1. Product and Company Identification

Product Name : METALGUARD PREMIUM ZINC DUST PRIMER

Product Code : 334'

Recommended Use: Interior/Exterior Alkyd Finish

Company Identification:

HALLMAN/LINDSAY PAINTS Information Phone: (608) 834-8844
P.O. BOX 109 Emergency Phone: 1-800-633-8253

SUN PRAIRIE, WI 53590

Petroleum Distillates (Light)

2. Hazards Identification

Hazard-determining component Signal Word Hazard Class/Catagory code

DANGER Asp.Tox 1

Carc. 2 Flam. Liq. 3 Skin Irrit.2

STOT RE 2 STOT SE 3

Hazard Pictogram Description

GHS02-Flame GHS07-Exclamation mark GHS08-Health hazard

Hazard statements

H226 Flammable liquid and vapor H304 May be fatal if swallowed and enters airways H315 Causes skin irritation H335 May cause respiratory irritation H336 May cause drowsiness or dizziness. H340 May cause genetic defects H350 May cause cancer H351 Suspected of causing cancer H372 Causes damage to organs through prolonged or repeated exposure May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children. Keep away from heat, sparks, open flames, hot surfaces. No Smoking. Use explosionproof electrical, ventilating, lighting, equipment. Take precautionary measures against static discharge. P260 Do not breathe dust, fume, gas, mist, vapors or spray. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water, shower. If inhaled: Remove victim to fresh air and keep comfortable for breathing. P314 Get medical advice, attention if you feel unwell. Store in a well-ventilated place. Keep cool. P501 Dispose of contents container in accordance with local, regional, national and international regulations. P202 Do not handle until all safety precautions have been read and understood. P264 Wash thoroughly after handling. P280 Wear protective gloves, protective clothing, eye protection and face protection. P301 + P310 (P) If swallowed: Immediately call a poison center, doctor if you feel unwell. P302 + P352 If on skin: Wash with plenty of soap and water P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a POISON CENTER/doctor/physician if you feel unwell. P321 Specific treatment (see first aid section on this label). P331 Do NOT induce vomiting. P362+P364 Take off contaminated clothing and wash it before reuse. P363 Take off contaminated clothing and wash before reuse. P370+P378 In case of fire: Use appropriate method to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P332 + P313 If skin irritation occurs: Get medical advice/attention.

Potential Health Effects

Eye: EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

Ingestion: EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed. Harmful or fatal if liquid is aspirated into lungs. Irritating to mouth, throat, and stomach. Can be readily absorbed by the stomach and intestinal tract. Symptoms include burning sensation of the mouth and esophagus, nausea, vomiting, diarrhea, dizziness, staggering gait, drowsiness, loss of consciousness and delerium as well as additional central nervous system effects.

Inhalation: EFFECTS OF OVEREXPOSURE - INHALATION: Vapors can cause irritation of the respiratory tract. High concentrations can cause headache, nausea, weakness, lightheadedness, and stupor (CNS depression).

Chronic (Cancer) Information:

For complete discussion of toxicology data refer to section 11. EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Possible brain damage from overexposure. Overexposure may cause nervous system damage. Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction. Significant exposure to this chemical may adversely affect people with chronic disease of the respiratory system, central nervous system, kidney, liver, skin, and/or eyes.

Teratology (Birth Defects) Information:

Not determined

Reproduction Information:

REPRODUCTIVE/DEVELOPMENTAL TOXICITY: There were no treatment-related effects on pregnancy rate, mortality or gross post mortem observations in animal studies utilizing mineral spirits containing less than 2% aromatics.

Aggravation of Pre-Existing Conditions:

Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Liver, Kidneys, Central Nervous System (CNS)

3. Composition/Information on IngredientsComponent	CAS#	% by Wt.	
ZINC DUST	7440-66-6	45%-50%	
Petroleum Distillates Light	64742-47-8	15%-20%	
OSHA PEL: 500ppm, ACGIH TLV: 100ppm			
STEL TLV: N/A			
ZINC OXIDE	1314-13-2	10%-15%	
OSHA PEL TWA: 15 mg/m³ 8 hour(s). Form: Total dust			
NIOSH REL TWA: 5 mg/m 3 10 hour(s). Form: Dust and fumes			
STEL: 10 mg/m³ 15 minute(s). Form: Fume			
XYLENE	1330-20-7	0%-05%	
OSHA PEL: 100ppm, ACGIH TLV: 100ppm			
STEL TLV: 150ppm			
TITANIUM DIOXIDE	13463-67-7	0%-05%	
OSHA PEL: 10 MG/M3, ACGIH TLV: 10 MG/M3, STEL TLV: N/A			
ETHYLBENZENE	100-41-4	0%-05%	
OSHA TWA: 100ppm			

4. First Aid Measures

Eves:

Flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. If easily accomplished, check for and remove contact lenses. If contact lenses cannot be removed, seek immediate medical attention. Do not use eye ointment. Seek medical attention.

Skin:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Immediately wash skin with soap and plenty of water. Get medical attention if irritation develops or persists. Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.

Ingestion:

Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

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Inhalation:

Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.

Note to Physicians:

INHALATION: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract

inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required.

5. Fire Fighting Measures

Flammable Properties:

Flash Point: 108 F

Method: T.C.C.

Explosive Limits:

Lower explosive limit: 1
Upper explosive limit: 6.7

Autoignition Temperature:

AP 230°C (AP 446°F)

Hazardous Combustion Products:

Carbon dioxide, carbon monoxide, smoke, fumes, and/or unburned hydrocarbons.

Extinguishing Media:

SMALL FIRE: Use dry chemicals, carbon dioxide, foam, or inert gas (nitrogen). Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.

LARGE FIRE: Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frothing and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.

Firefighting Procedures:

Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities of potential fire and explosion hazard if liquid enter sewers or waterways.

6. Accidental Release Measures

Small Spill:

Eliminate ignition sources, provide good ventilation, dike spill to minimize contamination. Absorb with inert material. Collect in containers. Keep spill out of waterways.

Large Spill:

For large spills, secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection. Pick up free liquid for recycle and/or disposal if it can be accomplished safely with explosion-proof equipment. Collect any excess material with absorbant pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal. Comply with all laws and regulations.

Environmental Precautions:

Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

Methods/Materials for Containment and Cleaning Up:

Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage

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Handling:

Keep out of reach of Children. Avoid prolonged contact with liquid and/or vapor. Do not store near heat, sparks, or flame. Store in a cool, dry, and well vented area. Keep containers closed when not in use. Ground all containers when transferring liquid. Use non sparking tools.

Storage:

Keep away from heat and open flames. Store in a cool and well vented area. Keep containers closed when not in use.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

Use only with adequate ventilation. Local exhaust preferable. General exhaust acceptable if the exposure to materials is maintained below applicable exposure limits. When spraying controlling exposure requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) Avoid contact with skin and eyes. Avoid breathing vapor and spray mist. Wash hands after using. This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 3) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Engineering Controls:

Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment. General mechanical ventilation or local exhaust should be suitable to keep the vapor concentrations below TLV values. Ventilation equipment must be explosion proof.

Personal Protective Equipment

Respiratory Protection:

For known vapor concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134). For airborne vapor concentrations that exceed the recommended protection factors for organic vapor respirators, use a full-face, positive-pressure, supplied air respirator. Due to fire and explosion hazards, do not enter atmospheres containing concentrations greater than 10% ofthe lower flammable limit of this product.

Skin Protection:

Chemical-resistant gloves and chemical goggles, face -shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.

Eve Protection:

Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation. Safety glasses equipped with side shields are recommended as minimum protection. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. A suitable emergency eye wash water and safety shower should be located near the work station.

9. Physical and Chemical Properties

Boiling Point:

Boiling Range: 318-386 F

Freezing Point: Not determined

Flash Point:

108 F

Vapor Pressure:

Not determined

Vapor Density:

Heavier than air

Solubility in Water:

Insoluable

Evaporation Rate:

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Slower than ether.

Exposure:

Upper Exposure Limit: No Data Lower Exposure Limit: No Data Specific Gravity: 1.98

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)
Material VOC (Includes Water and Exempt Solvent) Emitted VOC

 $342~{\rm g/l}$ 2.85 lb/gl Coating VOC (Minus Water and Exempt Solvent)

342 g/l 2.85 lb/gl

Odor:

Characteristic hydrocarbon solvent odor.

Odor Threshold: Not determined

Appearance:

Liquid coating.

Viscosity: Varies by product Autoignition Temperature: Decomposition Temperature:

10. Stability and Reactivity

Chemical Stability (Conditions to Avoid):

Keep away from heat, flame and other potential ignition sources. Keep away from strong oxidizing conditions and agents.

Incompatibility:

Strong acids, alkalies, and oxidizers such as liquid chlorine and oxygen.

Hazardous Decomposition Products:

Thermal decomposition may produce carbon monoxide, carbon dioxide, oxides of nitrogen and unidentifiable organic materials. No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.

Hazardous Polymerization:

Stable. Hazardous Polymerization Not expected to occur.

11. Toxicological Information

Distillates (petroleum), hydrotreated light:
ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Eye:

Eye Irritation: Data available. May cause mild, short-lasting discomfort to eyes.

Skin:

Skin Toxicity: LD50 > 3160 mg/kg Minimally Toxic. Based on test data for the material. Irritation: Data available. Mildly irritating to skin with prolonged exposure. Based on test data for the material.

Ingestion

Ingestion Toxicity: LD50 > 15000 mg/kg Minimally Toxic. Based on test data for the material.

Inhalation:

Inhalation Toxicity: Data available. May cause central nervous system effects. Based on test data for the material. Irritation: Data available. Negligible hazard at ambient/normal handling temperatures. Based on test data for the material. No significant exposure to primary particles of titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as in paints. End-users of these products are unlikely to be exposed to airborne particulates, which are bound within the "wetted mixture". Although in the event of the dry film being disturbed by sanding or other means the potential for exposure can increase.

Subchronic:

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Not determined

Chronic/Carcinogenicity:

IARC's Monograph No 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

IARC: Not determined

NTP: CARCINOGENICITY: The National Toxicology Program (NTP) conducted two-year carcinogenicity studies in rats and mice with Stoddard Solvent IIC (less than 2% aromatics). The studies indicated that there was some evidence of carcinogenic activity in male rats (adrenal medulla neoplasms and renal tubule adenoma) but no evidence of carcinogenic activity in female rats. Further, there was equivocal evidence of carcinogenic activity in female mice (hepatocellular adenoma) but no evidence of carcinogenic activity in male mice. A low carcinogenic potential is suggested by a lack of genotoxic potential identified in in vivo and in vitro genetic toxicity tests (with and without metabolic activation).

OSHA: Not determined
Teratology: Not determined
Reproduction: No Data

Mutagenicity: Not determined

Acute Toxicity: Eye Contact: May cause: Moderate irritation. Skin: May cause: Moderate irritation. Prolonged or repeated exposure can cause skin sensitization. Inhalation: of vapor or mist can cause headache, nausea, and irritation of the nose, throat and lungs. Ingestion: May cause: Nausea. May be harmful if swallowed. IRRITATION: Primary dermal irritation studies (four hour exposure) in rabbits utilizing mineral spirits containing less than 2% aromatics resulted in slight to moderate skin irritation. In humans, mineral spirits have produced slight to moderate skin irritation particularly with evaporation from the skin is prevented. Animal studies have demonstrated that mineral spirits produced mild respiratory tract irritation at elevated concentrations. Also, sensory respiratory tract irritation was evident by reduced breathing rates in the test animals in certain studies.

SENSITIZATION: In animal studies utilizing mineral spirits containing up to 18%, aromatics skin sensitization is not evident.

NERVOUS SYSTEM EFFECTS: In animal studies utilizing mineral spirits containing up to 22% aromatics indicated that the acute central nervous system effects are reversible. Based on existing animal studies, the potential for persistent effects is not clear.

STOT-single exposure: Not determined STOT-repeated exposure: Not determined

Routes of Exposure: Not determined

12. Ecological Information

This product will normally float on water. Components will evaporate rapidly. This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment. The octanol-water partition coefficient (log Kow) for this product is expected to be in the range of 2.1 to 5.

13. Disposal Considerations

Waste Disposal Method:

Maximize material recovery for reuse or recycling. Recovered non-usable material may be regulated by US EPA as a hazardous waste due to its ignitibility (D001) and/or its toxic (D018) characteristics. Conditions of use may cause this material to become a "hazardous

waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a RCRA "hazardous waste" at the time of disposal. Transportation, treatment, storage and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact your regional US EPA office for guidance concerning case specific disposal issues

14. Transport Information

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UN Number:

1263

UN Shipping Name:

Paint

Transport Hazard Class:

Packing Group:

III

15. Regulatory Information

Not determined

Section 313:

Not determined

16. Other Information

Prepared By: hallman/lindsay Regulatory Department

Manufacturer Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.