# **Chem-Impex International Inc.**

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# SAFETY DATA SHEET

# SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	36613
NAME:	Molybdophosphoric acid
SYNONYMS:	Phosphomolybdic acid hydrate, for microscopy
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 3), 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)

HAZARD STATEMENT	<b>(S)</b>
H272	MAY INTENSIFY FIRE; OXIDISER.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
PRECAUTIONARY STA	ATEMENT(S)
P210	KEEP AWAY FROM HEAT.
P220	KEEP/STORE AWAY FROM CLOTHING/ COMBUSTIBLE
1 220	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
	VOMITING.
P303 + P361 + P353	IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF IMMEDIATELY
	ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/
	SHOWER.
P304 + P340 + P310	IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP
	COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A
	POISON CENTER/ DOCTOR.
P305 + P351 + P338 +	IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL
P310	MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND
	EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A
	POISON CENTER/ DOCTOR.
P363	WASH CONTAMINATED CLOTHING BEFORE REUSE.
P370 + P378	IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR
	ALCOHOL-RESISTANT FOAM TO EXTINGUISH.
P405	STORE LOCKED UP.
P501	DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED
	WASTE DISPOSAL PLANT.
HAZARDS NOT	NONE
OTHERWISE	
CLASSIFIED (HNOC)	
OR NOT COVERED	
BY GHS	

# SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:	H <sub>3</sub> Mo <sub>12</sub> O <sub>40</sub> P·xH <sub>2</sub> O
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MW: 1825.25

CAS-NO. 51429-74-4

PURITY:  $\geq 96\%$ 

#### HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Molybdophosphoric acid		
	OX. SOL. 3; SKIN CORR. 1B;	<= 100%
	EYE DAM. 1; H272, H314, H318	

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	NO DATA AVAILABLE

# SECTION 5. FIRE AND EXPLOSION DATA

#### **EXTINGUISHING MEDIA**

SUITABLE EXTINGUISHING MEDIA	DRY POWDER DRY SAND
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	OXIDES OF PHOSPHORUS, MOLYBDENUM OXIDES NOT COMBUSTIBLE.
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 ENVIRONMENTAL PRECAUTIONS	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. DO NOT LET PRODUCT ENTER DRAINS.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP REFERENCE TO OTHER SECTIONS	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. FOR DISPOSAL SEE SECTION 13.

# SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	AVOID FORMATION OF DUST AND AEROSOLS.FURTHER PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE ADDITIONAL PROCESSING OCCURS. 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 STORAGE, INCLUDING ANY INCOMPATIBILITIES	KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE.
	Store at RT
SPECIFIC END USE(S)	APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED

# SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **CONTROL PARAMETERS**

**COMPONENTS WITH WORKPLACE CONTROL PARAMETERS** CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

## **EXPOSURE CONTROLS**

APPROPRIATE	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL
ENGINEERING	HYGIENE AND SAFETY PRACTICE. WASH HANDS
CONTROLS	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 EC 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.
<b>RESPIRATORY</b> <b>PROTECTION</b>	WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULLFACE 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.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Pale yellow to yellow powder
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING	78 - 90 °C
POINT/FREEZING POINT	
INITIAL BOILING POINT	
AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID,	THE PRODUCT IS NOT FLAMMABLE.
GAS)	
UPPER/LOWER	NO DATA AVAILABLE
FLAMMABILITY OR	
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	1.62
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
	OXIDIZING WITH THE CATEGORY 3.
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	NO DATA AVAILABLE

INCOMPATIBLE	ORGANIC MATERIALS, POWDERED METALS, STRONG
MATERIALS	OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS	HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS OXIDES OF PHOSPHORUS, MOLYBDENUM 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

SKIN

INHALATION: NO DATA AVAILABLE

NO INGREDIENT OF THIS PRODUCT PRESENT AT

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

NO DATA AVAILABLE

NO DATA AVAILABLE

**CORROSION/IRRITATION** 

SERIOUS EYE NO DATA AVAILABLE DAMAGE/EYE IRRITATION

**RESPIRATORY OR SKIN** NO DATA AVAILABLE **SENSITISATION** 

GERM CELL NO DATA AVAILABLE MUTAGENICITY

CARCINOGENICITY IARC:

LEVELS GREATER THAN OR EQUAL TO 0.1% ISIDENTIFIED AS PROBABLE, POSSIBLE ORCONFIRMED HUMAN CARCINOGEN BY IARC.NTP:NO INGREDIENT OF THIS PRODUCT PRESENT ATLEVELS GREATER THAN OR EQUAL TO 0.1% ISIDENTIFIED AS A KNOWN OR ANTICIPATEDCARCINOGEN BY NTP.OSHA:NO COMPONENT OF THIS PRODUCT PRESENT ATLEVELS GREATER THAN OR EQUAL TO 0.1% IS ONOSHA S LIST OF REGULATED CARCINOGENS.

**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: NOT AVAILABLE
	COUGH, SHORTNESS OF BREATH, HEADACHE,
	NAUSEA, VOMITING
	TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL,
	PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.
	SYMPTOMS OF AN ACUTE MOLYBDENUM (VI)
	INTOXICATION: DIARRHOEA, ANAEMIA (DECREASED
	HAEMOGLOBIN CONCENTRATION IN THE BLOOD),
	FATIGUE. TOXIC EFFECT ON LIVER AND KIDNEYS
	AFTER HIGH DOSES.
	OTHER DANGEROUS PROPERTIES CAN NOT BE
	EXCLUDED.
	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL
	HYGIENE AND SAFETY PRACTICE.

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# 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
OTHED ADVEDGE FEFECTS	

**OTHER ADVERSE EFFECTS** NO DATA AVAILABLE

# SECTION 13. DISPOSAL CONSIDERATIONS

## WASTE TREATMENT METHODS

PRODUCT	OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE. 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:	CORROSIVE SOLIDS, OXIDIZING, N.O.S. (PHOSPHOMOLYBDIC ACID HYDRATE)
UN NUMBER:	(PHOSPHOMOLYBDIC ACID HYDRATE) 3084
CLASS:	8 (5.1)
PACKING GROUP	II
REPORTABLE QUANTITY	
(RQ):	
POISON INHALATION	NO
HAZARD:	
IMDG	
PROPER SHIPPING NAME:	CORROSIVE SOLIDS, OXIDIZING, N.O.S. (PHOSPHOMOLYBDIC ACID HYDRATE)
UN NUMBER:	3084
CLASS:	8 (5.1)
PACKING GROUP:	II
EMS-NO:	F-A, S-Q
ΙΑΤΑ	
PROPER SHIPPING NAME:	CORROSIVE SOLIDS, OXIDIZING, N.O.S. (PHOSPHOMOLYBDIC ACID HYDRATE)
UN NUMBER:	3084
CLASS:	8 (5.1)
PACKING GROUP:	II

## SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS	THIS MATERIAL DOES NO COMPONENTS WITH A SE	
SARA 313 COMPONENTS	COMPONENTS WITH KNO EXCEED THE THRESHOLD	T CONTAIN ANY CHEMICAL WN CAS NUMBERS THAT O (DE MINIMIS) REPORTING 7 SARA TITLE III, SECTION 313.
SARA 311/312 HAZARDS	REACTIVITY HAZARD, AC	CUTE HEALTH HAZARD
MASSACHUSETTS RIGHT TO KNOW COMPONENTS NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.		
PENNSYLVANIA RIGHT TO KNOW COMPONENTS		
	CAS-NO.	REVISION DATE
Molybdophosphoric acid	51429-74-4	02-16-1993
NEW JERSEY RIGHT TO KNOW COMPONENTS		

CAS-NO.REVISION DATEMolybdophosphoric acid51429-74-402-16-1993

# SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.		
H272	MAY INTENSIFY FIRE; OXIDISER.	
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.	

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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