E396-GR1372 ZINC RICH PRIMER

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: E396-GR1372 ZINC RICH PRIMER
PRODUCT USE: Industrial Powder Coating

MANUFACTURER
Cardinal Paint and Powder
1329 Potrero Ave
S. El Monte, CA, 91733
626 444-9274

24 HR. EMERGENCY TELEPHONE NUMBER
CHEMTREC (US Transportation): (800)424-9300
CHEMTREC (International Transportation): (202)483-7616
WEB: WWW.CARDINALPAINT.COM

2. HAZARDS IDENTIFICATION

PICTOGRAMS :

SIGNAL WORD : WARNING

HAZARD STATEMENTS :
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H317 May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS :
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %	CAS Number
Zinc	60% - 65%	7440-66-6
Zinc Oxide	1% - 5%	1314-13-2
Titanium Dioxide	1% - 5%	13463-67-7
Bisphenol A	<1%	80-05-7

4. FIRST AID MEASURES

Description of first aid measures.

EYE CONTACT : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

SKIN CONTACT : Remove affected clothing and wash all exposed area with mild soap and water, followed by warm water rinse. Wash with plenty of soap and water. If skin irritation or rash occurs: Wash with plenty of soap and water. Get medical advice/attention. Wash contaminated clothing before reuse. Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

INGESTION : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a Poison Center or doctor/physician of you feel unwell.

INHALATION : Allow victim to breathe fresh air. Allow victim to rest. Remove to fresh air and keep at rest in a position comfortable to breath. Call a Poison Center or doctor/physician if you feel unwell.

Most important symptoms and effect, both acute and delayed : Symptoms/Injuries: May cause genetic defects. Causes damage to organs. - After Inhalation: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause an allergic skin reaction. May cause cancer by inhalation. - After Eye Contact: Causes serious eye damage. - After Ingestion: Swallowing a small quantity of this material may result in serious health hazard. Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Foam, alcohol foam, dry chemical, carbon dioxide, water fog or sand.

UNSUITABLE EXTINGUISHING MEDIA: Do not use heavy water stream.

FIRE FIGHTING PROCEDURE: Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering the environment.

Protection during firefighting: Firefighters should wear full protective gear. Do not enter fire area without proper protective equipment, including self-contained breathing apparatus with full face piece operated in pressure demand or other positive pressure modes.

UNUSUAL FIRE AND EXPLOSION HAZARD: This product is stable at normal handling and storage conditions.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES : General measures: Remove ignition sources. Use special care to avoid static electric charges. No smoking.

FOR NON-EMERGENCY PERSONNEL : For non-Emergency procedures: Evacuate unnecessary personnel.

FOR EMERGENCY RESPONDERS : Protective equipment : Equip cleanup crew with proper protection. - Emergency procedures : Ventilate area.

ENVIRONMENTAL PRECAUTIONS : Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public water. Avoid release to the environment.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP : On land, sweep or shovel into suitable containers,. Minimize generation of dust.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when you are leaving work. Provide good ventilation in process area.Use only in well ventilated areas. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.Eliminate all ignition sources if safe to do so. Avoid breathing dust, fumes and/or vapors.

Hygiene measures: Wash Skin thoroughly after handling.

CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES : Avoid heat sources and direct sunlight. Store in a dry place. Protect from moisture. Keep container closed when not in use. Keep only in the original container in a cool well ventilated place away from heat, ignition sources and direct sunlight.

Incompatible products: Strong bases. Strong acids.

Incompatible materials: Source of ignition. Direct sunlight.

8. EXPOSURE CONTROLS\PERSONAL PROTECTION

Amorphous Silica(112926-00-8)		
USA OSHA	USA OSHA TWA (Table Z-1)	6 mg/m3
USA OSHA	USA OSHA TWA (Tabla Z-3)	20 Million particals per cubic foot.
USA NIOSH	USA NIOSH TWA (REL)	6 mg/m3
Titanium Dioxide(13463-67-7)		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	10 mg/m3 8 hours
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	15 mg/m3 8 hours
Zinc Oxide(1314-13-2)		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	2 mg/m3 8 hours (Resiprable Fraction)
ACGIH TLV (Threshold Limit Value)	STEL (Short Term Exposure Limit)	10 mg/m3 (Respirable Fraction) 15 minutes
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	15 mg/m3 (Total Dust), 5mg/m3 (Respirable Fraction) 8 hours
NIOSH REL (Recommended Exposure Limit)	TWA (Time Weighted Average)	5 mg/m3 10 hours
NIOSH REL (Recommended Exposure Limit)	CEIL (Ceiling Limit)	15 mg/m3 15 minutes
OSHA PEL (Permissible Exposure Limit) Fume	TWA (Time Weighted Average)	5 mg/m3 8 hours
NIOSH REL (Recommended Exposure Limit) Fume	TWA (Time Weighted Average)	5 mg/m3 10 hours
NIOSH REL (Recommended Exposure Limit) Fume	CEIL (Ceiling Limit)	10 mg/m3 15 minutes

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION : Wear approved dust mask.

HAND PROTECTION : Wear protective gloves.

EYE PROTECTION : Chemical goggles or safety glasses.

SKIN AND BODY PROTECTION : Wear suitable protective clothing.

WORK HYGIENIC PRACTICES: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	**:**	Solid
Melting point	**:**	55 - 90 deg C
Flash point	**:**	No data available.
Lower explosion limit	**:**	10 g/m^3
Upper explosion limit	**:**	70 g/m^3
Density	**:**	2.7547
Solubility	**:**	No data available.
Autoignition temperature	**:**	No data available.
Decomposition temperature	**:**	No data available.

10. STABILITY AND REACTIVITY

REACTIVITY : This product is stable at normal handling and storage conditions.

CHEMICAL STABILITY : Stable under normal conditions.

CONDITIONS TO AVOID : Direct sunlight. Extremely high or low temperatures.

INCOMPATIBLE MATERIALS : Strong acids. Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Fume. Carbon monoxide. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Amorphous Silica(112926-00-8)	
Acute toxicity	no data available
Acute toxicity: Inhalation	no data available
Acute toxicity: Dermal	no data available
Skin irritation	no data available
Eye irritation	no data available
Respiratory or skin sensation	no data available
Germ cell mutagenicity	no data available
Carcinogenicity: IARC: Group 3:	not classifiable as to its carcinogenicity to humans
ACGIH	no component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH
NTP	no component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP
OSHA	no component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA
Reproductive toxicity	no data available
Specific target organ toxicity - single exposure	no data available
Specific target organ toxicity - repeated exposure	no data available
Aspiration hazard	no data available
Additional information	Amorphous silica is not classified as to its carcinogenicity to humans, however, crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1, IARC). Therefore, amorphous silica should be handled as if possessing the same hazards as the crystalline form. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Additional information	Stomach - irregularities - based on human evidence
Bisphenol A(80-05-7)	
Acute toxicity - oral - LD50 - male and female rat	> 2000 - 5000 mg/kg
Acute toxicity - inhalation - LC50 - male and female rat	170 mg/m3 / 6 h
Acute toxicity - dermal - LD50 - rabbit	6400 mg/kg
Skin irritation - rabbit	No skin irritation / 4 h
Eye irritation - rabbit	Severe eye irritation / 24 h
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity - Ames test - S. typhimurium	Negative
Germ cell mutagenicity - male and female mouse	Negative
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA
Reproductive toxicity	No data available
Specific targtet organ toxicity - single exposure	Inhalation - may cause respiratory irritation
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional information - repeated dose toxicity - male and female rat - oral	Lowest observed adverse effect level - 600 mg/kg
Additional information	To the best of our knowledge, the chemical, physica, and toxicological properties have not been thoroughly investigated.
Additional information	Stomach irregularities based on human evidence
Titanium Dioxide(13463-67-7)	

Acute toxicity - LD50 - oral - rat	> 10000 mg/kg
Acute toxicity - inhalation	No data available
Acute toxicity - LD50 - dermal - rabbit	> 10000 mg/kg
Skin irritation - human	Mild skin irritation - 3 h
Eye irritation - rabbit	No eye irritation
Respiration or skin sensitisation	Will not occur
Germ cell mutagenicity - hamster - ovary - micronucleus test	No results available
Germ cell mutagenicity - hamster - lungs	DNA inhibition
Germ cell mutagenicity - hamster - ovary - sister chromatid exchange	No results available
Germ cell mutagenicity - mouse - micronucleus test	No results available
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional information	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
Zinc Oxide(1314-13-2)	
Acute toxicty - LD50 -oral - mouse	7950 mg/kg
Acute toxicity - LC50 - inhalation - mouse	2500 mg/m3
Acute toxicity - dermal	No data available
Skin irritation - rabbit	Mild skin irritation / 24 h
Eye irritation - rabbit	Mild eye irritation / 24 h
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity - hamster embryo	Unscheduled DNA synthesis
Germ cell mutagenicity - hamster embryo	Morphological transformation
Germ cell mutagenicity - hamster embryo	Sister chromatid exchange
Germ cell mutagenicity - guinea pig	Unscheduled DNA synthesis
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as a probabe, possible or ci=onfirmed human carcinogen by IARC
ACGIH	No component ofthis product found at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH
NTP	No component ofthis product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional information	Zinc oxide dust or fume can irritate the respiratory tract. Prolonged skin contact can produce severe dermatitis called oxide pox. Exposure to high levels of dust or fume can cause metallic taste, marked thirst, coughing, fatigue, weakness, muscular pain, and nausea followed by fever and chills. Severe overexposure may result in bronchitis or pneumonia with a bluish tint to the skin., prolonged or repeated exposure can cause; reversible liver enzyme abnormalities, diarrhea.
Additional information	To the best of our knowledge, the chemical, pphysical and toxicological properties have not been thoroughly investigated.
Zinc(7440-66-6)	
Acute toxicity - inhalation	No data available
Acute toxicity - dermal	No data available
Skin irritation	No data available

Eye irritation	No data available
Respiratory or skin sensitization	Did not cause sensitization on laboratory animals
Germ cell mutagenicity	No data available
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH
NTP	No component of this product pressent at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity- repeated exposure	No data available
Aspiration hazard	No data available
Additional information	Effects due to ingestion may include; chills, dry throat, sweet taste, fever, cough, nausea, vomiting, weakness, contact with eyes or skin may cause irritation

12. ECOLOGICAL INFORMATION

Amorphous Silica(112926-00-8)	
Toxicity	no data available
Persistence and degradability	no data available
Bioaccumulative potential	no data available
Mobility in soil	no data available
PBT and vPvB	not available/not required
Bisphenol A(80-05-7)	
Toxicity to fish -flow-through test - LC50 - fathead minnow	4.6 mg/L / 96 h
Toxicity to daphnia and other aquatic invertebrates - static test EC50 - water flea	10.2 mg/L / 48 h
Toxicity to algae - static test EC50 - green algae	2.73 - 3.1 mg/L / 96 h
Persistence and degradability - biodegradability - aerobic	89% readily biodegradable - 28 d
Bioaccumulative potential - bioaccumulation - carp	0.015 mg/L / 42 d
Mobility in soil	No data available
PBT and vPvB	Not available/not required
Other adverse effects	An environmental hazard cannot be excluded in the endet of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.
Titanium Dioxide(13463-67-7)	
Toxicity to fish - LC50 - other fish	> 1000 mg/L / 96 h
Toxicity to daphnia and other aquatic invertebrates - EC50 - Dapphnia magna (water flea)	> 1000 mg/L / 48 h
Toxicity to daphnia and other aquatic invertebrates - EC0 - Daphnia magna (water flea)	1000 mg/L / 48 h
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
PBT and vPbV	Not available/not required
Other adverse effects	No data available
Zinc Oxide(1314-13-2)	
Toxicity to fish - LC50 - rainbow trout	1.1 mg/L / 96 h
Toxicity to fish and other aquatic invertebrates - EC50 - daphnia magna	0.098 mg/L / 48 h
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available

PBT and vPvB	Not available/not required
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Zinc(7440-66-6)	
Toxicity to fish - LC50 - carp	450 ug/L / 96 h
Toxicity to daphnia and other aquatic invertebrates - LC50 - daphnia magna	0.068 mg/L / 48 h
Toxicity to daphnia and other aquatic invertebrates - mortality NOEC - daphnia	0.101 - 0.14 mg/L / 7 d
Persistence and degradability	The methods for determining the biological degradability are not applicable to inorganic substances.
Bioaccumulative potential - algae	5 ug/L / 7 d
Bioaccumulative potential - bioconcentration factor	466
Mobility in soil	No data available
PBT and vPvB	Not available/not required
Other adverse effects	An environmental hazard cannot be excluded in the event of unproffesional handling or disposal. Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

GENERAL INFORMATION : No data available.
DISPOSAL METHOD: Dispose of in accordance with Local, State, Regional, National and International Regulations.

Ecology - waste materials: Avoid release to the environment.

14. TRANSPORT INFORMATION

***CHECK WITH YOUR CARRIER FOR ADDITIONAL RESTRICTIONS THAT MAY APPLY.**

USDOT GROUND
DOT (DEPARTMENT OF TRANSPORTATION)
PROPER SHIPPING NAME (DOT) : Not Regulated/Not Applicable
HAZARDS CLASS : None
UN/NA NUMBER : Not Applicable
PACKING GROUP : None
EMERGENCY RESPONSE GUIDE (ERG) : Not Applicable

IATA (AIR)
DOT (INTERNATIONAL AIR TRANSPORTATION ASSOCIATION)
PROPER SHIPPING NAME : Not Regulated/Not Applicable
HAZARDS CLASS : Not Applicable
UN/NA NUMBER : Not Applicable
PACKING GROUP : Not Applicable
EMERGENCY RESPONSE GUIDE (ERG) : Not Applicable

IMDG (OCEAN)
PROPER SHIPPING NAME : Not Regulated , Not Applicable
HAZARDS CLASS : Not Applicable
UN/NA NUMBER : Not Applicable
PACKING GROUP : Not Applicable
EMERGENCY RESPONSE GUIDE (ERG) : Not Applicable

MARINE POLLUTANT : No
SPECIAL PRECAUTIONS : P235 Keep cool.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS
All ingredients are TSCA (Toxic Substance Control Act) listed.

OSHA HAZARDS : Moderate skin irritant, Moderate eye irritant.
EPCRA - Emergency
CERCLA REPORTABLE QUANTITY

SARA 304 Extremely Hazardous Substances Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SARA 311/312 Hazards : Acute Health Hazard, Chronic Health Hazard

This product contains:	Chemical CAS#
Zinc	7440-66-6
Zinc Oxide	1314-13-2
Titanium Dioxide	13463-67-7
Bisphenol A	80-05-7

SARA 313 : This Product Contains Zinc Powder (CAS 7440-66-6)
This product contains Zinc Oxide (CAS 1314-13-2)

CLEAN AIR ACT :

INTERNATIONAL REGULATIONS

CLASSIFICATION ACCORDING TO REGULATION (EC) No. 1272/2008 (CLP) :
Carc. 2 H351 Suspected of causing cancer
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure

NATIONAL REGULATIONS

This product contains:	Chemical CAS#
~Titanium Dioxide	13463-67-7

National Regulations Key
~ Indicates a chemical listed by IARC as a possible carcinogen.
^ Indicates a chemical listed by IARC as carcinogenic to humans.

STATE REGULATIONS
CALIFORNIA PROPOSITION 65

This product contains:	Chemical CAS#
*Titanium Dioxide	13463-67-7
#Bisphenol A	80-05-7
*2-Methylimdazole	693-98-1

Proposition 65 Key

* **WARNING:** This product can expose you to a chemical(s), including those listed above, which is (are) known to the State of California to cause cancer.
For more information visit WWWPROP65.CA.GOV.

\# **WARNING:** This product can expose you to a chemical(s), including those listed above, which is (are) known to the State of California to cause birth defects or other reproductive harm.
For more information visit WWWPROP65.CA.GOV.

\+ **WARNING:** This product can expose you to a chemical(s), including those listed above, which is (are) known to the State of California to cause cancer and birth defects or other reproductive harm.
For more information visit WWWPROP65.CA.GOV.

Massachusetts Right to Know

This product contains	Chemical CAS#
Zinc	7440-66-6
Zinc Oxide	1314-13-2
Titanium Dioxide	13463-67-7
Bisphenol A	80-05-7
Amorphous Silica	112926-00-8

Pennsylvania Right to Know

This product contains	Chemical CAS#
Zinc	7440-66-6
Zinc Oxide	1314-13-2
Titanium Dioxide	13463-67-7
Bisphenol A	80-05-7
Amorphous Silica	112926-00-8
2-Methylimdazole	693-98-1

New Jersey Right to Know

This product contains	Chemical CAS#
Zinc	7440-66-6
Zinc Oxide	1314-13-2
Titanium Dioxide	13463-67-7
Bisphenol A	80-05-7
Amorphous Silica	112926-00-8
2-Methylimdazole	693-98-1

16. OTHER INFORMATION

Other Product Information:

% Volatile by Volume :	0.00	% Volatile by Weight :	0.00
% Solids by volume :	100.00	% Solids by Weight :	100.00

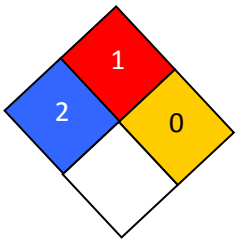
VOC CONTENT:

Content tested per EPA METHOD 24, ASTM D2369 is less than 1% Wt/Wt.

HMIS RATING

Health :	2
Flammability :	1
Reactivity :	0
Personal Protection :	E

NFPA CODES



MANUFACTURER DISCLAIMER : The information contained in this Safety Data Sheet is considered to be true and accurate. Cardinal Paint and Powder makes no warranties, expressed or implied, as to the accuracy and adequacy of this information. This data is offered solely for the user's consideration, investigation and verification.