# **Chem-Impex International Inc.**

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# SAFETY DATA SHEET

### SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	30655
NAME:	Zinc perchlorate hexahydrate
SYNONYMS:	
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA)
	352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

#### SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) OXIDIZING SOLIDS (CATEGORY 2), H272 SKIN CORROSION (CATEGORY 1B), H314 SERIOUS EYE DAMAGE (CATEGORY 1), H318 FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM



SIGNAL WORD

HAZARD STATEMENT(S)

H272 H314	MAY INTENSIFY FIRE; OXIDIZER. CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
PRECAUTIONARY STAT	'EMENT(S)
P210	KEEP AWAY FROM HEAT.
P220	KEEP/STORE AWAY FROM CLOTHING/
	COMBUSTIBLE MATERIALS.
P221	TAKE ANY PRECAUTION TO AVOID MIXING WITH
	COMBUSTIBLES.
P260	DO NOT BREATHE DUST OR MIST.
P264	WASH SKIN THOROUGHLY AFTER HANDLING.
P280	WEAR PROTECTIVE GLOVES/ PROTECTIVE
	CLOTHING/ EYE PROTECTION/ FACE PROTECTION.
P301 + P330 + P331	IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE
1501 1550 1551	VOMITING.
P303 + P361 + P353	IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF
	IMMEDIATELY ALL CONTAMINATED CLOTHING.
	RINSE SKIN WITH WATER/ SHOWER.
P304 + P340	IF INHALED: REMOVE VICTIM TO FRESH AIR AND
	KEEP AT REST IN A POSITION COMFORTABLE FOR
	BREATHING.
P305 + P351 + P338	IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR
1000 1001 1000	SEVERAL MINUTES. REMOVE CONTACT LENSES, IF
	PRESENT AND EASY TO DO. CONTINUE RINSING.
P310	IMMEDIATELY CALL A POISON CENTER/DOCTOR.
P321	SPECIFIC TREATMENT (SEE SUPPLEMENTAL FIRST
	AID INSTRUCTIONS ON THIS LABEL).
P363	WASH CONTAMINATED CLOTHING BEFORE REUSE.
P370 + P378	IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL
D 40 5	OR ALCOHOL-RESISTANT FOAM FOR EXTINCTION.
P405	STORE LOCKED UP.
P501	DISPOSE OF CONTENTS/ CONTAINER TO AN
	APPROVED WASTE DISPOSAL PLANT.
HAZARDS NOT	NONE
OTHERWISE	
CLASSIFIED (HNOC)	
OR NOT COVERED	

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:

 $Zn(ClO_4)_2 \cdot 6H_2O$ 

MW: 372.38

BY GHS

CAS-NO. 10025-64-6

PURITY:  $\geq$  99.99% (Assay, Zn content min. 17.5%)

#### HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Zinc perchlorate hexahydrat	e	
	OX. SOL. 2; SKIN CORR. 1B; EYE DAM. 1; H272, H314	<= 100 %
FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.		

### SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES		
GENERAL ADVICE	CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF DANGEROUS AREA.	
IF INHALED	IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.	
IN CASE OF SKIN CONTACT	TAKE OFF CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.	
IN CASE OF EYE CONTACT	RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.CONTINUE RINSING EYES DURING TRANSPORT TO HOSPITAL.	
IF SWALLOWED	DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.	
MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11	
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL	NO DATA AVAILABLE	

## SECTION 5. FIRE AND EXPLOSION DATA

**EXTINGUISHING MEDIA** 

TREATMENT NEEDED

SUITABLE EXTINGUISHING MEDIA	USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	NO DATA AVAILABLE
ADVICE FOR FIREFIGHTERS	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.
FURTHER INFORMATION	USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

# SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	USE PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. AVOID BREATHING DUST.
	FOR PERSONAL PROTECTION SEE SECTION 8.
ENVIRONMENTAL PRECAUTIONS	DO NOT LET PRODUCT ENTER DRAINS.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	SWEEP UP AND SHOVEL. CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WET-BRUSHING AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13). KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.
REFERENCE TO OTHER SECTIONS	FOR DISPOSAL SEE SECTION 13.

# SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE	AVOID FORMATION OF DUST AND AEROSOLS.
HANDLING	PROVIDE APPROPRIATE EXHAUST VENTILATION AT
	PLACES WHERE DUST IS FORMED.KEEP AWAY FROM
	SOURCES OF IGNITION - NO SMOKING.KEEP AWAY FROM
	HEAT AND SOURCES OF IGNITION.
	FOR PRECAUTIONS SEE SECTION 2.2.
CONDITIONS FOR SAFE	KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-
STORAGE, INCLUDING	VENTILATED PLACE.
ANY INCOMPATIBILITIES	

#### HYGROSCOPIC.

# SPECIFIC END USE(S)APART FROM THE USES MENTIONED IN SECTION 1.2 NO<br/>OTHER SPECIFIC USES ARE STIPULATED

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **CONTROL PARAMETERS**

COMPONENTS WITHCONTAINS NO SUBSTANCES WITH OCCUPATIONALWORKPLACE CONTROLEXPOSURE LIMIT VALUES.PARAMETERSEXPOSURE LIMIT VALUES.

#### **EXPOSURE CONTROLS**

APPROPRIATE	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL
ENGINEERING CONTROLS	HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE
	BREAKS AND AT THE END OF WORKDAY.

#### PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

SKIN PROTECTION	HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE"S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.
	FULL CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)
	SPLASH CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)
	IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.
BODY PROTECTION	COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.
RESPIRATORY PROTECTION	WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).
CONTROL OF ENVIRONMENTAL EXPOSURE	DO NOT LET PRODUCT ENTER DRAINS.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White crystalline powder with chunks
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING	106 °C
POINT/FREEZING POINT	
INITIAL BOILING POINT	
AND BOILING RANGE	
FLASH POINT	
EVAPOURATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID,	NO DATA AVAILABLE
GAS)	
UPPER/LOWER	NO DATA AVAILABLE
FLAMMABILITY OR	
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	2.25
WATER SOLUBILITY	NO DATA AVAILABLE
PARTITION COEFFICIENT:	NO DATA AVAILABLE
N- OCTANOL/WATER	
AUTO-IGNITION	NO DATA AVAILABLE
TEMPERATURE	
DECOMPOSITION	NO DATA AVAILABLE
TEMPERATURE	
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	THE SUBSTANCE OR MIXTURE IS CLASSIFIED AS OXIDIZINO
	WITH THE CATEGORY 2.
OTHER SAFETY	NO DATA AVAILABLE
INFORMATION	

# SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	NO DATA AVAILABLE
CHEMICAL STABILITY	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	NO DATA AVAILABLE
CONDITIONS TO AVOID	AVOID MOISTURE.
INCOMPATIBLE MATERIALS	STRONG REDUCING AGENTS, ORGANIC MATERIALS, POWDERED METALS.

HAZARDOUS	HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER
DECOMPOSITION	FIRE CONDITIONS HYDROGEN CHLORIDE GAS, ZINC/ZINC
PRODUCTS	OXIDES OTHER DECOMPOSITION PRODUCTS - NO DATA
	AVAILABLE
	IN THE EVENT OF FIRE: SEE SECTION 5

# SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS	
ACUTE TOXICITY	NO DATA AVAILABLE
	INHALATION: NO DATA AVAILABLE
	DERMAL: NO DATA AVAILABLE
	NO DATA AVAILABLE
SKIN CORROSION/IRRITATION	NO DATA AVAILABLE
SERIOUS EYE DAMAGE/EYE IRRITATION	NO DATA AVAILABLE
RESPIRATORY OR SKIN SENSITISATION	NO DATA AVAILABLE
GERM CELL MUTAGENICITY	NO DATA AVAILABLE
CARCINOGENICITY IARC:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN
ACGIH:	CARCINOGEN BY IARC. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A
NTP:	CARCINOGEN OR POTENTIAL CARCINOGEN BY ACGIH. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A
OSHA:	KNOWN OR ANTICIPATED CARCINOGEN BY NTP. 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	RTECS: SD0525000
	MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF
	THE MUCOUS MEMBRANES AND UPPER RESPIRATORY
	TRACT, EYES, AND SKIN., SPASM, INFLAMMATION AND
	EDEMA OF THE LARYNX, SPASM, INFLAMMATION AND
	EDEMA OF THE BRONCHI, PNEUMONITIS, PULMONARY
	EDEMA, BURNING SENSATION, COUGH, WHEEZING,
	LARYNGITIS, SHORTNESS OF BREATH, HEADACHE,
	NAUSEA.

# SECTION 12. ECOLOGICAL INFORMATION

TOXICITY	NO DATA AVAILABLE
PERSISTENCE AND DEGRADABILITY	NO DATA AVAILABLE
BIOACCUMULATIVE POTENTIAL	NO DATA AVAILABLE
MOBILITY IN SOIL	NO DATA AVAILABLE
RESULTS OF PBT AND VPVB ASSESSMENT	PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED.
OTHER ADVERSE EFFECTS	NO DATA AVAILABLE

## SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT	BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
CONTAMINATED PACKAGING	DISPOSE OF AS UNUSED PRODUCT.

## SECTION 14. TRANSPORT INFORMATION

DOT (US)	
PROPER SHIPPING NAME:	PERCHLORATES, INORGANIC, N.O.S. (Zinc perchlorate
	hexahydrate)
UN NUMBER:	1481
CLASS:	5.1
PACKING GROUP:	II
<b>REPORTABLE QUANTITY</b>	
(RQ):	
POISON INHALATION	NO
HAZARD	
IMDG	
PROPER SHIPPING NAME:	PERCHLORATES, INORGANIC, N.O.S. (Zinc perchlorate
	hexahydrate )
UN NUMBER:	1481
CLASS:	5.1
PACKING GROUP:	II
EMS-NO:	F-H, S-Q
IATA	
PROPER SHIPPING NAME:	PERCHLORATES, INORGANIC, N.O.S. (Zinc perchlorate
	hexahydrate)
UN NUMBER:	1481
CLASS:	5.1
PACKING GROUP:	II

#### SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTSNO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE<br/>REPORTING REQUIREMENTS OF SARA TITLE III, SECTION<br/>302.

#### SARA 313 COMPONENTS

THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED		
BY SARA TITLE III, SECTION 313:		
	CAS #	REVISION DATE
Zinc perchlorate hexahydrate	10025-64-6	07-01-2007
SARA 311/312 HAZARDS	REACTIVITY HAZARD, ACU	TE HEALTH HAZARD
MASSACHUSETTS RIGHT	NO COMPONENTS ARE SUB.	JECT TO THE
TO KNOW COMPONENTS	MASSACHUSETTS RIGHT TO	) KNOW ACT.
PENNSYLVANIA RIGHT TO KNOW COMPONENTS		
	CAS #	REVISION DATE
Zinc perchlorate hexahydrate	10025-64-6	07-01-2007
NEW JERSEY RIGHT TO KNOW COMPONENTS		
	CAS #	<b>REVISION DATE</b>
Zinc perchlorate hexahydrate	10025-64-6	07-01-2007
CALIFORNIA PROP. 65 COMPONENTS		CONTAIN ANY CHEMICALS FORNIA TO CAUSE CANCER, THER REPRODUCTIVE HARM.

## SECTION 16. OTHER INFORMATION

FULL TEXT OF H-ST	TATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.
EYE DAM.	SERIOUS EYE DAMAGE
H272	MAY INTENSIFY FIRE; OXIDIZER.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
H318	CAUSES SERIOUS EYE DAMAGE.
OX. SOL.	OXIDIZING SOLIDS.
SKIN CORR.	SKIN CORROSION.

#### HMIS RATING

HEALTH HAZARD:3CHRONIC HEALTH HAZARD:FLAMMABILITY:0PHYSICAL HAZARD2

#### NFPA RATING

HEALTH HAZARD:	3
FIRE HAZARD:	0
REACTIVITY HAZARD:	2
SPECIAL HAZARD.I:	OX

#### MSDS LEGEND

MW:	MOLECULAR WEIGHT
MF:	MOLECULAR FORMULA
VOC:	VOLATILE ORGANIC COMPOUNDS

ACGIH:	AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL
	HYGINISTS
CAS:	CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL:	PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV:	THRESHOLD LIMIT VALUE (ACGIH)
IMPORTANT:	

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