Chem-Impex International Inc.

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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	36023
NAME:	Chlorodicyclohexyl borane
SYNONYMS:	Dicyclohexylboron chloride Dicyclohexylchloroborane
24 HOUR EMERGENCY	(800) 535-5053(USA)
TELEPHONE:	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 2), H225 PYROPHORIC LIQUIDS (CATEGORY 1), H250

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)

H225	HIGHLY FLAMMABLE LIQUID AND VAPOUR.
H250	CATCHES FIRE SPONTANEOUSLY IF EXPOSED TO AIR.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

PRECAUTIONARY STATEMENT(S)

P210	KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES.
	NO SMOKING.
P222	DO NOT ALLOW CONTACT WITH AIR.
P231	HANDLE UNDER INERT GAS.
P233	KEEP CONTAINER TIGHTLY CLOSED.
P240	GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.
P241	USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/
	LIGHTING/ EQUIPMENT.
P242	USE ONLY NON-SPARKING TOOLS.
P243	TAKE PRECAUTIONARY MEASURES AGAINST STATIC
	DISCHARGE.
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.
P302 + P334	IF ON SKIN: IMMERSE IN COOL WATER/ WRAP IN WET
	BANDAGES.
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 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 OR
	ALCOHOL-RESISTANT FOAM FOR EXTINCTION.
P403 + P235	STORE IN A WELL-VENTILATED PLACE. KEEP COOL.
P405	STORE LOCKED UP.
P422	STORE CONTENTS UNDER INERT GAS.

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 ₁₂ H ₂₂ BCl
MW:	212.57
CAS-NO.	36140-19-9
PURITY:	97.5 - 102.5% (Assay by titration)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Chlorodicyclohexyl borane		
	FLAM. LIQ. 2; PYR. LIQ. 1; SKIN CORR. 1B; EYE DAM. 1; H225, H250, H314, H318	<= 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.

P501

BY
WITH
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SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA	SMALL (INCIPIENT) FIRES MUST BE EXTINGUISHED WITH ALCOHOL RESISTANT FOAM, DRY CHEMICAL POWDER OR CARBON DIOXIDE. LARGE AMOUNTS OF WATER ARE INEFFECTIVE. COOL CONTAINERS WITH LARGE AMOUNTS OF WATER.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	CARBON OXIDES, HYDROGEN CHLORIDE GAS, BORANE/BORON OXIDES
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	USE PERSONAL PROTECTIVE EQUIPMENT. AVOID
PRECAUTIONS,	BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE
PROTECTIVE EQUIPMENT	VENTILATION. REMOVE ALL SOURCES OF IGNITION.
AND EMERGENCY	EVACUATE PERSONNEL TO SAFE AREAS. BEWARE OF
PROCEDURES	VAPOURS ACCUMULATING TO FORM EXPLOSIVE
	CONCENTRATIONS. VAPOURS CAN ACCUMULATE IN LOW

AREAS. FOR PERSONAL PROTECTION SEE SECTION 8.

ENVIRONMENTAL
PRECAUTIONSPREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO
SO. DO NOT LET PRODUCT ENTER DRAINS.METHODS AND
MATERIALS FOR
CONTAINMENT AND
CLEANING UPCONTAIN SPILLAGE, AND THEN COLLECT WITH AN
ELECTRICALLY PROTECTED VACUUM CLEANER OR BY
WETBRUSHING AND PLACE IN CONTAINER FOR DISPOSAL
ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13).REFERENCE TO OTHER
SECTIONSFOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	AVOID INHALATION OF VAPOUR OR MIST. USE EXPLOSION-PROOF EQUIPMENT.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	STORE IN COOL PLACE. 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. AIR AND MOISTURE SENSITIVE. HANDLE AND STORE UNDER INERT GAS.
SPECIFIC END USE(S)	Store at RT 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 INDUSTRIALENGINEERING CONTROLSHYGIENE AND SAFETY PRACTICE. WASH HANDS BEFOREBREAKS AND AT THE END OF WORKDAY.

PERSONAL PROTECTIVE EQUIPMENT

- **EYE/FACE PROTECTION** TIGHTLY FITTING SAFETY GOGGLES. FACESHIELD (8-INCH MINIMUM). USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).
- SKIN PROTECTIONHANDLE 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. PROTECTIVE GLOVES
AGAINST THERMAL RISKS
- BODY PROTECTIONCOMPLETE 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.
- RESPIRATORYWHERE 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 OFPREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DOENVIRONMENTALSO. DO NOT LET PRODUCT ENTER DRAINS.EXPOSUREEXPOSURE

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE ODOUR ODOUR THRESHOLD PH Colorless liquid NO DATA AVAILABLE NO DATA AVAILABLE NO DATA AVAILABLE

MELTING	
POINT/FREEZING POINT	
INITIAL BOILING POINT	100 - 101 °C/1 mmHg
AND BOILING RANGE	C C
FLASH POINT	-12 °C
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	0.97
WATER SOLUBILITY	NO DATA AVAILABLE
PARTITION COEFFICIENT:	NO DATA AVAILABLE
N- OCTANOL/WATER	
AUTO-IGNITION	CATCHES FIRE SPONTANEOUSLY IF EXPOSED TO AIR.
TEMPERATURE	
DECOMPOSITION	NO DATA AVAILABLE
TEMPERATURE	
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE
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	VAPOURS MAY FORM EXPLOSIVE MIXTURE WITH AIR.REACTS VIOLENTLY WITH WATER.
CONDITIONS TO AVOID	EXPOSURE TO AIR. EXPOSURE TO MOISTURE HEAT, FLAMES AND SPARKS. EXTREMES OF TEMPERATURE AND DIRECT SUNLIGHT.
INCOMPATIBLE MATERIALS	STRONG OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS	HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS CARBON OXIDES, HYDROGEN CHLORIDE GAS, 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

NO DATA AVAILABLE

CORROSION/IRRITATION

SKIN

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. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS ACGIH: 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 NO DATA AVAILABLE

SPECIFIC TARGET ORGAN NO DATA AVAILABLE TOXICITY - SINGLE EXPOSURE

SPECIFIC TARGET ORGAN NO DATA AVAILABLE **TOXICITY - REPEATED EXPOSURE**

ASPIRATION HAZARD NO DATA AVAILABLE

ADDITIONAL INFORMATION **RTECS: NOT AVAILABLE**

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

PACKAGING

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.
CONTAMINATED	DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US) PROPER SHIPPING NAME:	PYROPHORIC LIQUIDS, ORGANIC, N.O.S. (Chlorodicyclohexyl
TROTER SHILLING NAME.	borane)
UN NUMBER:	2845
CLASS:	4.2
PACKING GROUP:	Ι
POISON INHALATION	NO
HAZARD:	
IMDG	
PROPER SHIPPING NAME:	PYROPHORIC LIQUIDS, ORGANIC, N.O.S. (Chlorodicyclohexyl
	borane)
UN NUMBER:	2845
CLASS:	4.2
PACKING GROUP:	Ι
EMS-NO:	F-G, S-M
MARINE POLLUTANT :	YES
ІАТА	
PROPER SHIPPING NAME:	PYROPHORIC LIQUIDS, ORGANIC, N.O.S. (Chlorodicyclohexyl
TROTER STILLTING WANTE.	borane)
UN NUMBER:	2845
CLASS.	42
IATA PASSENGER:	NOT PERMITTED FOR TRANSPORT
IATA CARGO:	NOT PERMITTED FOR TRANSPORT

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, REACTIVITY HAZARD, ACUTE HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

NO. F	REVISION DATE
19-9	
	NO. F -19-9

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-NO. Chlorodicyclohexyl borane 36140-19-9 **REVISION DATE**

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.H225HIGHLY FLAMMABLE LIQUID AND VAPOUR.H250CATCHES FIRE SPONTANEOUSLY IF EXPOSED TO AIR.H314CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

MOLECULAR WEIGHT
MOLECULAR FORMULA
VOLATILE ORGANIC COMPOUNDS
AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL
HYGINISTS
CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PERMISSIBLE EXPOSURE LIMIT (OSHA)
THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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