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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 32489

NAME: Lappaconitine hydrobromide

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)
ACUTE TOXICITY, ORAL (CATEGORY 2), H300

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)
H300 FATAL IF SWALLOWED

PRECAUTIONARY STATEMENT(S)
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
P264 WASH HANDS AND FACE THOROUGHLY AFTER HANDLING.
P301+310+330 IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER OR DOCTOR. RINSE MOUTH.
P405 STORE LOCKED UP.
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

**HAZARDS NOT
OTHERWISE
CLASSIFIED (HNOC)
OR NOT COVERED
BY GHS** NONE

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: $C_{32}H_{44}N_2O_8 \cdot HBr$
MW: 665.62
CAS-NO. 97792-45-5
PURITY: $\geq 95\%$ (HPLC)

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

IMMEDIATELY CALL A POISON CENTER OR DOCTOR. MOVE VICTIM TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF VICTIM IS NOT BREATHING. ADMINISTER OXYGEN IF BREATHING IS DIFFICULT. KEEP VICTIM WARM AND QUIET. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

IN CASE OF SKIN CONTACT

IMMEDIATELY CALL A POISON CENTER OR DOCTOR. REMOVE AND WASH CONTAMINATED CLOTHING BEFORE RE-USE. IN CASE OF CONTACT WITH SUBSTANCE, IMMEDIATELY FLUSH SKIN WITH RUNNING WATER FOR AT LEAST 20 MINUTES. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

IN CASE OF EYE CONTACT

IF THIS CHEMICAL CONTACTS THE EYES, IMMEDIATELY WASH (IRRIGATE) THE EYES WITH LARGE AMOUNTS OF WATER, OCCASIONALLY LIFTING THE LOWER AND UPPER EYELIDS. IF EYE IRRITATION PERSISTS GET MEDICAL ADVICE/ATTENTION. MOVE VICTIM TO FRESH AIR. CHECK FOR AND REMOVE ANY CONTACT LENSES. KEEP VICTIM WARM AND QUIET. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. EFFECTS OF EXPOSURE TO SUBSTANCE MAY BE DELAYED. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

IF SWALLOWED

FATAL IF SWALLOWED. IF SWALLOWED, SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THE CONTAINER OR LABEL. DO NOT USE MOUTH-TO-MOUTH METHOD IF VICTIM INGESTED THE SUBSTANCE; GIVE ARTIFICIAL RESPIRATION WITH THE AID OF A POCKET MASK EQUIPPED WITH A ONE-WAY VALVE OR OTHER PROPER RESPIRATORY MEDICAL DEVICE. LOOSEN TIGHT CLOTHING SUCH AS A COLLAR, TIE, BELT OR WAISTBAND. IF A PERSON VOMITS PLACE THEM IN THE RECOVERY POSITION SO THAT VOMIT WILL NOT REENTER THE MOUTH AND THROAT. RINSE MOUTH. KEEP VICTIM WARM AND QUIET. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

NO DATA AVAILABLE

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

WARNING: IT MIGHT BE DANGEROUS TO THE PERSON PROVIDING AID TO GIVE MOUTH-TO-MOUTH RESPIRATION, BECAUSE THE INHALED MATERIAL IS TOXIC. IF BREATHING HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. USE FIRST AID TREATMENT ACCORDING TO THE NATURE OF THE INJURY. ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED AND TAKE PRECAUTIONS TO PROTECT THEMSELVES.

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA

DRY CHEMICAL, CO2 OR WATER SPRAY. CONSULT WITH LOCAL FIRE AUTHORITIES BEFORE ATTEMPTING LARGE SCALE FIRE FIGHTING OPERATIONS.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

HAZARDOUS COMBUSTION

THESE PRODUCTS INCLUDE: CARBON OXIDES NITROGEN OXIDES HALOGENATED COMPOUNDS

**PRODUCTS:
OTHER SPECIFIC HAZARDS:**

CLOSED CONTAINERS MAY EXPLODE FROM HEAT OF A FIRE.

ADVICE FOR FIREFIGHTERS

WEAR SELF CONTAINED BREATHING APPARATUS FOR FIRE FIGHTING IF NECESSARY.

FURTHER INFORMATION

NO DATA AVAILABLE

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

AVOID CONTACT WITH SKIN, EYES, AND CLOTHING. KEEP PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK. DO NOT TOUCH DAMAGED CONTAINERS OR SPILLED MATERIAL UNLESS WEARING APPROPRIATE PROTECTIVE CLOTHING (SECTION 8). WARN UNNECESSARY PERSONNEL TO MOVE AWAY. STOP LEAK IF YOU CAN DO IT WITHOUT RISK. ENSURE ADEQUATE VENTILATION. ISOLATE THE HAZARD

**ENVIRONMENTAL
PRECAUTIONS**

AREA AND DENY ENTRY TO UNNECESSARY AND UNPROTECTED PERSONNEL. KEEP AWAY FROM LIVING QUARTERS. PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. WATER RUNOFF CAN CAUSE ENVIRONMENTAL DAMAGE. PREVENT ENTRY INTO SEWERS, BASEMENTS OR CONFINED AREAS; DIKE IF NEEDED.

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

ELIMINATE ALL IGNITION SOURCES (NO SMOKING, FLARES, SPARKS, OR FLAMES IN IMMEDIATE AREA). STOP LEAK IF WITHOUT RISK. VENTILATE THE AREA. ABSORB WITH AN INERT MATERIAL AND PUT THE SPILLED MATERIAL IN AN APPROPRIATE WASTE DISPOSAL CONTAINER. USE CLEAN NON-SPARKING TOOLS TO COLLECT ABSORBED MATERIAL.

**REFERENCE TO OTHER
SECTIONS**

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE
HANDLING**

AVOID INHALATION OF VAPOR OR MIST. DO NOT INGEST. AVOID CONTACT WITH SKIN AND EYES. GOOD GENERAL VENTILATION SHOULD BE SUFFICIENT TO CONTROL AIRBORNE LEVELS. KEEP CONTAINER DRY. HANDLE AND OPEN CONTAINER WITH CARE. WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION. WHEN USING DO NOT EAT, DRINK, OR SMOKE. KEEP AWAY FROM SOURCES OF IGNITION.

**CONDITIONS FOR SAFE
STORAGE, INCLUDING
ANY INCOMPATIBILITIES**

STORE LOCKED UP. KEEP CONTAINERS TIGHTLY CLOSED IN A COOL, WELL-VENTILATED PLACE. KEEP AWAY FROM INCOMPATIBLES. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. AVOID PROLONGED STORAGE PERIODS. STORE IN REFRIGERATOR.

STORE AWAY FROM OXIDIZING AGENTS

Store at 2 - 8 °C

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 ENGINEERING CONTROLS GOOD GENERAL VENTILATION SHOULD BE SUFFICIENT TO CONTROL AIRBORNE LEVELS. VENTILATION IS NORMALLY REQUIRED WHEN HANDLING OR USING THIS PRODUCT. EYEWASH FOUNTAINS SHOULD BE PROVIDED IN AREAS WHERE THERE IS ANY POSSIBILITY THAT WORKERS COULD BE EXPOSED TO THE SUBSTANCE. FOLLOW SAFE INDUSTRIAL ENGINEERING/LABORATORY PRACTICES WHEN HANDLING ANY CHEMICAL.

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.

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 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 pale yellow crystalline powder
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING POINT/FREEZING POINT	221 - 223 °C
INITIAL BOILING POINT AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	
WATER SOLUBILITY	NO DATA AVAILABLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	NO DATA AVAILABLE
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	NO DATA AVAILABLE
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	HEAT SENSITIVE.
POSSIBILITY OF HAZARDOUS REACTIONS	NO HAZARDOUS REACTIVITY HAS BEEN REPORTED.
CONDITIONS TO AVOID	HEAT SENSITIVE.
INCOMPATIBLE MATERIALS	OXIDIZING AGENTS

**HAZARDOUS
DECOMPOSITION
PRODUCTS**

NO DATA AVAILABLE

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY ORL-RAT LD50:47500 UG/KG
SCU-MUS LD50:11700 UG/KG
IHL-RAT LC:>400 MG/M3
IVN-MUS LD50:8400 UG/KG

**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 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 IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY OSHA.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN
TOXICITY - SINGLE
EXPOSURE** INHALATION, EYE CONTACT, INGESTION.

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	OVEREXPOSURE MAY RESULT IN SERIOUS ILLNESS OR DEATH.
ASPIRATION HAZARD	MAY BE HARMFUL IF INHALED OR INGESTED.
ADDITIONAL INFORMATION	RTECS: AR5569600 TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

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	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. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY.
CONTAMINATED PACKAGING	DISPOSE OF AS UNUSED PRODUCT. DO NOT RE-USE EMPTY CONTAINERS.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: ALKALOIDS SALTS, SOLID, N.O.S.
UN NUMBER: 1544
CLASS: 6.1
PACKING GROUP: II

IMDG

PROPER SHIPPING NAME: ALKALOIDS SALTS, SOLID, N.O.S.
UN NUMBER: 1544
CLASS: 6.1
PACKING GROUP: II
EMS-NO: F-A, S-A

IATA

PROPER SHIPPING NAME: ALKALOIDS SALTS, SOLID, N.O.S.
UN NUMBER: 1544
CLASS: 6.1
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
Lappaconitine hydrobromide	97792-45-5	

NEW JERSEY RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Lappaconitine hydrobromide	97792-45-5	

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.

ACUTE TOX. ACUTE TOXICITY
H300 FATAL IF SWALLOWED

HMIS RATING

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

NFPA RATING

HEALTH HAZARD: 3
FIRE HAZARD: 0
REACTIVITY HAZARD: 0

MSDS LEGEND

MW: MOLECULAR WEIGHT
MF: MOLECULAR FORMULA
VOC: VOLATILE ORGANIC COMPOUNDS
ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL
HYGINISTS
CAS: CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV: THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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