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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

| | |
|---------------------------------|--|
| CATALOG #: | 22116 |
| NAME: | <i>cis</i> -Diammineplatinum(II)dichloride |
| SYNONYMS: | <i>cis</i> -Dichlorodiammine platinum(II) <i>cis</i> -Platinum(II) diammine dichloride Cisplatin |
| 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
SERIOUS EYE DAMAGE (CATEGORY 1), H318
CARCINOGENICITY (CATEGORY 1B), H350

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.
H318 CAUSES SERIOUS EYE DAMAGE.
H350 MAY CAUSE CANCER.

PRECAUTIONARY STATEMENT(S)

P201 OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.
P202 DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD.
P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE PROTECTION.
P301 + P310 IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER OR DOCTOR/ PHYSICIAN.
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 OR DOCTOR/ PHYSICIAN.
P321 SPECIFIC TREATMENT (SEE SUPPLEMENTAL FIRST AID INSTRUCTIONS ON THIS LABEL).
P330 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: $\text{Pt}(\text{NH}_3)_2\text{Cl}_2$
MW: 300.05
CAS-NO. 15663-27-1

PURITY: 98 - 102% (HPLC)
(64.42 - 65.22% Pt content)

HAZARDOUS COMPONENTS

| COMPONENT | CLASSIFICATION | CONCENTRATION |
|-----------|---|---------------|
| CISPLATIN | ACUTE TOX. 2; EYE DAM. 1; CARC. 1B; H300, H318, H350 | 90 - 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 | WASH OFF WITH SOAP AND PLENTY OF WATER. TAKE VICTIM IMMEDIATELY TO HOSPITAL. CONSULT A PHYSICIAN. |
| IN CASE OF EYE CONTACT | RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN. |
| IF SWALLOWED | 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
EXTINGUISHING MEDIA** USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY
CHEMICAL OR CARBON DIOXIDE.

**SPECIAL HAZARDS
ARISING FROM THE
SUBSTANCE OR MIXTURE** NITROGEN OXIDES (NOX), HYDROGEN CHLORIDE
GAS

**ADVICE FOR
FIREFIGHTERS** WEAR SELF-CONTAINED BREATHING APPARATUS FOR
FIREFIGHTING IF NECESSARY.

FURTHER INFORMATION NO DATA AVAILABLE

SECTION 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL
PRECAUTIONS,
PROTECTIVE
EQUIPMENT AND
EMERGENCY
PROCEDURES** WEAR RESPIRATORY PROTECTION. 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.

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

**METHODS AND
MATERIALS FOR
CONTAINMENT AND
CLEANING UP** PICK UP AND ARRANGE DISPOSAL WITHOUT
CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN
SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

**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.
PROVIDE APPROPRIATE EXHAUST VENTILATION AT
PLACES WHERE DUST IS FORMED.
FOR PRECAUTIONS SEE SECTION 2.2.

**CONDITIONS FOR SAFE
STORAGE, INCLUDING
ANY INCOMPATIBILITIES** KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND
WELL-VENTILATED PLACE.
RECOMMENDED STORAGE TEMPERATURE 2 - 8 C
KEEP IN A DRY PLACE.

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** AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
WASH HANDS BEFORE BREAKS AND IMMEDIATELY
AFTER HANDLING THE PRODUCT.

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 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

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 | Yellow crystalline powder |
| ODOUR | NO DATA AVAILABLE |
| ODOUR THRESHOLD | NO DATA AVAILABLE |
| PH | NO DATA AVAILABLE |
| MELTING POINT/FREEZING POINT | |
| 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 | STABLE UNDER RECOMMENDED STORAGE CONDITIONS. |
| POSSIBILITY OF HAZARDOUS REACTIONS | NO DATA AVAILABLE |
| CONDITIONS TO AVOID | NO DATA AVAILABLE |

**INCOMPATIBLE
MATERIALS**

STRONG OXIDIZING AGENTS

**HAZARDOUS
DECOMPOSITION
PRODUCTS**

IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

LD50 ORAL - RAT - 25.8 MG/KG
REMARKS: BEHAVIORAL:CHANGE IN MOTOR
ACTIVITY (SPECIFIC ASSAY). DIARRHOEA
BLOOD:NORMOCYTIC ANEMIA.
INHALATION: NO DATA AVAILABLE
DERMAL: NO DATA AVAILABLE

**SKIN
CORROSION/IRRITATION**

NO DATA AVAILABLE

**SERIOUS EYE
DAMAGE/EYE IRRITATION**

NO DATA AVAILABLE

**RESPIRATORY OR SKIN
SENSITISATION**

PROLONGED OR REPEATED EXPOSURE MAY CAUSE
ALLERGIC REACTIONS IN CERTAIN SENSITIVE
INDIVIDUALS.

**GERM CELL
MUTAGENICITY**

NO DATA AVAILABLE

CARCINOGENICITY

CARCINOGENICITY - MOUSE - INTRAPERITONEAL
TUMORIGENIC:NEOPLASTIC BY RTECS CRITERIA.
SKIN AND APPENDAGES: OTHER: TUMORS.
TUMORIGENIC EFFECTS: UTERINE TUMORS.
CARCINOGENICITY - MOUSE - INTRAPERITONEAL
TUMORIGENIC:CARCINOGENIC BY RTECS CRITERIA.
LUNGS, THORAX, OR RESPIRATION:TUMORS.
POSSIBLE HUMAN CARCINOGEN

IARC:

2A - GROUP 2A: PROBABLY CARCINOGENIC TO
HUMANS (CISPLATIN)

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:

REASONABLY ANTICIPATED TO BE A HUMAN
CARCINOGEN (CISPLATIN)

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 | NO DATA AVAILABLE |
| SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE | NO DATA AVAILABLE |
| ASPIRATION HAZARD | NO DATA AVAILABLE |
| ADDITIONAL INFORMATION | RTECS: TP2450000 LIVER - 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. 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: TOXIC SOLID, INORGANIC, N.O.S.(*cis*-Diammineplatinum(II)dichloride)

UN NUMBER: 3288

CLASS: 6.1

PACKING GROUP: II

REPORTABLE QUANTITY (RQ):

MARINE POLLUTANT: NO

POISON INHALATION HAZARD: NO

IMDG

PROPER SHIPPING NAME: TOXIC SOLID, INORGANIC, N.O.S.(*cis*-Diammineplatinum(II)dichloride)

UN NUMBER: 3288

CLASS: 6.1

PACKING GROUP: II

EMS-NO: F-A, S-A

MARINE POLLUTANT: NO

IATA

PROPER SHIPPING NAME: TOXIC SOLID, INORGANIC, N.O.S.(*cis*-Diammineplatinum(II)dichloride)

UN NUMBER: 3288

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 (DEMINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

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

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|--|------------|---------------|
| <i>cis</i> - Diammineplatinum(II)dichloride | 15663-27-1 | 4/24/1993 |

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|--|------------|---------------|
| <i>cis</i> - Diammineplatinum(II)dichloride | 15663-27-1 | 4/24/1993 |

NEW JERSEY RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|--|------------|---------------|
| <i>cis</i> - Diammineplatinum(II)dichloride | 15663-27-1 | 4/24/1993 |

CALIFORNIA PROP. 65 COMPONENTS WARNING! THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

| | CAS-NO. | REVISION DATE |
|--|------------|---------------|
| <i>cis</i> - Diammineplatinum(II)dichloride | 15663-27-1 | 9/28/2007 |

SECTION 16. OTHER INFORMATION

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

| | |
|------------|----------------------------|
| ACUTE TOX. | ACUTE TOXICITY |
| CARC. | CARCINOGENICITY |
| EYE DAM. | SERIOUS EYE DAMAGE |
| H300 | FATAL IF SWALLOWED. |
| H318 | CAUSES SERIOUS EYE DAMAGE. |
| H350 | MAY CAUSE CANCER. |

HMIS RATING

| | |
|------------------------|---|
| HEALTH HAZARD: | 4 |
| 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 SERIVE REGISTRY NUMBER |
| OSHA: | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION |
| PEL: | PERMISSIBLE EXPOSURE LIMIT (OSHA) |
| TLV: | THRESHOLD LIMIT VALUE (ACGIH) |

IMPORTANT:

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