

# *Chem-Impex International Inc.*

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## SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION

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CATALOG #: 21858

NAME: 3-Amino-1,2,4-triazole

SYNONYMS: 1,2,4-Triazol-3-amine

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

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#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

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

CARCINOGENICITY (CATEGORY 1B), H350

REPRODUCTIVE TOXICITY (CATEGORY 2), H361

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (CATEGORY 2), H373

LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 2), H411

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)

H350 MAY CAUSE CANCER.  
H361 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.  
H373 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.  
H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

PRECAUTIONARY STATEMENT(S)

P201 OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.  
P202 DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD.  
P260 DO NOT BREATHE DUST/ FUME/ GAS/ MIST/ VAPORS/ SPRAY.  
P273 AVOID RELEASE TO THE ENVIRONMENT.  
P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION.  
P308 + P313 IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/ ATTENTION.  
P391 COLLECT SPILLAGE.  
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

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

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MF: C<sub>2</sub>H<sub>4</sub>N<sub>4</sub>  
MW: 84.08  
CAS-NO. 61-82-5  
PURITY: ≥ 99% (HPLC)

**HAZARDOUS COMPONENTS**

COMPONENT	CLASSIFICATION	CONCENTRATION
3-Amino-1,2,4-triazole		

	CARC. 1B; REPR. 2; STOT RE 2; AQUATIC CHRONIC 2; H350, H361, H373, H411	<= 100 %
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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

<b>GENERAL ADVICE</b>	SHOW THIS MATERIAL SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.
<b>IF INHALED</b>	AFTER INHALATION: FRESH AIR. CALL IN PHYSICIAN.
<b>IN CASE OF SKIN CONTACT</b>	IN CASE OF SKIN CONTACT: TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER. CONSULT A PHYSICIAN.
<b>IN CASE OF EYE CONTACT</b>	AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF WATER. CALL IN OPHTHALMOLOGIST. REMOVE CONTACT LENSES.
<b>IF SWALLOWED</b>	AFTER SWALLOWING: IMMEDIATELY MAKE VICTIM DRINK WATER (TWO GLASSES AT MOST). CONSULT A PHYSICIAN.
<b>MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED</b>	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11.
<b>INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED</b>	NO DATA AVAILABLE

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## SECTION 5. FIRE AND EXPLOSION DATA

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### EXTINGUISHING MEDIA

<b>SUITABLE EXTINGUISHING MEDIA</b>	SUITABLE EXTINGUISHING MEDIA WATER FOAM CARBON DIOXIDE (CO2) DRY POWDER
	UNSUITABLE EXTINGUISHING MEDIA

FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF EXTINGUISHING AGENTS ARE GIVEN.

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

CARBON OXIDES  
NITROGEN OXIDES (NOX)  
COMBUSTIBLE.  
FIRE MAY CAUSE EVOLUTION OF:  
NITROGEN OXIDES  
DEVELOPMENT OF HAZARDOUS COMBUSTION GASES OR VAPOURS POSSIBLE IN THE EVENT OF FIRE.

**ADVICE FOR FIREFIGHTERS**

STAY IN DANGER AREA ONLY WITH SELF-CONTAINED BREATHING APPARATUS. PREVENT SKIN CONTACT BY KEEPING A SAFE DISTANCE OR BY WEARING SUITABLE PROTECTIVE CLOTHING.

**FURTHER INFORMATION**

SUPPRESS (KNOCK DOWN) GASES/VAPORS/MISTS WITH A WATER SPRAY JET. PREVENT FIRE EXTINGUISHING WATER FROM CONTAMINATING SURFACE WATER OR THE GROUND WATER SYSTEM.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

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

ADVICE FOR NON-EMERGENCY PERSONNEL: AVOID INHALATION OF DUSTS. AVOID SUBSTANCE CONTACT. ENSURE ADEQUATE VENTILATION. EVACUATE THE DANGER AREA, OBSERVE EMERGENCY PROCEDURES, CONSULT AN EXPERT.

FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL PRECAUTIONS**

DO NOT LET PRODUCT ENTER DRAINS.

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

COVER DRAINS. COLLECT, BIND, AND PUMP OFF SPILLS. OBSERVE POSSIBLE MATERIAL RESTRICTIONS (SEE SECTIONS 7 AND 10). TAKE UP DRY. DISPOSE OF PROPERLY. CLEAN UP AFFECTED AREA. AVOID GENERATION OF DUSTS.

**REFERENCE TO OTHER SECTIONS**

FOR DISPOSAL SEE SECTION 13.

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**SECTION 7. HANDLING AND STORAGE**

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**PRECAUTIONS FOR SAFE HANDLING** WORK UNDER HOOD. DO NOT INHALE SUBSTANCE/MIXTURE. CHANGE CONTAMINATED CLOTHING. PREVENTIVE SKIN PROTECTION RECOMMENDED. WASH HANDS AFTER WORKING WITH SUBSTANCE. FOR PRECAUTIONS SEE SECTION 2.2.

**CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES** TIGHTLY CLOSED. DRY. Store at 0 - 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

COMPONENT	CAS-NO.	VALUE	CONTROL PARAMETERS	BASIS
3-Amino-1,2,4-triazole	61-82-5	TWA	0.2 MG/M3	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
	REMARKS	CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS		
		TWA	0.2 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		POTENTIAL OCCUPATIONAL CARCINOGEN		
		TWA	0.2 MG/M3	USA. OSHA - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS - 1910.1000
		PEL	0.2 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS

### EXPOSURE CONTROLS

**APPROPRIATE ENGINEERING CONTROLS** CHANGE CONTAMINATED CLOTHING. PREVENTIVE SKIN PROTECTION RECOMMENDED. WASH HANDS AFTER WORKING WITH SUBSTANCE.

### 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). SAFETY GLASSES

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	PROTECTIVE CLOTHING
RESPIRATORY PROTECTION	REQUIRED WHEN DUSTS ARE GENERATED. OUR RECOMMENDATIONS ON FILTERING RESPIRATORY PROTECTION ARE BASED ON THE FOLLOWING STANDARDS: DIN EN 143, DIN 14387 AND OTHER ACCOMPANYING STANDARDS RELATING TO THE USED RESPIRATORY PROTECTION SYSTEM.
CONTROL OF ENVIRONMENTAL EXPOSURE	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	White to yellow crystal powder
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING	152 - 158 °C
POINT/FREEZING POINT	
INITIAL BOILING POINT AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	THE PRODUCT IS NOT FLAMMABLE. - FLAMMABILITY (SOLIDS)
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	< 0.1 HPA AT 20 °C - OECD TEST GUIDELINE 104
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	
WATER SOLUBILITY	264 G/L AT 20 °C - OECD TEST GUIDELINE 105 - COMPLETELY SOLUBLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	LOG POW: -0.93 AT 20 °C - OECD TEST GUIDELINE 107 - BIOACCUMULATION IS NOT EXPECTED.
AUTO-IGNITION TEMPERATURE	DOES NOT IGNITE

DECOMPOSITION TEMPERATURE	NO DATA AVAILABLE
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

**OTHER SAFETY INFORMATION**

BULK DENSITY	650 KG/M3
SURFACE TENSION	73.3 MN/M AT 1G/L AT 20 C - SURFACE TENSION
DISSOCIATION CONSTANT	4.3 AT 25 C - OECD TEST GUIDELINE 112

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**SECTION 10. STABILITY AND REACTIVITY**

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<b>REACTIVITY</b>	THE FOLLOWING APPLIES IN GENERAL TO FLAMMABLE ORGANIC SUBSTANCES AND MIXTURES: IN CORRESPONDINGLY FINE DISTRIBUTION, WHEN WHIRLED UP A DUST EXPLOSION POTENTIAL MAY GENERALLY BE ASSUMED.
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<b>CHEMICAL STABILITY</b>	THE PRODUCT IS CHEMICALLY STABLE UNDER STANDARD AMBIENT CONDITIONS
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<b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	EXOTHERMIC REACTION WITH: STRONG OXIDIZING AGENTS STRONG ACIDS ACID HALIDES ACID ANHYDRIDES ALUMINUM IRON COPPER
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<b>CONDITIONS TO AVOID</b>	NO DATA AVAILABLE
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<b>INCOMPATIBLE MATERIALS</b>	ALUMINUM, COPPER, MILD STEEL
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<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	IN THE EVENT OF FIRE: SEE SECTION 5
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**SECTION 11. TOXICOLOGICAL INFORMATION**

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**INFORMATION ON TOXICOLOGICAL EFFECTS**

<b>ACUTE TOXICITY</b>	<p>LD50 ORAL - RAT - MALE AND FEMALE - &gt;= 10,000 MG/KG (OECD TEST GUIDELINE 401)</p> <p>LC50 INHALATION - RAT - MALE AND FEMALE - 4 H - &gt; 439 MG/M3 (OECD TEST GUIDELINE 403)</p> <p>LD50 DERMAL - RAT - MALE AND FEMALE - &gt; 2,000 MG/KG (OECD TEST GUIDELINE 402)</p> <p>NO DATA AVAILABLE</p>
<b>SKIN CORROSION/IRRITATION</b>	<p>SKIN - RABBIT RESULT: NO SKIN IRRITATION - 4 H (OECD TEST GUIDELINE 404)</p>
<b>SERIOUS EYE DAMAGE/EYE IRRITATION</b>	<p>EYES - RABBIT RESULT: NO EYE IRRITATION - 30 S (OECD TEST GUIDELINE 405)</p>
<b>RESPIRATORY OR SKIN SENSITISATION</b>	<p>MAXIMIZATION TEST - GUINEA PIG RESULT: NEGATIVE (OECD TEST GUIDELINE 406)</p>
<b>GERM CELL MUTAGENICITY</b>	<p>TEST TYPE: AMES TEST TEST SYSTEM: ESCHERICHIA COLI/SALMONELLA TYPHIMURIUM METABOLIC ACTIVATION: WITH AND WITHOUT METABOLIC ACTIVATION METHOD: OECD TEST GUIDELINE 471 RESULT: NEGATIVE TEST TYPE: MUTAGENICITY (MAMMAL CELL TEST): CHROMOSOME ABERRATION. TEST SYSTEM: HUMAN LYMPHOCYTES METABOLIC ACTIVATION: WITH AND WITHOUT METABOLIC ACTIVATION METHOD: OECD TEST GUIDELINE 473 RESULT: NEGATIVE TEST TYPE: IN VITRO MAMMALIAN CELL GENE MUTATION TEST TEST SYSTEM: MOUSE LYMPHOMA CELLS METABOLIC ACTIVATION: WITH AND WITHOUT METABOLIC ACTIVATION METHOD: OECD TEST GUIDELINE 476 RESULT: NEGATIVE IN VIVO TESTS SHOWED MUTAGENIC EFFECTS</p>
<b>CARCINOGENICITY</b> IARC:	<p>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.</p>



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.
<b>REPRODUCTIVE TOXICITY</b>	SUSPECTED OF DAMAGING THE UNBORN CHILD.
<b>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE</b>	NO DATA AVAILABLE
<b>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE</b>	MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE. REMARKS: CLASSIFIED ACCORDING TO REGULATION (EU) 1272/2008, ANNEX VI (TABLE 3.1/3.2)
<b>ASPIRATION HAZARD</b>	NO DATA AVAILABLE
<b>ADDITIONAL INFORMATION</b>	RTECS: NOT AVAILABLE  REPEATED DOSE TOXICITY - RAT - MALE AND FEMALE - ORAL - 10 WEEKS - LOAEL (LOWEST OBSERVED ADVERSE EFFECT LEVEL) - <= 1.5 MG/KG  TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.  HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE.  LIVER - IRREGULARITIES - BASED ON HUMAN EVIDENCE

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## SECTION 12. ECOLOGICAL INFORMATION

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<b>TOXICITY</b>	
TOXICITY TO FISH	SEMI-STATIC TEST LC50 - CYPRINODON VARIEGATUS (SHEEPSHEAD MINNOW) - > 1,000 MG/L - 96 H (OECD TEST GUIDELINE 203)
TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES	STATIC TEST LC50 - DAPHNIA MAGNA (WATER FLEA) - 18 MG/L - 48 H (OECD TEST GUIDELINE 202)
TOXICITY TO ALGAE	STATIC TEST ERC50 - PSEUDOKIRCHNERIELLA SUBCAPITATA (GREEN ALGAE) - > 5.1 MG/L - 5 H (OECD TEST GUIDELINE 201)

TOXICITY TO BACTERIA      STATIC TEST EC50 - ACTIVATED SLUDGE - > 1,000 MG/L - 3  
H  
(OECD TEST GUIDELINE 209)

**PERSISTENCE AND DEGRADABILITY**

BIODEGRADABILITY      AEROBIC - EXPOSURE TIME 28 D  
RESULT: 0 % - NOT READILY BIODEGRADABLE.  
(OECD TEST GUIDELINE 301F)

**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**      DISCHARGE INTO THE ENVIRONMENT MUST BE  
AVOIDED.

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**SECTION 13.      DISPOSAL CONSIDERATIONS**

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**WASTE TREATMENT METHODS**

**PRODUCT**      WASTE MATERIAL MUST BE DISPOSED OF IN  
ACCORDANCE WITH THE NATIONAL AND LOCAL  
REGULATIONS. LEAVE CHEMICALS IN ORIGINAL  
CONTAINERS. NO MIXING WITH OTHER WASTE.

**CONTAMINATED  
PACKAGING**      DISPOSE OF AS UNUSED PRODUCT.

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**SECTION 14.      TRANSPORT INFORMATION**

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**DOT (US)**

PROPER SHIPPING NAME:      ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. ( 3-Amino-1,2,4-triazole )

UN NUMBER:      3077

CLASS:      9

PACKING GROUP:      III

REPORTABLE QUANTITY      10 LBS

(RQ):

POISON INHALATION      NO

HAZARD:

**IMDG**

PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. ( 3-Amino-1,2,4-triazole )  
UN NUMBER: 3077  
CLASS: 9  
PACKING GROUP: III  
EMS-NO: F-A, S-F  
MARINE POLLUTANT : YES

**IATA**

PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. ( 3-Amino-1,2,4-triazole )  
UN NUMBER: 3077  
CLASS: 9  
PACKING GROUP: III

**FURTHER INFORMATION**

EHS-MARK REQUIRED (IMDG CODE 2.10.3) FOR SINGLE PACKAGINGS AND COMBINATION  
PACKAGINGS CONTAINING INNER PACKAGINGS WITH DANGEROUS GOODS > 5L FOR  
LIQUIDS OR > 5KG FOR SOLIDS.

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**SECTION 15. REGULATORY INFORMATION**

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**SARA 302 COMPONENTS** THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS  
WITH A SECTION 302 EHS TPQ.

**SARA 313 COMPONENTS**

THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED  
BY SARA TITLE III, SECTION 313:

	CAS-NO.	REVISION DATE
3-Amino-1,2,4-triazole	61-82-5	07-01-2007

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS**

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

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**SECTION 16. OTHER INFORMATION**

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

H350 MAY CAUSE CANCER.  
H361 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.  
H373 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR  
REPEATED EXPOSURE.  
H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

**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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