# Chem-Impex International Inc.

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# SAFETY DATA SHEET

# SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 36402

NAME: Dimethyl methylphosphonate

SYNONYMS: Dimethoxymethyl phosphine oxide

Methanephosphonic acid dimethyl ester

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) FLAMMABLE LIQUIDS (CATEGORY 4), H227 EYE IRRITATION (CATEGORY 2A), H319 GERM CELL MUTAGENICITY (CATEGORY 1B), H340

REPRODUCTIVE TOXICITY (CATEGORY 2), H361

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

## GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM

**(** 

SIGNAL WORD DANGER

# **HAZARD STATEMENT(S)**

H227 COMBUSTIBLE LIQUID.

H319 CAUSES SERIOUS EYE IRRITATION. H340 MAY CAUSE GENETIC DEFECTS.

H361 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN

CHILD.

## PRECAUTIONARY STATEMENT(S)

P201 OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.

P202 DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE

BEEN READ AND UNDERSTOOD.

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT

SURFACES. NO SMOKING.

P264 WASH SKIN THOROUGHLY AFTER HANDLING.

P280 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE

PROTECTION/FACE PROTECTION.

P305 + P351 + P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL

MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND

EASY TO DO. CONTINUE RINSING.

P308 + P313 IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/

ATTENTION

P337 + P313 IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/

ATTENTION.

P370 + P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR

ALCOHOL-RESISTANT FOAM TO EXTINGUISH.

P403 + P235 STORE IN A WELL-VENTILATED PLACE. KEEP COOL.

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:  $C_3H_9O_3P$ 

MW: 124.08

CAS-NO. 756-79-6

PURITY:  $\geq$  97% (Assay)

## **HAZARDOUS COMPONENTS**

COMPONENT	CLASSIFICATION	CONCENTRATION
Dimethyl methylphosphonate		
	FLAM. LIQ. 4; EYE IRRIT. 2A;	<= 100 %
	MUTA. 1B; REPR. 2; H227, H319,	
	H340, H361	

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**

CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA **GENERAL ADVICE** 

SHEET TO THE DOCTOR IN ATTENDANCE. MOVE OUT OF

DANGEROUS AREA.

IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF IF INHALED

NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.

CONSULT A PHYSICIAN.

IN CASE OF SKIN WASH OFF WITH SOAP AND PLENTY OF WATER.

**CONTACT** CONSULT A PHYSICIAN.

RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT IN CASE OF EYE

**CONTACT** LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

IF SWALLOWED DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING

> BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.

THE MOST IMPORTANT KNOWN SYMPTOMS AND **MOST IMPORTANT** SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE

**EFFECTS, BOTH ACUTE** SECTION 2.2) AND/OR IN SECTION 11 AND DELAYED

INDICATION OF ANY NO DATA AVAILABLE IMMEDIATE MEDICAL

ATTENTION AND SPECIAL TREATMENT

**NEEDED** 

#### SECTION 5. FIRE AND EXPLOSION DATA

**EXTINGUISHING MEDIA** 

SUITABLE USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY

**EXTINGUISHING MEDIA** CHEMICAL OR CARBON DIOXIDE.

SPECIAL HAZARDS CARBON OXIDES, OXIDES OF PHOSPHORUS

ARISING FROM THE SUBSTANCE OR MIXTURE

ADVICE FOR WEAR SELF CONTAINED BREATHING APPARATUS FOR

**FIREFIGHTERS** FIRE FIGHTING IF NECESSARY.

**FURTHER INFORMATION** USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL USE PERSONAL PROTECTIVE EOUIPMENT. AVOID PRECAUTIONS, BREATHING VAPOURS, MIST OR GAS. ENSURE

ADEQUATE VENTILATION. REMOVE ALL SOURCES OF **PROTECTIVE** IGNITION. EVACUATE PERSONNEL TO SAFE AREAS. **EQUIPMENT AND** BEWARE OF VAPOURS ACCUMULATING TO FORM **EMERGENCY PROCEDURES** EXPLOSIVE CONCENTRATIONS. VAPOURS CAN

ACCUMULATE IN LOW AREAS.

FOR PERSONAL PROTECTION SEE SECTION 8.

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO **ENVIRONMENTAL** 

DO SO. DO NOT LET PRODUCT ENTER DRAINS. **PRECAUTIONS** 

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP** 

ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WETBRUSHING AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE

CONTAIN SPILLAGE, AND THEN COLLECT WITH AN

SECTION 13). KEEP IN SUITABLE, CLOSED CONTAINERS

FOR DISPOSAL.

REFERENCE TO OTHER FOR DISPOSAL SEE SECTION 13.

**SECTIONS** 

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE AVOID CONTACT WITH SKIN AND EYES. AVOID

**HANDLING** INHALATION OF VAPOUR OR MIST.

KEEP AWAY FROM SOURCES OF IGNITION - NO

SMOKING. TAKE MEASURES TO PREVENT THE BUILD UP

OF ELECTROSTATIC CHARGE.

FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT

UPRIGHT TO PREVENT LEAKAGE.

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**

APPROPRIATEHANDLE IN ACCORDANCE WITH GOOD INDUSTRIALENGINEERINGHYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE

**CONTROLS** BREAKS AND AT THE END OF WORKDAY.

# PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO

EN166 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**

IMPERVIOUS CLOTHING, 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 FULLFACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR TYPE ABEK (EN 14387) 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** 

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

## INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Colorless liquid

ODOUR NO DATA AVAILABLE
ODOUR THRESHOLD NO DATA AVAILABLE
PH NO DATA AVAILABLE

MELTING

POINT/FREEZING POINT

INITIAL BOILING POINT 181 °C (Lit.)

AND BOILING RANGE

FLASH POINT

EVAPORATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE < 0.1 HPA AT 20 C VAPOUR DENSITY NO DATA AVAILABLE RELATIVE DENSITY 1.145 g/cm3 (Lit.) 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 NO DATA AVAILABLE

#### OTHER SAFETY INFORMATION

NO DATA AVAILABLE

## 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** HEAT, FLAMES AND SPARKS.

INCOMPATIBLE MATERIALS

STRONG OXIDIZING AGENTS, STRONG BASES

HAZARDOUS DECOMPOSITION PRODUCTS HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES, OXIDES

OF PHOSPHORUS

OTHER DECOMPOSITION PRODUCTS - NO DATA

**AVAILABLE** 

IN THE EVENT OF FIRE: SEE SECTION 5

## SECTION 11. TOXICOLOGICAL INFORMATION

## INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY LD50 ORAL - RAT - 8,210 MG/KG

REMARKS: BEHAVIORAL: MUSCLE WEAKNESS.

LC50 INHALATION - RAT - 4 H - > 2.589 MG/L

LD50 DERMAL - RABBIT - > 2,000 MG/KG

NO DATA AVAILABLE

**SKIN** SKIN RABBIT

**CORROSION/IRRITATION** RESULT: NO SKIN IRRITATION

**SERIOUS EYE** EYES RABBIT

**DAMAGE/EYE IRRITATION** RESULT: MODERATE EYE IRRITATION

RESPIRATORY OR SKIN

**SENSITISATION** 

NO DATA AVAILABLE

GERM CELL IN VIVO TESTS SHOWED MUTAGENIC EFFECTS

MUTAGENICITY IN VITRO ASSAY

CHINESE HAMSTER OVARY CELLS

RESULT: POSITIVE

SISTER CHROMATID EXCHANGE

IN VITRO ASSAY

MOUSE LYMPHOMA CELLS

RESULT: POSITIVE

CYTOGENETIC ANALYSIS

MOUSE

RESULT: POSITIVE

CARCINOGENICITY THIS PRODUCT IS OR CONTAINS A COMPONENT THAT

IS NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY

BASED ON ITS IARC, ACGIH, NTP, OR EPA

CLASSIFICATION.

IARC: NO COMPONENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS

IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED

HUMAN CARCINOGEN BY IARC.

ACGIH: NO COMPONENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL

CARCINOGEN BY ACGIH.

NTP: NO COMPONENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED

CARCINOGEN BY NTP.

OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS.

REPRODUCTIVE TOXICITY SUSPECTED OF DAMAGING FERTILITY. SUSPECTED

HUMAN REPRODUCTIVE TOXICANT

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: SZ9120000

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE

NOT BEEN THOROUGHLY INVESTIGATED.

NAUSEA, HEADACHE, VOMITING

## 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** PBT/VPVB ASSESSMENT NOT AVAILABLE AS

ASSESSMENT CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT

CONDUCTED

OTHER ADVERSE EFFECTS NO DATA AVAILABLE

## SECTION 13. DISPOSAL CONSIDERATIONS

## WASTE TREATMENT METHODS

PRODUCT THIS COMBUSTIBLE MATERIAL MAY BE BURNED IN A

CHEMICAL INCINERATOR EQUIPPED WITH AN

AFTERBURNER AND SCRUBBER. OFFER SURPLUS AND

NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED

PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE

OF THIS MATERIAL.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

## SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: COMBUSTIBLE LIQUID, N.O.S. (Dimethyl

methylphosphonate)

NA-NUMBER: 1993 CLASS: NONE PACKING GROUP: III

REPORTABLE QUANTITY

(RQ):

POISON INHALATION NO

HAZARD:

**IMDG** 

NOT DANGEROUS GOODS

**IATA** 

NOT DANGEROUS GOODS

# SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE

REPORTING REQUIREMENTS OF SARA TITLE III,

SECTION 302.

SARA 313 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL

COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

SARA 311/312 HAZARDS FIRE HAZARD, ACUTE HEALTH HAZARD, CHRONIC

**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

Dimethyl methylphosphonate 756-79-6

#### NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-No. REVISION DATE

Dimethyl methylphosphonate 756-79-6

#### **CALIFORNIA PROP. 65 COMPONENTS**

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE HARM.

# **SECTION 16. OTHER INFORMATION**

## FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H227 COMBUSTIBLE LIQUID.

H319 CAUSES SERIOUS EYE IRRITATION. H340 MAY CAUSE GENETIC DEFECTS.

H361 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN

CHILD.

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)

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