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**Section 1: IDENTIFICATION**

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**1.1 PRODUCT IDENTIFIER**

**Product Name:** ZP-9F  
**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  
155 Harlem Avenue,  
Glenview, Illinois  
60025  
**Telephone Number:** 847-657-5300

**1.4 EMERGENCY TELEPHONE NUMBER**

**Emergency Telephone Number:** CHEMTREC 800-424-9300  
**Date of Preparation:** April 1, 2014 **Version #:** 1.1

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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**

Flammable liquid 2  
Serious eye irritation 2A  
Specific target organ toxicity - Single exposure 3

**2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012****Hazard Pictogram:**

**Signal Word:** Danger  
**Hazard Statement:** Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness.  
**Prevention:** Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/eye protection/face protection. Wash hands thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

**Response:** If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

**Storage:** Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.

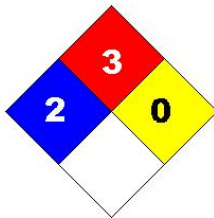
**Disposal:** Dispose of contents and container in accordance with all local, regional, national and international regulations.

### 2.3 ADDITIONAL INFORMATION

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

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 B2 - Flammable Liquid  
Class D2B - Eye Irritant

**WHMIS Hazard Symbols:**



**WHMIS Signal Word:** WARNING

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 MIXTURES

Ingredient	UN #	H / F / R / *	CAS No	Wt. %
Acetone	UN1090	1/3/0	67-64-1	30 - 60
Isopropanol	UN1219	1/3/0	67-63-0	10 - 30
Pentaerythritol	Not available.	1/2/0	115-77-5	10 - 30

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

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**Section 4: FIRST- AID MEASURES**

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**4.1 DESCRIPTION OF THE FIRST AID MEASURE**

<b>Eye:</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.
<b>Skin:</b>	In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.
<b>Inhalation:</b>	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.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

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

<b>Eye:</b>	Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
<b>Skin:</b>	May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
<b>Inhalation:</b>	May cause drowsiness or dizziness. May cause respiratory tract irritation.
<b>Ingestion:</b>	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

<b>Note to Physicians:</b>	Symptoms may not appear immediately.
<b>Specific Treatments:</b>	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**

<b>Flammability:</b>	Flammable by WHMIS/OSHA/NOM-018-STPS-2000 criteria.
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**5.2 EXTINGUISHING MEDIA**

<b>Suitable Extinguishing Media:</b>	Carbon dioxide, dry chemical, foam, water fog.
<b>Unsuitable Extinguishing Media:</b>	Not available.

**5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL**

<b>Products of Combustion:</b>	May include, and are not limited to: oxides of carbon.
<b>Explosion Data:</b>	

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

**Sensitivity to Static Discharge:** Not available.

**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). Use water spray to keep fire-exposed containers cool.

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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. Eliminate sources of ignition.

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

**Methods for Containment:** Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). Do not absorb in sawdust, paper, cloth or other combustible absorbents.

**Methods for Cleaning-Up:** Scoop up material and place in a disposal container. Vapours may be heavier than air and may travel along the ground to a distant ignition source and flash back. Provide ventilation.

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### Section 7: HANDLING AND STORAGE

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#### 7.1 PRECAUTIONS FOR SAFE HANDLING

**Handling:** Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/Bond container and receiving equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist /vapors/spray. Do not swallow. Handle and open container with care. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. When using do not eat, drink or smoke. (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 and dry. Store in a cool, well ventilated area. Store locked up. (See section 10)

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### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### 8.1 CONTROL PARAMETERS

##### Exposure Guidelines

Ingredient	Occupational Exposure Limits	
	OSHA-PEL	ACGIH-TLV
Acetone	1000 ppm; 2400 mg/m <sup>3</sup>	500 ppm
Isopropanol	400 ppm	200 ppm
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)

#### 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:** Safety glasses or goggles are recommended when using product.

**Skin Protection:**

**Hand Protection:** Wear chemical resistant 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:** Handle according to established industrial hygiene and safety practices. Ensure that eyewash stations and safety showers are close to the workstation location.

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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>	Clear.
<b>Color:</b>	Colorless.
<b>Odor:</b>	Characteristic.
<b>Odor Threshold:</b>	Not available.
<b>Physical State:</b>	Liquid.
<b>pH:</b>	Not available.
<b>Melting Point/Freezing Point:</b>	Not available.
<b>Initial Boiling Point and Boiling Range:</b>	56 °C (133 °F) at 100kPa
<b>Flash Point:</b>	20 °C (68 °F)
<b>Evaporation Rate:</b>	Not available.
<b>Flammability:</b>	Flammable.
<b>Lower Flammability/Explosive Limit:</b>	2.0% (IPA)
<b>Upper Flammability/Explosive Limit:</b>	12.8% (acetone)
<b>Vapor Pressure:</b>	Not available.
<b>Vapor Density:</b>	Not available.
<b>Relative Density/Specific Gravity:</b>	~ 0.78
<b>Solubility:</b>	Soluble.
<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.

**Explosive Properties:** Not available.

**VOC content, wt. %:** ~ 80%

### Section 10: STABILITY AND REACTIVITY

#### 10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

#### 10.2 CHEMICAL STABILITY

Stable under normal storage conditions.

#### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

#### 10.4 CONDITIONS TO AVOID

Heat. Incompatible materials. Sources of ignition.

#### 10.5 INCOMPATIBLE MATERIALS

Strong oxidizing agents.

#### 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, inhalation, and ingestion.

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

**Eye:** Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

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

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

**Inhalation:** May cause drowsiness or dizziness. May cause respiratory tract irritation.

**Acute Toxicity:**

Ingredient	IDLH	LC50	LD50
Acetone	2500 ppm	Inhalation 50100 mg/m <sup>3</sup> 8h, rat	Oral 5800 mg/kg, rat Oral 4396 mg/kg, rat Dermal 12800 mg/kg, rat
Isopropanol	2000 ppm	Inhalation 72.6 mg/L 4h, rat	Dermal 12870 mg/kg, rabbit
Pentaerythritol	Not available.	Not available.	Oral 10000 mg/kg, rat

#### Calculated overall Chemical Acute Toxicity Values

LC50 (inhalation)	LD50 (oral)	LD50 (dermal)
> 20 mg/L 4h, rat	> 2000 mg/kg, rat	> 2000 mg/kg, rabbit

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*
Acetone	G-A4
Isopropanol	G-A4, I-3
Pentaerythritol	Not listed.

\* See Section 15 for more information.

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

<b>Skin Corrosion/Irritation:</b>	Based on available data, the classification criteria are not met.
<b>Serious Eye Damage/Irritation:</b>	Causes serious eye irritation.
<b>Respiratory Sensitization:</b>	Based on available data, the classification criteria are not met.
<b>Skin Sensitization:</b>	Based on available data, the classification criteria are not met.
<b>STOT-Single Exposure:</b>	May cause drowsiness or dizziness.
<b>Chronic Health Effects:</b>	
<b>Carcinogenicity:</b>	Based on available data, the classification criteria are not met.
<b>Germ Cell Mutagenicity:</b>	Based on available data, the classification criteria are not met.
<b>Reproductive Toxicity:</b>	
<b>Developmental:</b>	Based on available data, the classification criteria are not met.
<b>Teratogenicity:</b>	Based on available data, the classification criteria are not met.
<b>Embryotoxicity:</b>	Based on available data, the classification criteria are not met.
<b>Fertility:</b>	Based on available data, the classification criteria are not met.
<b>STOT-Repeated Exposure:</b>	Based on available data, the classification criteria are not met.
<b>Aspiration Hazard:</b>	Based on available data, the classification criteria are not met.
<b>Toxicologically Synergistic Materials:</b>	Not available.
<b>Other Information:</b>	Not available.

## Section 12: ECOLOGICAL INFORMATION

### 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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DOT (non-bulk)	< 119 gallons UN 1993, Flammable Liquid,n.o.s. (Isopropanol, Acetone), 3,II
IATA	Prohibited
IMDG (non-bulk)	UN 1993, Flammable Liquid,n.o.s. (Isopropanol, Acetone), 3,II

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**Section 15: REGULATORY INFORMATION**


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**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
Acetone	Not listed.	Not listed.	5,000	Not listed.
Isopropanol	Not listed.	Not listed.	Not listed.	313
Pentaerythritol	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
Acetone	DSL	Yes.
Isopropanol	DSL	Yes.
Pentaerythritol	NDSL	Yes.

#### NFPA National Fire Protection Association:

<b>Health:</b>	2
<b>Fire:</b>	3
<b>Reactivity:</b>	0

#### HMIS-Hazardous Materials Identification System

<b>Health:</b>	2
<b>Fire:</b>	3
<b>Physical Hazard:</b>	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.

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**Section 16: OTHER INFORMATION**

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**Date of Preparation:** April 1, 2014  
**Expiry Date:** April 1, 2017  
**Version:** 1.1  
**Revision Date:** June 9, 2015

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**End of Safety Data Sheet**