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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

| | |
|---------------------------------|---|
| CATALOG #: | 43386 |
| NAME: | <i>cis</i> -2,6-Dimethylpiperazine |
| 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)

FLAMMABLE SOLIDS (CATEGORY 1), H228
SKIN CORROSION/IRRITATION (CATEGORY 2), H315
EYE DAMAGE/IRRITATION (CATEGORY 2A), H319

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

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
PICTOGRAM



SIGNAL WORD WARNING

HAZARD STATEMENT(S)

H228 FLAMMABLE SOLID.
H315 CAUSES SKIN IRRITATION.
H319 CAUSES SERIOUS EYE IRRITATION.

PRECAUTIONARY STATEMENT(S)

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. NO SMOKING.
P240 GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.
P241 USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/ LIGHTING EQUIPMENT.
P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE PROTECTION.
P302 + P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.
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.

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: C₆H₁₄N₂
MW: 114.19
CAS-NO. 21655-48-1
PURITY: ≥ 98% (GC)

HAZARDOUS COMPONENTS

| COMPONENT | CLASSIFICATION | CONCENTRATION |
|------------------------------------|----------------|---------------|
| <i>cis</i> -2,6-Dimethylpiperazine | | |
| | - | - |

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 | REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. GET MEDICAL ADVICE/ATTENTION IF YOU FEEL UNWELL. |
| IN CASE OF SKIN CONTACT | REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. GENTLY WASH WITH PLENTY OF SOAP AND WATER. IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ATTENTION. |
| IN CASE OF EYE CONTACT | RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/ATTENTION. |
| IF SWALLOWED | GET MEDICAL ADVICE/ATTENTION IF YOU FEEL UNWELL. RINSE MOUTH. |
| MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED | ACUTE: REDNESS. 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 | DRY CHEMICAL, FOAM, WATER SPRAY, CARBON DIOXIDE. |
| SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE | CARBON OXIDES NITROGEN OXIDES |

**ADVICE FOR
FIREFIGHTERS**

WEAR SELF-CONTAINED BREATHING APPARATUS IF POSSIBLE.

FURTHER INFORMATION

CLOSED CONTAINERS MAY EXPLODE FROM HEAT OF A FIRE.
TAKE CARE AS IT MAY DECOMPOSE UPON COMBUSTION OR IN HIGH TEMPERATURES TO GENERATE POISONOUS FUME.

SECTION 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL
PRECAUTIONS,
PROTECTIVE
EQUIPMENT AND
EMERGENCY
PROCEDURES**

USE PERSONAL PROTECTIVE EQUIPMENT. KEEP PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK. ENTRY TO NON-INVOLVED PERSONNEL SHOULD BE CONTROLLED AROUND THE LEAKAGE AREA BY ROPING OFF, ETC.

**ENVIRONMENTAL
PRECAUTIONS**

PREVENT PRODUCT FROM ENTERING DRAINS.

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

SWEEP DUST TO COLLECT IT INTO AN AIRTIGHT CONTAINER, TAKING CARE NOT TO DISPERSE IT. ADHERED OR COLLECTED MATERIAL SHOULD BE PROMPTLY DISPOSED OF, IN ACCORDANCE WITH APPROPRIATE LAWS AND REGULATIONS.

**REFERENCE TO OTHER
SECTIONS**

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE
HANDLING**

HANDLING IS PERFORMED IN A WELL VENTILATED PLACE. WEAR SUITABLE PROTECTIVE EQUIPMENT. PREVENT DISPERSION OF DUST. KEEP AWAY FROM HEAT/SPARKS/OPEN FLAME/HOT SURFACES. -NO SMOKING. TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE. WASH HANDS AND FACE THOROUGHLY AFTER HANDLING.
USE A LOCAL EXHAUST IF DUST OR AEROSOL WILL BE GENERATED.
AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

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

KEEP CONTAINER TIGHTLY CLOSED. STORE IN A COOL AND DARK PLACE.
STORE UNDER INERT GAS. PROTECT FROM MOISTURE.

STORE AWAY FROM INCOMPATIBLE MATERIALS SUCH
AS OXIDIZING AGENTS.
LIGHT-SENSITIVE HYGROSCOPIC

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 ENGINEERING CONTROLS

FOLLOW SAFE INDUSTRIAL ENGINEERING/LABORATORY
PRACTICES WHEN HANDLING ANY CHEMICAL. INSTALL
A CLOSED SYSTEM OR LOCAL EXHAUST. ALSO INSTALL
SAFETY SHOWER AND EYE BATH.

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

IMPERVIOUS CLOTHING, 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 PROTECTION

DUST RESPIRATOR. FOLLOW LOCAL AND NATIONAL
REGULATIONS.

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 orange to green crystalline powder |
| ODOUR | NO DATA AVAILABLE |
| ODOUR THRESHOLD | NO DATA AVAILABLE |
| PH | NO DATA AVAILABLE |
| MELTING | 112 - 115 °C |
| POINT/FREEZING POINT | |
| INITIAL BOILING POINT | 160 °C |
| AND BOILING RANGE | |
| FLASH POINT | |
| EVAPORATION RATE | NO DATA AVAILABLE |
| FLAMMABILITY (SOLID, GAS) | NO DATA AVAILABLE |
| UPPER/LOWER | NO DATA AVAILABLE |
| FLAMMABILITY OR | |
| EXPLOSIVE LIMITS | |
| VAPOUR PRESSURE | NO DATA AVAILABLE |
| VAPOUR DENSITY | NO DATA AVAILABLE |
| RELATIVE DENSITY | |
| WATER SOLUBILITY | VERY SOLUBLE |
| PARTITION COEFFICIENT: N- OCTANOL/WATER | NO DATA AVAILABLE |
| 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

| | |
|----------------|---------------------------------|
| OTHER SOLVENTS | VERY SOLUBLE: ALCOHOLS, BENZENE |
| SOLUBILITY | |

SECTION 10. STABILITY AND REACTIVITY

| | |
|------------------------------------|--|
| REACTIVITY | NO DATA AVAILABLE |
| CHEMICAL STABILITY | STABLE UNDER RECOMMENDED STORAGE CONDITIONS. |
| POSSIBILITY OF HAZARDOUS REACTIONS | NO SPECIAL REACTIVITY HAS BEEN REPORTED. |
| CONDITIONS TO AVOID | SPARK, OPEN FLAME, STATIC DISCHARGE |

**INCOMPATIBLE
MATERIALS**

OXIDIZING AGENTS, STRONG ACIDS

**HAZARDOUS
DECOMPOSITION
PRODUCTS**

CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN
OXIDES (NOX)

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
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 ON
OSHA S LIST OF REGULATED CARCINOGENS.

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: NOT AVAILABLE 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 | NO DATA AVAILABLE |
| 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 SOLID, ORGANIC, N.O.S (*cis*-2,6-Dimethylpiperazine)
UN NUMBER: 1325
CLASS: 4.1
PACKING GROUP: III

IMDG

PROPER SHIPPING NAME: FLAMMABLE SOLID, ORGANIC, N.O.S (*cis*-2,6-Dimethylpiperazine)
UN NUMBER: 1325
CLASS: 4.1
PACKING GROUP: III
EMS-NO: F-A, S-G

IATA

PROPER SHIPPING NAME: FLAMMABLE SOLID, ORGANIC, N.O.S (*cis*-2,6-Dimethylpiperazine)
UN NUMBER: 1325
CLASS: 4.1
PACKING GROUP: III

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 |
|------------------------------------|------------|---------------|
| <i>cis</i> -2,6-Dimethylpiperazine | 21655-48-1 | |

NEW JERSEY RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|------------------------------------|------------|---------------|
| <i>cis</i> -2,6-Dimethylpiperazine | 21655-48-1 | |

SECTION 16. OTHER INFORMATION

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

| | |
|------|--------------------------------|
| H228 | FLAMMABLE SOLID. |
| H315 | CAUSES SKIN IRRITATION. |
| H319 | CAUSES SERIOUS EYE IRRITATION. |

MSDS LEGEND

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

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