

**ZINC NACIONAL, S.A.**  
**MATERIAL SAFETY DATA SHEET**

**SECTION 1 PRODUCT IDENTIFICATION**

1) **PRODUCT NAME:** MAXIMO 360 / MAXIMO 361 / MAXIMO 362 - ZINC SULFATE

2) **EMERGENCY PHONE NO. :** 011 (52)(618) 343-85-60 & (618) 342-97-13     8) **NFPA ACUTE HAZARD RATING:**

3) **CHEMICAL NAME:** ZINC SULFATE     **HEALTH:**     **FLAMMABILITY:**     **REACTIVITY:**

4) **CHEMICAL FAMILY:** ZINC COMPOUNDS     

1	0	1
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5) **CHEMICAL FORMULA:** ZnSO<sub>4</sub> · H<sub>2</sub>O     **DEGREE OF HAZARD:**     0 = MINIMUM HAZARD  
1 = SLIGHT HAZARD  
2 = MODERATE HAZARD  
3 = SERIOUS HAZARD  
4 = SEVERE HAZARD

6) **MANUFACTURER'S NAME:** ZINC NACIONAL, S.A.

7) **MANUFACTURER'S ADDRESS:** SERAFIN PEÑA #938 SUR  
MONTERREY, N.L.  
MEXICO, 64000

9) **DATE PREPARED**     JANUARY, 2002

**SECTION 2 CHEMICAL COMPOSITION**

INGREDIENT	CHEMICAL NAME	CAS NO.	PERCENT
ZINC SULFATE	ZINC SULFATE	7446-19-7	99.00
LEAD		7439-92-1	0.01
CADMIUM		7440-43-9	0.01

LEAD AND CADMIUM ARE INHERENT IN THE MANUFACTURE OF ZINC SULFATE AND ARE NOT PHYSICALLY ADDED IN ITS MANUFACTURE.

**SECTION 3 HAZARDOUS INGREDIENTS AND IDENTITY INFORMATION**

MATERIAL	FORM	EXPOSURE CRITERIAS			
		OSHA PEL	NIOSH REL	NIOSH CEL	ACGIH TLV
ZINC SULFATE	TOTAL DUST RESPIRABLE FRACTION	mg/m <sup>3</sup>	mg/m <sup>3</sup>	mg/m <sup>3</sup>	mg/m <sup>3</sup>
		15	10	----	10
		5	----	----	---

**SECTION 4 PHYSICAL DATA**

1) **APPEARANCE / ODOR:** WHITE, ODORLESS POWDER

2) **PHYSICAL STATE:** SOLID

3) **BOILING POINT:** N/A

4) **MELTING / FREEZING POINT:** N/A

5) **SPECIFIC GRAVITY (WATER=1):** 3.540 (20°C / 4°C)

6) **pH (RECOMMENDED DISSOLUTIONS):** 5.50

7) **SOLUBILITY IN WATER:** GR./100 GR. WATER AT 45 (20°C)

8) **VAPOR PRESSURE (mm/Hg):** 44.4 °C

9) **VAPOR DENSITY (AIR=1):** N/A

10) **EVAPORATION RATE:** N/A

11) **PERCENT VOLATILES:** N/A

**SECTION 5 FIRE AND EXPLOSION HAZARD DATA**

**FLASH POINT:** NOT COMBUSTIBLE

**EXTINGUISHING MEDIA:** FOAM, WATER, DRY CHEMICAL OR CARBON DIOXIDE.

**SPECIAL FIRE FIGHTING PROCEDURES:**

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** POISONOUS GASES ARE PRODUCED IN FIRE. WEAR FULL PROTECTIVE CLOTHING, SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE-DEMAND MODE.  
N/A

**SECTION 6 REACTIVITY DATA**

1) **THERMAL STABILITY:** STABLE

2) **CONDITIONS TO AVOID:** N/A

3) **HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** NONE IDENTIFIED

4) **HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR

5) **INCOMPATIBILITY (MATERIALS TO AVOID):** N/A

6) **CORROSIVE ACTION ON MATERIALS :** N/A

## HEALTH HAZARD DATA

### SECTION 7

- 1) **EYE AND SKIN CONTACT:** DUST OR FUMES MAY CAUSE MODERATE EYE IRRITATION. NO SKIN IRRITATION CAN BE EXPECTED FROM SINGLE SHORT-TERM EXPOSURE TO THIS PRODUCT. PROLONGED AND/OR REPEATED SKIN CONTACT WITH THIS PRODUCT MAY CAUSE IRRITATION / DERMATITIS.
- 2) **INHALATION:** DUSTS AND MISTS MAY BE MILDLY IRRITATING.
- 3) **INGESTION:** LARGE DOSES OF THIS PRODUCT CAN CAUSE IRRITATION TO THE THROAT AND STOMACH, VOMITING, ABDOMINAL PAIN, DIARRHEA, CONVULSIONS, BLOOD PRESSURE CHANGE, COMA AND EVEN DEATH.
- 4) **EMERGENCY AND FIRST AID PROCEDURES:** FOR **INHALATION** IF SYMPTOMS ARE EXPERIENCED, REMOVE SOURCE OF CONTAMINATION OR MOVE VICTIM TO FRESH AIR. IF SYMPTOMS PERSIST, OBTAIN MEDICAL ADVICE IMMEDIATELY. **SKIN CONTACT:** IF IRRITATION SHOULD OCCUR, WASH GENTLY AND THOROUGHLY WITH WATER AND NON-ABRASIVE SOAP. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. **INGESTION:** HAVE VICTIM RINSE MOUTH THOROUGHLY WITH WATER. "DO NOT INDUCE VOMITING". IMMEDIATELY GIVE LARGE AMOUNTS OF WATER. IF VOMITING OCCURS, RINSE MOUTH AND REPEAT ADMINISTRATION OF WATER. OBTAIN MEDICAL ADVICE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. **EYES:** IN CASE OF EYE CONTACT, FLUSH WITH PLENTY OF WATER FOR 15 MINUTES. IF IRRITATION SHOULD PERSIST, SEEK MEDICAL ATTENTION.

## PRECAUTIONS FOR SAFE HANDLING AND USE

### SECTION 8

- 1) **MATERIAL RELEASE OR SPILL:** VENTILATE AREA. CLEAN UP-PERSONNEL REQUIRE RESPIRATORY PROTECTION. COLLECT POWDER MATERIALS AND DEPOSIT IN SEALED DRUMS. STOP OR REDUCE LEAK IF SAFE TO DO SO. PREVENT MATERIALS FROM ENTERING SEWERS OR WATERWAYS.
- 2) **WASTE DISPOSAL METHOD:** DISPOSE MATERIAL IN SUITABLE CLOSED LABELLED CONTAINERS. BE REGULATED UNDER CERCLA, TSCA, SARA AND/OR RCRA REGULATIONS.
- 3) **HANDLING AND STORING:** STORE IN DRY AREAS. PREVENT RELEASE OF FUMES. WASH HANDS THOROUGHLY AFTER HANDLING.
- 4) **SHIPPING INFORMATION:** PACKAGINGS LESS THAN 1,000 POUNDS (454 KGS) ARE NOT REGULATED BY U.S. DOT.

## CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

### SECTION 9

- 1) **VENTILATION:** GENERAL EXHAUST.
- 2) **RESPIRATORY PROTECTION:** USE NIOSH APPROVED PARTICULATE RESPIRATOR IF DUST GENERATION OCCURS.
- 3) **PROTECTIVE GLOVES:** NATURAL RUBBER GLOVES.
- 4) **EYE PROTECTION:** SAFETY GOGGLES ARE RECOMMENDED.
- 5) **WORKING UNIFORM:** NORMAL.

ALWAYS WASH HANDS THOROUGHLY AFTER USING CHEMICAL; NEVER BRING FOOD, DRINK OR SMOKING MATERIALS INTO VICINITY OF CHEMICALS.

## REGULATORY INFORMATION

### SECTION 10

THIS PRODUCT IS CONSIDERED HAZARDOUS MATERIAL (UN 3077) WHEN PACKAGED IN INDIVIDUAL CONTAINERS EXCEEDING 1,000 LBS (453 KGS.) IN WEIGHT. PACKING GROUP III, LABEL CLASS 9

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