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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

| | |
|---------------------------------|---|
| CATALOG #: | 46206 |
| NAME: | 2,4-Dinitro-5-fluoroaniline |
| SYNONYMS: | 5-Fluoro-2,4-dinitroaniline |
| 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 3), H301
ACUTE TOXICITY, DERMAL (CATEGORY 3), H311
ACUTE TOXICITY, INHALATION (CATEGORY 3), H331

SKIN CORROSION/IRRITATION (CATEGORY 2), H315
EYE DAMAGE/IRRITATION (CATEGORY 2A), H319

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
PICTOGRAM**



SIGNAL WORD DANGER

HAZARD STATEMENT(S)

H301 + H311 + H331 TOXIC IF SWALLOWED, IN CONTACT WITH SKIN OR IF
INHALED
H315 CAUSES SKIN IRRITATION.
H319 CAUSES SERIOUS EYE IRRITATION.

PRECAUTIONARY STATEMENT(S)

P261 AVOID BREATHING
DUST/FUMES/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/ PROTECTIVE CLOTHING/ EYE
PROTECTION/ FACE PROTECTION.
P301 + P310 + P330 IF SWALLOWED: IMMEDIATELY CALL A POISON
CENTER/DOCTOR. RINSE MOUTH.
P302 + P352 + P312 IF ON SKIN: WASH WITH PLENTY OF WATER. CALL A POISON
CENTER/DOCTOR IF YOU FEEL UNWELL.
P304 + P340 + P311 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP
COMFORTABLE FOR BREATHING. CALL A POISON CENTER/
DOCTOR.
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.
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
OTHERWISE
CLASSIFIED (HNOC)
OR NOT COVERED
BY GHS** NONE

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: C₆H₄FN₃O₄
MW: 201.11
CAS-NO. 367-81-7
PURITY: ≥ 98% (GC)

HAZARDOUS COMPONENTS

| COMPONENT | CLASSIFICATION | CONCENTRATION |
|------------------------------------|----------------|---------------|
| 2,4-Dinitro-5-fluoroaniline | | |
| | - | ≤ 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 MOVE OUT OF DANGEROUS AREA.

IF INHALED REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. CALL A POISONCENTER OR DOCTOR/PHYSICIAN.

IN CASE OF SKIN CONTACT REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. GENTLY WASH WITH PLENTY OF SOAP AND WATER. CALL A POISON CENTER OR DOCTOR/PHYSICIAN.

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 IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. 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 NO DATA AVAILABLE

**ATTENTION AND
SPECIAL TREATMENT
NEEDED**

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 HALOGENATED
COMPOUNDS
WARNING: HIGHLY TOXIC HF GAS IS PRODUCED
DURING COMBUSTION.

**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** USE PERSONAL PROTECTIVE EQUIPMENT. KEEP
PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK.
ENTRY TONON-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. BE CAREFUL NOT TO CAUSE LEAKAGE, OVERFLOW, OR DISPERSION. STEAM SHOULD NOT BE GENERATED UNNECESSARILY. KEEP AWAY FROM HEAT/SPARKS/OPEN FLAME/HOT SURFACES. -NO SMOKING. TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE. USE EXPLOSION-PROOF EQUIPMENT. AVOID SHOCK AND FRICTION. WASH HANDS AND FACE BEFORE BREAKS AND IMMEDIATELY AFTER HANDLING THE PRODUCT. USE A CLOSED SYSTEM IF POSSIBLE. USE A LOCAL EXHAUST IF DUST OR AEROSOL WILL BE GENERATED. AVOID CONTACT WITH SKIN, EYES AND CLOTHING. FOR PRECAUTIONS SEE SECTION 2.2. |
| CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES | KEEP CONTAINER TIGHTLY CLOSED. STORE IN A COOL, DARK AND WELL-VENTILATED PLACE. STORE UNDER INERT GAS. PROTECT FROM MOISTURE. STORE LOCKED UP. BE SURE NOT TO GIVE THE CONTAINER UNEXPECTED IMPACTS, SUCH AS FALLING DOWN OR FALLING OFF. STORE AWAY FROM INCOMPATIBLE MATERIALS SUCH AS OXIDIZING AGENTS. HYGROSCOPIC 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

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

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS

GENERAL INDUSTRIAL HYGIENE PRACTICE.

PERSONAL PROTECTIVE EQUIPMENT

| | |
|--|--|
| EYE/FACE PROTECTION | 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 | CHOOSE BODY PROTECTION IN RELATION TO ITS TYPE, TO THE CONCENTRATION AND AMOUNT OF DANGEROUS SUBSTANCES, AND TO THE SPECIFIC WORK-PLACE. THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE. |
| RESPIRATORY PROTECTION | RESPIRATORY PROTECTION IS NOT REQUIRED. WHERE PROTECTION FROM NUISANCE LEVELS OF DUSTS ARE DESIRED, USE TYPE N95 (US) OR TYPE P1 (EN 143) DUST MASKS. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU). |
| CONTROL OF ENVIRONMENTAL EXPOSURE | NO SPECIAL ENVIRONMENTAL PRECAUTIONS REQUIRED. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--|
| APPEARANCE | Light yellow to yellow powder to crystal |
| ODOUR | NO DATA AVAILABLE |
| ODOUR THRESHOLD | NO DATA AVAILABLE |
| PH | NO DATA AVAILABLE |
| MELTING POINT/FREEZING POINT | 185 - 189 °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 | STABLE UNDER RECOMMENDED STORAGE CONDITIONS. |
| POSSIBILITY OF HAZARDOUS REACTIONS | MAY EXPLOSIVELY DECOMPOSE ON HEATING, SHOCK, FRICTION, ETC. |
| CONDITIONS TO AVOID | HEAT, SHOCK, FRICTION |
| INCOMPATIBLE MATERIALS | OXIDIZING AGENTS |
| HAZARDOUS DECOMPOSITION PRODUCTS | HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN OXIDES (NOX), HYDROGEN FLUORIDE 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 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 | 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 | RECYCLE TO PROCESS IF POSSIBLE. IT IS THE GENERATOR'S RESPONSIBILITY TO COMPLY WITH FEDERAL, STATE AND LOCAL RULES AND REGULATIONS. CONSULT AN EXPERT OF DISPOSAL. YOU MAY BE ABLE TO DISSOLVE OR MIX MATERIAL WITH A COMBUSTIBLE SOLVENT AND LITTLE BY LITTLE BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER SYSTEM. IF A LARGE AMOUNT OF THE SUBSTANCE IS BURNED AT A TIME, AN EXPLOSION MAY OCCUR. THIS SECTION IS INTENDED TO PROVIDE ASSISTANCE BUT DOES NOT REPLACE THESE LAWS, NOR DOES COMPLIANCE IN ACCORDANCE WITH THIS SECTION ENSURE REGULATORY COMPLIANCE ACCORDING TO THE LAW. THE PRODUCT SHOULD NOT BE ALLOWED TO ENTER THE ENVIRONMENT, DRAINS, WATER WAYS, OR THE SOIL. |
| CONTAMINATED PACKAGING | DISPOSE OF AS UNUSED PRODUCT. DO NOT RE-USE EMPTY CONTAINERS. |

SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: TOXIC SOLIDS, ORGANIC, N.O.S. (2,4-Dinitro-5-fluoroaniline)
UN NUMBER: 2811
CLASS: 6.1
PACKING GROUP: III

IMDG

PROPER SHIPPING NAME: TOXIC SOLIDS, ORGANIC, N.O.S. (2,4-Dinitro-5-fluoroaniline)
UN NUMBER: 2811
CLASS: 6.1
PACKING GROUP: III
EMS-NO: F-A, S-A

IATA

PROPER SHIPPING NAME: TOXIC SOLIDS, ORGANIC, N.O.S. (2,4-Dinitro-5-fluoroaniline)
UN NUMBER: 2811
CLASS: 6.1
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.

SARA 311/312 HAZARDS NO SARA HAZARDS

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 |
|-----------------------------|----------|---------------|
| 2,4-Dinitro-5-fluoroaniline | 367-81-7 | |

NEW JERSEY RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|-----------------------------|----------|---------------|
| 2,4-Dinitro-5-fluoroaniline | 367-81-7 | |

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.

H301 + H311 + H331 TOXIC IF SWALLOWED, IN CONTACT WITH SKIN OR IF INHALED
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 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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