
| Skin Contact: | Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. | | | | |
| Serious Skin contact | Not available. | | | | |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. | | | | |
| Serious Inhalation | Not available. | | | | |
| Ingestion | DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear. | | | | |
| Serious Ingestion | Not available | | | | |
| SECTION 5: FIRE & EXPLOSION DATA | | | | | |
| Flammability of the Product | Non-flammable | | | | |
| Auto-Ignition Temperature | Not applicable | | | | |
| Flash points | Not applicable | | | | |
| Flammable Limits | Not applicable | | | | |
| Products of Combustion | Not available | | | | |
| Fire Hazards in presence of Various substances | Not applicable | | | | |
| Explosion Hazards in presence Of various substances | Risks of explosion of the product in presence of mechanical impact: Not available Risks of explosion of the product in presence of static discharge: Not available. | | | | |
| Fire Fighting Media and Instructions | Not applicable | | | | |
| Special Remarks on Fire hazards | Slow addition of zinc oxide to cover linseed oil vamish causes generation of heat and ignition. | | | | |
| Special Remarks on Explosion Hazards | May explode when mixed with chlorinated rubber. Zinc oxide and magnesium can react explosively when heated. | | | | |

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| SECTION 6. ACCIDENTAL RELEASE MEASURES | | | |
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| Small Spill | Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. | | |
| Large Spill | Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities. | | |
| SECTION 7 : HANDLING AND STORAGE | | | |
| Precautions | Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. | | |
| Storage | Keep container tightly closed. Keep container in a cool, well-ventilated area. | | |
| SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION | | | |
| Engineering Controls | Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. | | |
| Personal Protection | Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. | | |
| Personal Protection in case of a Large spill | Splash Goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient, consult a specialist BEFORE handling this product. | | |
| Exposure Limits | Zinc oxide TWA: 5 STEL: 10 (mg/m³) from ACGIH (TLV) [United states] Inhalation. TWA: 15 (mg/m³) from OSHA (PEL) [United States] Inhalation Total. Ferric oxide TWA: 15 (mg/m³) from OSHA (PEL) [United States] Inhalation Total. TWA: 5 (mg/m³) from ACGIH (TLV) [Unites States Inhalation Respirable. | | |
| SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES | | | |
| Physical state and appearance | Solid (Powdered solid) | Odour | Odourless |
| Molecular Weight | Not applicable | Taste | Not available |
| pH (1% soln./water) | Not applicable | Colour | Pink |
| Boiling Point | Not available | | |
| Melting Point | 1975°C (3587°F) based on data for Zinc oxide. | | |
| Critical Temperature | Not available | | |
| Special Gravity | The only known value is 5.607 (Water = 1) (Zinc oxide) | | |
| Vapor Pressure | Not applicable | | |
| Vapor Density | Not available | | |
| Volatility | Not available | | |
| Odor Threshold | Not available | | |
| Water/Oil Dist. Coeff. | Not available | | |
| Ionicity (in Water) | Not available | | |
| Dispersion Properties | Not available | | |
| Solubility | Insoluble in cold water, hot water. Soluble in dilute acetic acid or mineral acid, ammonia, ammonium carbonate, and fixed alkali hydroxide solution | | |
| SECTION 10 : STABILITY AND REACTIVITY DATA | | | |
| Stability | The product is stable | | |
| Instability Temperature | Not available | | |
| Conditions of Instability | Incompatible materials | | |
| Incompatibility with various substances | Not available. | | |
| Corrosivity | Non-corrosive in presence of glass | | |
| Special Remarks on Reactivity | Reacts violently with magnesium, linseed oil. Reacts with hydrochloric acid to produce zinc chloride. Reacts with sulfuric acid to produce zinc sulfate. Reacts with hydrogen fluoride acid to produce zinc fluoride tetrahydrate. Gradually absorbs CO2 on exposure to air. Sublimes at normal pressure. Zinc Oxide reacts with Carbon Monoxide or hydrogen to produce elemental zinc. | | |
| Special Remarks on Corrosivity | Not available | | |
| Polymerization | Will not occur. | | |

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| SECTION 11: TOXICOLOGICAL INFORMATION | | | |
|--|--|---|---|
| Routes of Entry | | Inhalation. Ingestion | |
| Toxicity to Animals | | Acute oral toxicity (LD50): 7950 mg/kg [Mouse]. (Zinc oxide) | |
| Chronic Effects on Humans | | CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Ferric oxide]. Contains material which may cause damage to the following organs, lungs, eyes. | |
| Other Toxic Effects on Humans | | Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation. | |
| Special Remarks on Toxicity to Animals | | Not available | |
| Special Remarks on Chronic Effects on Humans | | May cause adverse reproductive effects based on animal data. No human data found at this time. May affect genetic material (mutagenic) | |
| Special Remarks on other Toxic Effects on Humans | | Acute Potential Health Effects: Skin: May cause skin irritation Eye: May cause eye irritation Inhalation: Irritation of the respiratory tract Ingestion: None identified. Expected to be a low hazard. May cause digestive/gastrointestinal tract irritation or disturbances. Chronic Potential Health Effect. No information found. | |
| SECTION 12: ECOLOGICAL INFORMATION | | | |
| Ecotoxicity | | Not available | |
| BOD5 and COD | | Not available | |
| Products of Biodegradation | | Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. | |
| Toxicity of the Products of Biodegradation | | The product itself and its products of degradation are more not toxic. | |
| Special Remarks on the Products of Biodegradation | | Not available. | |
| SECTION 13: DISPOSAL CONSIDERATIONS | | | |
| Waste Disposal | | Waste must be disposed of in accordance with federal, state and local environmental contact regulations. | |
| SECTION 14: TRANSPORT INFORMATION | | | |
| DOT Classification | | Not a DOT controlled material (United States) | |
| Identification | | Not applicable | |
| Special Provisions for Transport | | Not applicable | |
| SECTION 15: OTHER REGULATORY INFORMATION AND PICTOGRAMS | | | |
| Federal & State Regulations | | No products were found | |
| CALIFORNIA PROPOSITION 65 WARNINGS: | | | |
| HMIS (U.S.A.) | Health Hazard Fire Hazard Reactivity Personal Protection | 1 1 0 E | National Fire Protection Association (U.S.A.) Flammability Health Reactivity Specific Hazard |
| | | | 0 1 0 - |
| Protective Equipment | Gloves (impervious), Lab Coat, Dust Respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses. | | |
| SECTION : 16 : OTHER INFORMATION | | | |
| Notice to Reader: All chemicals may pose unknown hazards and should be used with caution. The Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the users responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judgment to be reliable.Jai Radhe Sales assumes no responsibility for the completeness or accuracy of the information contained herein. | | | |