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**Section 1: IDENTIFICATION**

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**1.1 PRODUCT IDENTIFIER**

**Product Name:** ZP-4B

**Product Code:** Not available.

**1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE**

**Use:** Non-Destructive Testing.

**1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET**

**Name/Address:** Magnaflux  
218 E. Industrial St.,  
De Witt, IA  
52742

**Telephone Number:** 800-424-9300

**1.4 EMERGENCY TELEPHONE NUMBER**

**Emergency Telephone Number:** CHEMTREC 800-424-9300

**Date of Preparation:** August 20, 2014      **Version #:** 1.0

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**Section 2: HAZARD(S) IDENTIFICATION**

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**2.1 CLASSIFICATION OF THE CHEMICAL ACCORDING TO OSHA HAZCOM 2012****Hazard class**

Not hazardous by OSHA HazCom 2012 criteria.

**2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012**

**Hazard Pictogram:** Not applicable.

**Signal Word:** Not applicable.

**Hazard Statement:** Not applicable.

**Prevention:** Not applicable.

**Response:** Not applicable.

**Storage:** Not applicable.

**Disposal:** Not applicable.

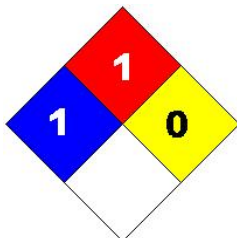
**2.3 ADDITIONAL INFORMATION**

**Hazards not otherwise classified:** Not applicable.

23 % of the mixture consists of ingredient(s) of unknown acute toxicity.

This product is a hazardous chemical as defined by NOM-018-STPS-2000.

**Mexico Classification:**



**Blue = Health   Red = Flammability   Yellow = Reactivity   White = Special**

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

**WHMIS Classification(s):**

Class D2B - Skin/Eye Irritant

**WHMIS Hazard Symbols:**



**WHMIS Signal Word:** CAUTION

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 MIXTURES

Ingredient	UN #	H / F / R / *	CAS No	Wt. %
Pentaerythritol	Not available.	1/2/0	115-77-5	30 - 60
Magnesium carbonate	Not available.	1/1/0	546-93-0	10 - 30
Aluminum oxide	Not available.	Not available.	1344-28-1	1 - 5
Silica, amorphous, fumed, crystalline-free	Not available.	Not available.	112945-52-5	1 - 5

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

\* Per NOM-018-STPS-2000

### Section 4: FIRST- AID MEASURES

#### 4.1 DESCRIPTION OF THE FIRST AID MEASURE

**Eye:** In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

**Skin:** In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.

**Inhalation:** If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

**Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

#### 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

**Eye:** May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

**Skin:** May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

**Inhalation:** Dust may cause respiratory tract irritation.

**Ingestion:** May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

#### 4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

**Note to Physicians:** Symptoms may not appear immediately.

**Specific Treatments:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

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### Section 5: FIRE-FIGHTING MEASURES

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#### 5.1 FLAMMABILITY

**Flammability:** This product is not flammable by WHMIS/OSHA/NOM-018-STPS-2000 criteria.

#### 5.2 EXTINGUISHING MEDIA

**Suitable Extinguishing Media:** Treat for surrounding material.

**Unsuitable Extinguishing Media:** None known.

#### 5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

**Products of Combustion:** May include, and are not limited to: oxides of carbon.

**Explosion Data:**

**Sensitivity to Mechanical Impact:** Not available.

**Sensitivity to Static Discharge:** Take precautionary measures against static discharge. Avoid generating dust as the product may form flammable dust/air mixtures.

#### 5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

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### Section 6: ACCIDENTAL RELEASE MEASURES

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#### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

#### 6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

**Methods for Containment:** Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).



**Methods for Cleaning-Up:** Vacuum or sweep material and place in a disposal container. Provide ventilation.

## Section 7: HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING

**Handling:** Avoid contact with skin and eyes. Do not swallow. Good housekeeping is important to prevent accumulation of dust. Avoid generating and breathing dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Use only in well-ventilated areas. Handle and open container with care. When using do not eat or drink. (See section 8)

**General Hygiene Advice:** Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

**Storage:** Keep out of the reach of children. Keep container tightly closed. Store in dust-tight, dry, labeled containers. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. (See section 10)

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

#### Exposure Guidelines

Occupational Exposure Limits		
Ingredient	OSHA-PEL	ACGIH-TLV
Pentaerythritol	15 mg/m <sup>3</sup> (total); 5 mg/m <sup>3</sup> (resp)	10 mg/m <sup>3</sup> (total); 5 mg/m <sup>3</sup> (resp)
Magnesium carbonate	15 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable fraction)	Not available.
Aluminum oxide	15 mg/m <sup>3</sup> (total); 5 mg/m <sup>3</sup> (resp)	10 mg/m <sup>3</sup>
Silica, amorphous, fumed, crystalline-free	Not available.	Not available.

### 8.2 EXPOSURE CONTROLS

**Engineering Controls:** Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

### 8.3 INDIVIDUAL PROTECTIVE MEASURES

#### Personal Protective Equipment:

**Eye/Face Protection:** Wear eye protection.

#### Skin Protection:

**Hand Protection:** Wear suitable gloves.

**Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**General Health and Safety Measures:** Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

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**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Powder.
<b>Color:</b>	White.
<b>Odor:</b>	Odorless.
<b>Odor Threshold:</b>	Not available.
<b>Physical State:</b>	Solid.
<b>pH:</b>	Neutral.
<b>Melting Point/Freezing Point:</b>	Not available.
<b>Initial Boiling Point and Boiling Range:</b>	Not available.
<b>Flash Point:</b>	None.
<b>Evaporation Rate:</b>	Not available.
<b>Flammability:</b>	Not flammable.
<b>Lower Flammability/Explosive Limit:</b>	Not available.
<b>Upper Flammability/Explosive Limit:</b>	Not available.
<b>Vapor Pressure:</b>	Not available.
<b>Vapor Density:</b>	Not available.
<b>Relative Density/Specific Gravity:</b>	0.2
<b>Solubility:</b>	4%
<b>Partition coefficient: n-octanol/water:</b>	Not available.
<b>Auto-ignition Temperature:</b>	Not available.
<b>Decomposition Temperature:</b>	Not available.
<b>Viscosity:</b>	Not available.
<b>Oxidizing Properties:</b>	Not available.
<b>Explosive Properties:</b>	Not available.

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**Section 10: STABILITY AND REACTIVITY**

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**10.1 REACTIVITY**

No dangerous reaction known under conditions of normal use.

**10.2 CHEMICAL STABILITY**

Stable under normal storage conditions. Keep dry in storage.

**10.3 POSSIBILITY OF HAZARDOUS REACTIONS**

No dangerous reaction known under conditions of normal use. Avoid generating dust as the product may form flammable dust/air mixtures.

#### 10.4 CONDITIONS TO AVOID

Heat. Incompatible materials. Moisture.

#### 10.5 INCOMPATIBLE MATERIALS

Acids.

#### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

May include, and are not limited to: oxides of carbon.

### Section 11: TOXICOLOGICAL INFORMATION

#### 11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

**Likely Routes of Exposure:** Skin contact, eye contact, and inhalation.

**Symptoms related to physical/chemical/toxicological characteristics:**

**Eye:** May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

**Skin:** May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

**Ingestion:** May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

**Inhalation:** Dust may cause respiratory tract irritation.

**Acute Toxicity:**

Ingredient	IDLH	LC50	LD50
Pentaerythritol	Not available.	Not available.	Oral 10000 mg/kg, rat
Magnesium carbonate	Not available.	Not available.	Not available.
Aluminum oxide	Not available.	Not available.	Oral >5000 mg/kg, rat
Silica, amorphous, fumed, crystalline-free	Not available.	Not available.	Oral >3160 mg/kg, rat

#### Calculated overall Chemical Acute Toxicity Values

LC50 (inhalation)	LD50 (oral)	LD50 (dermal)
Not available.	> 2000 mg/kg, rat	Not available.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*
Pentaerythritol	Not listed.
Magnesium carbonate	Not listed.
Aluminum oxide	Not listed.
Silica, amorphous, fumed, crystalline-free	I-3

\* See Section 15 for more information.

#### 11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

**Skin Corrosion/Irritation:** May cause skin irritation.

**Serious Eye Damage/Irritation:** May cause eye irritation.

**Respiratory Sensitization:** Based on available data, the classification criteria are not met.

**Skin Sensitization:** Based on available data, the classification criteria are not met.

**STOT-Single Exposure:** Based on available data, the classification criteria are not met.

**Chronic Health Effects:**

**Carcinogenicity:** Based on available data, the classification criteria are not met.

**Germ Cell Mutagenicity:** Based on available data, the classification criteria are not met.

**Reproductive Toxicity:**

**Developmental:** Based on available data, the classification criteria are not met.

**Teratogenicity:** Based on available data, the classification criteria are not met.

**Embryotoxicity:** Based on available data, the classification criteria are not met.

**Fertility:** Based on available data, the classification criteria are not met.

**STOT-Repeated Exposure:** Based on available data, the classification criteria are not met.

**Aspiration Hazard:** Based on available data, the classification criteria are not met.

**Toxicologically Synergistic Materials:** Not available.

**Other Information:** Not available.

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**Section 12: ECOLOGICAL INFORMATION**

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**12.1 ECOTOXICITY**

**Acute/Chronic Toxicity:** May cause long-term adverse effects in the aquatic environment.

**12.2 PERSISTENCE AND DEGRADABILITY**

Not available.

**12.3 BIOACCUMULATIVE POTENTIAL**

**Bioaccumulation:** Not available.

**12.4 MOBILITY IN SOIL**

Not available.

**12.5 OTHER ADVERSE EFFECTS**

Not available.

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**Section 13: DISPOSAL CONSIDERATIONS**

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**13.1 WASTE TREATMENT METHODS**

**Disposal Method:** This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

**Other disposal recommendations:** Not available.

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**Section 14: TRANSPORT INFORMATION**

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**14.1 UN NUMBER**

**DOT**  
Not regulated.

**TDG**  
Not regulated.

**NOM-004-SCT2-1994**  
Not regulated.



## 14.2 UN PROPER SHIPPING NAME

DOT	TDG	NOM-004-SCT2-1994
Not applicable.	Not applicable.	Not applicable.

## 14.3 TRANSPORT HAZARD CLASS (ES)

DOT	TDG	NOM-004-SCT2-1994
Not applicable.	Not applicable.	Not applicable.

## 14.4 PACKING GROUP

DOT	TDG	NOM-004-SCT2-1994
Not applicable.	Not applicable.	Not applicable.

Not available.

## 14.6 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Not available.

## 14.7 SPECIAL PRECAUTIONS FOR USER

Do not handle until all safety precautions have been read and understood.

## Section 15: REGULATORY INFORMATION

### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

**Canada:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**US:** SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

**Mexico:** SDS prepared pursuant to NOM-018-STPS-2000.

SARA Title III				
Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Pentaerythritol	Not listed.	Not listed.	Not listed.	Not listed.
Magnesium carbonate	Not listed.	Not listed.	Not listed.	Not listed.
Aluminum oxide	Not listed.	Not listed.	Not listed.	313
Silica, amorphous, fumed, crystalline-free	Not listed.	Not listed.	Not listed.	Not listed.

### State Regulations

#### California Proposition 65:

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

#### Global Inventories:

Ingredient	Canada DSL/NDSL	USA TSCA
Pentaerythritol	NDSL	Yes.
Magnesium carbonate	DSL	Yes.

Aluminum oxide	DSL	Yes.
Silica, amorphous, fumed, crystalline-free	DSL	No.

NFPA-National Fire Protection Association:		
Health:		1
Fire:		1
Reactivity:		0

HMIS-Hazardous Materials Identification System:		
Health:		1
Fire:		1
Physical Hazard:		0

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

#### SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

**CP65** California Proposition 65

**OSHA (O)** Occupational Safety and Health Administration.

**ACGIH (G)** American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

**IARC (I)** International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

**NTP (N)** National Toxicology Program.

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

#### Section 16: OTHER INFORMATION

**Date of Preparation:** August 20, 2014

**Expiry Date:** August 20, 2017

**Version:** 1.0

**Revision Date:** August 20, 2014

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**End of Safety Data Sheet**