# Chem-Impex International Inc.

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## SAFETY DATA SHEET

## SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 36276

NAME: Borane 4-methylmorpholine complex

SYNONYMS: 4-Methylmorpholine-borane

24 HOUR EMERGENCY (800) 535-5

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 SOLIDS (CATEGORY 1), H228

ACUTE TOXICITY, ORAL (CATEGORY 4), H302

ACUTE TOXICITY, INHALATION (CATEGORY 4), H332

ACUTE TOXICITY, DERMAL (CATEGORY 4), H312

SKIN IRRITATION (CATEGORY 2), H315

EYE IRRITATION (CATEGORY 2A), H319

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3), RESPIRATORY SYSTEM, H335

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)**

H228 FLAMMABLE SOLID.

H302 + H312 + H332 HARMFUL IF SWALLOWED, IN CONTACT WITH SKIN OR IF

INHALED.

H315 CAUSES SKIN IRRITATION.

H319 CAUSES SERIOUS EYE IRRITATION. H335 MAY CAUSE RESPIRATORY IRRITATION.

## PRECAUTIONARY STATEMENT(S)

P210	KEEP AWAY FROM HEAT/SPAR	KS/OPEN FLAMES/HOT SURFACES.
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NO SMOKING.

P240 GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.

P241 USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/ LIGHTING

EQUIPMENT.

P261 AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/ SPRAY.

P264 WASH SKIN THOROUGHLY AFTER HANDLING.

P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.
P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE

PROTECTION.

P301 + P312 + P330 IF SWALLOWED: CALL A POISON CENTER/DOCTOR IF YOU FEEL

UNWELL. RINSE MOUTH.

P302 + P352 + P312 IF ON SKIN: WASH WITH PLENTY OF WATER. CALL A POISON

CENTER/DOCTOR IF YOU FEEL UNWELL.

P304 + P340 + P312 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP

COMFORTABLE FOR BREATHING. CALL A POISON

CENTER/DOCTOR IF YOU FEEL UNWELL.

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

MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO

DO. CONTINUE RINSING.

P332 + P313 IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/

ATTENTION.

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

ATTENTION

P362 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE

REUSE.

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

RESISTANT FOAM TO EXTINGUISH.

P403 + P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER

TIGHTLY CLOSED.

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:  $C_5H_{14}BNO$ 

MW: 114.98

CAS-NO. 15648-16-5

PURITY:  $\geq 97\%$  (Assay by titration)

### HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION	
Borane 4-methylmorpholine complex			
	FLAM. SOL. 1; ACUTE TOX. 4; SKIN IRRIT. 2; EYE IRRIT. 2A; STOT SE 3; H228, H302, H332, H312, H315, H319, H335	<= 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 WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A

**CONTACT** PHYSICIAN.

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

**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.

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 TREATMENT NEEDED NO DATA AVAILABLE

#### 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, NITROGEN OXIDES (NOX),

ARISING FROM THE BORANE/BORON OXIDES

SUBSTANCE OR MIXTURE

**ADVICE FOR** WEAR SELF-CONTAINED BREATHING APPARATUS FOR

**FIREFIGHTERS** FIREFIGHTING IF NECESSARY.

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

### SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL USE PERSONAL PRECAUTIONS, FORMAT ENSURE ENSURE

AND EMERGENCY PROCEDURES

USE PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. REMOVE ALL SOURCES OF IGNITION. EVACUATE PERSONNEL TO SAFE AREAS.

AVOID BREATHING DUST.

FOR PERSONAL PROTECTION SEE SECTION 8.

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

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

METHODS AND SWEEP UP AND SHOVEL. CONTAIN SPILLAGE, AND THEN MATERIALS FOR COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM

# CONTAINMENT AND CLEANING UP

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. CONTAIN SPILLAGE, PICK UP WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WET-BRUSHING AND TRANSFER TO A CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13).

REFERENCE TO OTHER SECTIONS

FOR DISPOSAL SEE SECTION 13.

### SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS.FURTHER

FOR PRECAUTIONS SEE SECTION 2.2.

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.TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE.

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 CONTROLS** HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE

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.

**BODY PROTECTION** COMPLETE SUIT PROTECTING AGAINST CHEMICALS,

FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING. THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF

THE DANGEROUS SUBSTANCE AT THE SPECIFIC

WORKPLACE.

**RESPIRATORY** WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING **PROTECTION** 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

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 White to off-white crystal ODOUR NO DATA AVAILABLE ODOUR THRESHOLD NO DATA AVAILABLE PH NO DATA AVAILABLE

MELTING 42 - 45 °C (Lit.)

POINT/FREEZING POINT

**BOILING POINT** 

FLASH POINT 66 °C

EVAPOURATION RATE NO DATA AVAILABLE

FLAMMABILITY (SOLID, THE SUBSTANCE OR MIXTURE IS A FLAMMABLE SOLID

GAS) WITH THE CATEGORY 1. UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE NO DATA AVAILABLE VAPOUR DENSITY NO DATA AVAILABLE

RELATIVE DENSITY

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** NO DATA AVAILABLE

**HAZARDOUS REACTIONS** 

**CONDITIONS TO AVOID** HEAT, FLAMES AND SPARKS.

INCOMPATIBLE STRONG OXIDIZING AGENTS, STRONG ACIDS

MATERIALS

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

**PRODUCTS** (NOX), BORANE/BORON 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** 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: 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.

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** NO DATA AVAILABLE

SPECIFIC TARGET ORGAN

TOXICITY - SINGLE

EXPOSURE

INHALATION - MAY CAUSE RESPIRATORY IRRITATION.

SPECIFIC TARGET ORGAN

**TOXICITY - REPEATED** 

**EXPOSURE** 

NO DATA AVAILABLE

**ASPIRATION HAZARD** NO DATA AVAILABLE

ADDITIONAL RTECS: NOT AVAILABLE INFORMATION

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT

BEEN THOROUGHLY INVESTIGATED.

STOMACH - IRREGULARITIES - BASED ON HUMAN

EVIDENCE

## 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 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.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

# **SECTION 14.** TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: FLAMMABLE SOLIDS, ORGANIC, N.O.S. (Borane 4-

methylmorpholine complex)

UN NUMBER: 1325 CLASS: 4.1 PACKING GROUP: II

REPORTABLE QUANTITY

(RQ):

POISON INHALATION NO

HAZARD:

**IMDG** 

PROPER SHIPPING NAME: FLAMMABLE SOLIDS, ORGANIC, N.O.S. (Borane 4-

methylmorpholine complex)

UN NUMBER: 1325 CLASS: 4.1 PACKING GROUP: II EMS-NO: F-A. S-G

**IATA** 

PROPER SHIPPING NAME: FLAMMABLE SOLIDS, ORGANIC, N.O.S. (Borane 4-

methylmorpholine complex)

UN NUMBER: 1325 CLASS: 4.1 PACKING GROUP: II

## 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.

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

Borane 4-methylmorpholine

complex

15648-16-5

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS NO. REVISION DATE

Borane 4-methylmorpholine

complex

15648-16-5

# SECTION 16. OTHER INFORMATION

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

H228 FLAMMABLE SOLID.

H302 + H312 + H332 HARMFUL IF SWALLOWED, IN CONTACT WITH SKIN OR IF

INHALED.

H315 CAUSES SKIN IRRITATION.

H319 CAUSES SERIOUS EYE IRRITATION. H335 MAY CAUSE RESPIRATORY IRRITATION.

#### 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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*VERSION: 3.1 REVISION DATE: 01/27/2017*