

# *Chem-Impex International Inc.*

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## SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION

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|                                 |  |
|---------------------------------|--|
| CATALOG #:                      | 44785  |
| NAME:                           | 5-Bromo-2-cyano-3-nitropyridine  |
| SYNONYMS:                       | 5-Bromo-3-nitropyridine-2-carbonitrile<br>5-Bromo-3-nitropicolinonitrile |
| 24 HOUR EMERGENCY<br>TELEPHONE: | (800) 535-5053(USA)<br>352-323-3500 (INTERNATIONAL)                      |
| TO REQUEST AN MSDS:             | (800) 869-9290   |
| CUSTOMER<br>SERVICE:            | (630) 766-2112   |

### SECTION 2. HAZARDS IDENTIFICATION

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#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

#### GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

ACUTE TOXICITY, ORAL (CATEGORY 3), H301

ACUTE TOXICITY, INHALATION (CATEGORY 4), H332

ACUTE TOXICITY, DERMAL (CATEGORY 4), H312

SKIN IRRITATION (CATEGORY 2), H315

SERIOUS EYE DAMAGE (CATEGORY 1), H318  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3),  
RESPIRATORY SYSTEM, H335

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)**

H301 TOXIC IF SWALLOWED.  
H312 + H332 HARMFUL IN CONTACT WITH SKIN OR IF INHALED.  
H315 CAUSES SKIN IRRITATION.  
H318 CAUSES SERIOUS EYE DAMAGE.  
H335 MAY CAUSE RESPIRATORY IRRITATION.

**PRECAUTIONARY STATEMENT(S)**

P261 AVOID BREATHING DUST/ FUME/ 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/ 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 + P312 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP  
COMFORTABLE FOR BREATHING. CALL A POISON  
CENTER/DOCTOR IF YOU FEEL UNWELL.  
P305 + P351 + P338 +  
P310 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL  
MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND  
EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A  
POISON CENTER/ DOCTOR.  
P332 + P313 IF SKIN IRRITATION OCCURS: 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)** NONE

**OR NOT COVERED  
BY GHS**

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

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MF:  $C_6H_2BrN_3O_2$   
MW: 228.01  
CAS-NO. 573675-25-9  
PURITY:  $\geq 98\%$  (GC)

**HAZARDOUS COMPONENTS**

| COMPONENT                              | CLASSIFICATION  | CONCENTRATION |
|--|---|---------------|
| <b>5-Bromo-2-cyano-3-nitropyridine</b> |   |               |
|  | ACUTE TOX. 3; ACUTE TOX. 4;<br>SKIN IRRIT. 2; EYE DAM. 1;<br>STOT SE 3; H301, H332, H312,<br>H315, H318, H335 | $\leq 100\%$  |

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

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**SECTION 4. FIRST-AID MEASURES**

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**DESCRIPTION OF FIRST AID MEASURES**

**GENERAL ADVICE** CONSULT A PHYSICIAN. SHOW THIS MATERIAL 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

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## **SECTION 5. FIRE AND EXPLOSION DATA**

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### **EXTINGUISHING MEDIA**

**SUITABLE EXTINGUISHING MEDIA**

USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.

**SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE**

CARBON OXIDES  
NITROGEN OXIDES (NOX)  
HYDROGEN BROMIDE GAS  
COMBUSTIBLE.

**ADVICE FOR FIREFIGHTERS**

WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.

**FURTHER INFORMATION**

NO DATA AVAILABLE

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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**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.

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## **SECTION 7. HANDLING AND STORAGE**

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|   |   |
|---|---|
| <b>PRECAUTIONS FOR SAFE HANDLING</b>                                | AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS. FURTHER PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE ADDITIONAL PROCESSING OCCURS.<br>PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED.<br>AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WASH HANDS BEFORE BREAKS AND IMMEDIATELY AFTER HANDLING THE PRODUCT.<br>FOR PRECAUTIONS SEE SECTION 2.2. |
| <b>CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES</b> | KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE.<br><br>Store at RT  |
| <b>SPECIFIC END USE(S)</b>  | APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED  |

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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### **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 EC 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 FULLFACE 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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

|  |   |
|--|---|
| APPEARANCE                                   | Light orange to yellow to green powder to crystal |
| ODOUR  | NO DATA AVAILABLE                                 |
| ODOUR THRESHOLD                              | NO DATA AVAILABLE                                 |
| PH   | NO DATA AVAILABLE                                 |
| MELTING POINT/FREEZING POINT                 | 105 - 109 °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      | LOG POW: 0.888                                    |
| 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                                 |
| <b>OTHER SAFETY INFORMATION</b>              | NO DATA AVAILABLE                                 |

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**SECTION 10. STABILITY AND REACTIVITY**

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|   |  |
|---|--|
| <b>REACTIVITY</b>                         | NO DATA AVAILABLE                            |
| <b>CHEMICAL STABILITY</b>                 | STABLE UNDER RECOMMENDED STORAGE CONDITIONS. |
| <b>POSSIBILITY OF HAZARDOUS REACTIONS</b> | NO DATA AVAILABLE                            |
| <b>CONDITIONS TO AVOID</b>                | NO DATA AVAILABLE                            |

**INCOMPATIBLE  
MATERIALS**

STRONG OXIDIZING AGENTS

**HAZARDOUS  
DECOMPOSITION  
PRODUCTS**

IN THE EVENT OF FIRE: SEE SECTION 5

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

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### **INFORMATION ON TOXICOLOGICAL EFFECTS**

**ACUTE TOXICITY**

LD50 ORAL - 100 MG/KG

LC50 INHALATION - 4 H - 1.5 MG/L  
(ACUTE TOXICITY ESTIMATE)

LD50 DERMAL - 1,100 MG/KG

NO DATA AVAILABLE

**SKIN  
CORROSION/IRRITATION**

NO DATA AVAILABLE

**SERIOUS EYE  
DAMAGE/EYE IRRITATION**

NO DATA AVAILABLE

**RESPIRATORY OR SKIN  
SENSITISATION**

THE PRECEDING DATA, OR INTERPRETATION OF DATA, WAS DETERMINED USING QUANTITATIVE STRUCTURE ACTIVITY RELATIONSHIP (QSAR) MODELING. PROLONGED OR REPEATED EXPOSURE MAY CAUSE ALLERGIC REACTIONS IN CERTAIN SENSITIVE INDIVIDUALS.

**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



|   |   |
|---|---|
| <b>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE</b>   | INHALATION - MAY CAUSE RESPIRATORY IRRITATION.  |
| <b>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE</b> | NO DATA AVAILABLE   |
| <b>ASPIRATION HAZARD</b>                                  | NO DATA AVAILABLE   |
| <b>ADDITIONAL INFORMATION</b>                             | RTECS: NOT AVAILABLE<br><br>TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED. |

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## **SECTION 12. ECOLOGICAL INFORMATION**

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|   |  |
|---|--|
| <b>TOXICITY</b>                           | NO DATA AVAILABLE  |
| <b>PERSISTENCE AND DEGRADABILITY</b>      | NO DATA AVAILABLE  |
| <b>BIOACCUMULATIVE POTENTIAL</b>          | NO DATA AVAILABLE  |
| <b>MOBILITY IN SOIL</b>                   | NO DATA AVAILABLE  |
| <b>RESULTS OF PBT AND VPVB ASSESSMENT</b> | PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED |
| <b>OTHER ADVERSE EFFECTS</b>              | NO DATA AVAILABLE  |

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

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### **WASTE TREATMENT METHODS**

|                |  |
|----------------|--|
| <b>PRODUCT</b> | 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.

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**SECTION 14. TRANSPORT INFORMATION**

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**DOT (US)**

PROPER SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S. (5-Bromo-2-cyano-3-nitropyridine)  
UN NUMBER: 2811  
CLASS: 6.1  
PACKING GROUP: III  
REPORTABLE QUANTITY (RQ):  
POISON INHALATION HAZARD: NO

**IMDG**

PROPER SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S. (5-Bromo-2-cyano-3-nitropyridine)  
UN NUMBER: 2811  
CLASS: 6.1  
PACKING GROUP: III  
EMS-NO: F-A, S-A

**IATA**

PROPER SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S. (5-Bromo-2-cyano-3-nitropyridine)  
UN NUMBER: 2811  
CLASS: 6.1  
PACKING GROUP: III

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**SECTION 15. REGULATORY INFORMATION**

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**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** ACUTE HEALTH HAZARD

**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 |
|---------------------------------|-------------|---------------|
| 5-Bromo-2-cyano-3-nitropyridine | 573675-25-9 |               |

**NEW JERSEY RIGHT TO KNOW COMPONENTS**

|                                 | CAS-NO.     | REVISION DATE |
|---------------------------------|-------------|---------------|
| 5-Bromo-2-cyano-3-nitropyridine | 573675-25-9 |               |

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**SECTION 16. OTHER INFORMATION**

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

|             |   |
|-------------|---|
| H301        | TOXIC IF SWALLOWED.                         |
| H312 + H332 | HARMFUL IN CONTACT WITH SKIN OR IF INHALED. |
| H315        | CAUSES SKIN IRRITATION.                     |
| H318        | CAUSES SERIOUS EYE DAMAGE.                  |
| H335        | MAY CAUSE RESPIRATORY 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)                            |

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