



## SAFETY DATA SHEET

(according to (EC) 1907/2006)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Gamma Picoline

##### Synonyms:

4-Picoline; 4-Methylpyridine

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

chemical intermediate

#### 1.3. Details of the supplier of the safety data sheet

**Manufacturer Information:** Vertellus Integrated Pyridines LLC  
201 North Illinois Street, Suite 1800,  
Indianapolis, IN 46204  
317-247-8141

**Non-Emergency Fax Number:**

1-317-248-6402

**E-Mail Address:**

msds@vertellus.com

Vertellus Specialty Chemicals (Nantong) Co.,  
Ltd. #9 Shengkai Road NETDZ  
Nantong, Jiangsu, China. 226009  
86-513-83591318

**Non-Emergency Phone Number:** 1-317-247-8141

#### 1.4. Emergency telephone number

Vertellus: 1-317-247-8141

CHEMTREC (USA): 1-800-424-9300 (collect calls accepted); (Int'l): 1-703-527-3887 ; CHINA: 86 25 85477110

### SECTION 2: Hazards identification

HMIS Rating	
HEALTH	3
FLAMMABILITY	2
REACTIVITY	0

#### 2.1. Classification of the substance or mixture

(According to Regulation (EC) No 1272/2008)

## SAFETY DATA SHEET

Specific Target Organ Systemic Toxicity Single Exposure Category 3  
Serious Eye Damage/Eye Irritation Category 2  
Skin Corrosion/Irritation Category 2  
Acute Toxicity Inhalation Vapour Category 4  
Acute Toxicity Oral Category 4  
Acute Toxicity Dermal Category 3  
Flammable Liquids Category 3

**Signal Word:**  
Danger

**Hazard Precautions:**

H335 - May cause respiratory irritation.  
H319 - Causes serious eye irritation.  
H315 - Causes skin irritation.  
H302+H332 - Harmful if swallowed or if inhaled.  
H311 - Toxic in contact with skin.  
H226 - Flammable liquid and vapour.

### 2.2. Label elements

Hazard Symbols (Pictogram):



**Prevention Precautions:**

P271 - Use only outdoors or in a well-ventilated area.  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P270 - Do not eat, drink or smoke when using this product.  
P264 - Wash hands thoroughly after handling.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P243 - Take precautionary measures against static discharge.  
P242 - Use only non-sparking tools.  
P241 - Use explosion-proof electrical/ventilating/lighting/telecommunication/computer/ equipment.  
P240 - Ground/bond container and receiving equipment.  
P233 - Keep container tightly closed.  
P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

**First Aid Precautions:**

P337+P313 - If eye irritation persists: Get medical advice/attention.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P362 - Take off contaminated clothing and wash before reuse.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P321 - Specific treatment (see supplemental information on this label).



## SAFETY DATA SHEET

P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P330 - Rinse mouth.  
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P363 - Wash contaminated clothing before reuse.  
P361 - Remove/Take off immediately all contaminated clothing.  
P322 - Specific measures (see supplemental information on this label).  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P370+P378 - In case of fire: Use carbon dioxide/dry chemical/soda ash for extinction.  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

### Storage Precautions:

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P403+P235 - Store in a well-ventilated place. Keep cool.

### Disposal Precautions:

P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

### Single Exposure Target Organs:

Not applicable

### Repeated Exposure Target Organs:

Not applicable

### (According to Directive 67/548/EEC)

Symbol: Xn, Xi, T

Risk Phrases: R24: Toxic in contact with skin.  
R36/37/38: Irritating to eyes, respiratory system and skin.  
R20/22: Harmful by inhalation and if swallowed.  
R10: Flammable.

Safety Phrases: S1/2: Keep locked up and out of the reach of children.  
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36: Wear suitable protective clothing.  
S45: In case of accident or if you feel unwell, seek medical advice immediately.

### 2.3. Other hazards

Signs and Symptoms of Potential Overexposure: Gamma Picoline is corrosive to skin, eyes and mucous membranes. Vapors may be irritating to the respiratory tract. Gamma Picoline is readily absorbed through the skin and is considered toxic via oral and dermal routes. Extended exposure (e.g., from saturated clothing) may lead to skin burns and/or systemic poisoning. Symptoms may include headache, dizziness, nausea, nervousness, weakness, narcosis, sleeplessness, loss of appetite and possibly loss of consciousness. Symptoms seen after ingestion or inhalation overexposures are expected to be essentially the same as those listed previously. Gamma Picoline is a corrosive, so damage to the mouth



## SAFETY DATA SHEET

**Primary Route(s) of Exposure:** and throat is a possibility if large amounts are ingested. Ingestion is not likely to be a primary route of exposure.  
Skin contact and absorption, eye contact, and inhalation. Ingestion is not likely to be a primary route of exposure.

**Medical Conditions Aggravated by Exposure:** Persons with pre-existing skin, liver, or kidney disorders may be at increased risk from overexposure to this material. This is not likely to be a problem when appropriate procedures are used to minimize exposure.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances or 3.2. Mixtures

Ingredient	CAS Number	Concentration (%)	EINECS / ELINCS	EU Symbol	Risk Phrases
Gamma Picoline	108-89-4	100.000000	203-626-4	T, Xi, Xn	R24- R36/37/38- R20/22- R10

**NOTE:** See Section 8 of this MSDS for exposure limit data for these ingredients.  
See Section 15 of this MSDS for trade secret information (where applicable).  
See Section 16 of this MSDS for the full text of the R-phrases above.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

**Skin Contact:** Wash exposed area twice with soap and water. The exposed area should be examined by medical personnel if irritation or pain persists after the area has been washed.

**Eye Contact:** Rinse eyes immediately with large amounts of water for at least 15 minutes, occasionally lifting the eyelids. GET MEDICAL ATTENTION.

**Inhalation:** Remove from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. Keep affected person warm and at rest. GET MEDICAL ATTENTION.

**Ingestion:** Do NOT induce vomiting, this material is corrosive. Immediate dilution with milk or water is recommended, after which nothing should be administered orally until medical personnel have been contacted. Give oxygen if respiration is shallow. GET MEDICAL ATTENTION. Do not give anything by mouth to an unconscious person.

#### 4.2. Most important symptoms and effects, both acute and delayed

**Acute:** Gamma Picoline is corrosive to skin, eyes and mucous membranes. Vapors may be irritating to the respiratory tract. Gamma Picoline is readily absorbed through the skin and is considered toxic via oral and dermal routes. Extended exposure (e.g., from saturated clothing) may lead to skin burns and/or systemic poisoning. Symptoms may include headache, dizziness, nausea, nervousness, weakness, narcosis, sleeplessness, loss of appetite and possibly loss of consciousness. Symptoms seen after ingestion or inhalation overexposures are expected to be essentially the same as those listed previously. Gamma Picoline is a corrosive, so damage to the mouth and throat is a possibility if large amounts are ingested. Ingestion is not likely to be a primary route of exposure.

**Delayed Effects:** Due to the corrosive nature of this material, burns are likely to occur. Ongoing contact with contaminated clothing may cause burns to appear after an extended exposure period.

#### 4.3. Indication of any immediate medical attention and special treatment needed

**Thermal Exposure:** Not applicable.

## SAFETY DATA SHEET

**Note to Physician:** No specific indications. Treatment should be based on the judgment of the physician in response to the reactions of the patient.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Appropriate Extinguishing Media:** Water fog Foam Alcohol foam Carbon dioxide Dry chemical

#### 5.2. Special hazards arising from the substance or mixture

**Hazardous Products of Combustion:** Toxic fumes may be released upon thermal decomposition (cyanides, nitrogen oxides, carbon monoxide).

**Potential for Dust Explosion:** Not applicable.

**Special Flammability Hazards:** Severe explosion hazard in the form of vapor (within flammability limits) when exposed to heat, flame or static discharge.

#### 5.3. Advice for firefighters

**Basic Fire Fighting Guidance:** Wear self-contained breathing apparatus and full protective clothing (i.e., Bunker gear). Skin and eye contact should be avoided. Normal fire fighting procedures may be used.

**Flammability Classification (OSHA):** Combustible Liquid - Class II

NFPA Rating



### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Evacuation Procedures:** Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Special Instructions:** Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded.

#### 6.2. Environmental precautions

Prevent releases to soils, drains, sewers, and waterways.

#### 6.3. Methods and material for containment and cleaning up

**Containment Techniques and Clean-up Procedures:** Remove all ignition sources. Ventilate the area of spill or leak. Wear protective equipment during clean-up. For small spills, use suitable absorbent material and collect for later disposal. For large spills, the area may require diking to contain the spill. Material can then be collected (eg., suction) for later disposal. After collection of material, flush area with water. Dispose of the material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws.



## SAFETY DATA SHEET

Special Reporting Requirements: Not applicable.

### 6.4. Reference to other sections

Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for Unique Hazards: Not applicable.

Practices to Minimize Risk: Wear appropriate protective equipment when performing maintenance on contaminated equipment. Wash hands thoroughly before eating or smoking after handling this material.

Special Handling Equipment: Not applicable.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage Precautions & Recommendations: Maintain dry, ventilated conditions for storage. Protect containers against physical damage. Outside or detached storage is preferable. Inside storage should be in standard flammable liquids storage room or cabinet. Keep away from strong acids and oxidizing agents. Should be periodically inspected.

Dangerous Incompatibility Reactions: Avoid contact with strong acids and oxidizing agents.

Incompatibilities with Materials of Construction: May cause some forms of plastics and rubbers to deteriorate.

### 7.3. Specific end use(s)

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Exposure Limits (United States): OSHA PEL: Not established ACGIH TLV: Not established

### 8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

Personal Protective Equipment: Use NIOSH approved chemical cartridge-respirator or supplied air breathing equipment. Chemical goggles should be worn at all times; use face shields as conditions warrant. Neoprene, nitrile or PVC-coated gloves. Impervious clothing and boots.

Respirator Caution: Observe OSHA regulations for respirator use (29 CFR 1910.134). Air-purifying respirators must not be used in oxygen-deficient atmospheres.

Ventilation: All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided.

Other Engineering Controls: All appropriate engineering controls should be used to minimize exposure potential. Use exhaust ventilation to keep airborne concentrations below exposure limits.

Thermal Hazards: Not applicable.



## SAFETY DATA SHEET

Additive or Synergistic Effects: None known.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Appearance, State & Odor (ambient temperature):	Colorless to yellow liquid with a strong, unpleasant odor.		
Molecular Formula:	C6H7N	Molecular Weight:	93.13
Vapor Pressure:	5.77 mm Hg @ 25°C	Evaporation Rate:	Not determined
Specific Gravity or Density:	0.956	Vapor Density (air = 1):	3.2
Boiling Point:	144.9 °C	Freezing / Melting Point:	3.66 °C
Solubility in Water:	miscible	Octanol / Water Coefficient:	log Kow = 1.22
pH:	pKa = 5.98	Odor Threshold:	< 1 ppm
Viscosity:		Autoignition Temperature:	> 500°C
Flash Point and Method:	102°F (38°C) (Tag Closed Cup)	Flammable Limits:	1.3% (LEL) – 8.7% (UEL)

#### 9.2. Other information

Not applicable.

### SECTION 10: Stability and reactivity

<u>10.1. Reactivity</u>	Not classified as dangerously reactive.
<u>10.2. Chemical stability</u>	Stable
<u>10.3. Possibility of hazardous reactions</u>	Will not occur.
<u>10.4. Conditions to avoid</u>	Avoid static discharge and uncontrolled exposure to high temperatures.
<u>10.5. Incompatible materials</u>	Avoid contact with strong acids and oxidizing agents.
<u>10.6. Hazardous decomposition products</u>	Toxic fumes may be released upon thermal decomposition (cyanides, nitrogen oxides, carbon monoxide).

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute Oral LD <sub>50</sub> :	Oral LD <sub>50</sub> (rat) = 841 mg/kg Oral LD <sub>50</sub> (rat) = 700 mg/kg
Acute Dermal LD <sub>50</sub> :	Dermal LD <sub>50</sub> (rabbit) = 126 - 316 mg/kg Dermal LD <sub>50</sub> (rabbit) = 258 mg/kg
Acute Inhalation LC <sub>50</sub> :	Inhalation LC <sub>50</sub> (5h) (rat) < 9170 mg/cubic meter Inhalation LC <sub>50</sub> (2.5h) (rat) < 17500 mg/cubic meter





## SAFETY DATA SHEET

Skin / Eye Irritation:	Inhalation LC50 (4h) (rat) > 1000 ppm Corrosive to skin. Corrosive to eyes.
Sensitization:	No data available.
Target Organs:	No data is available for this material. However, data is available for a close analog, namely Alpha Picoline (2-Methylpyridine). A subchronic inhalation study of Alpha Picoline in rats over 6 months showed an NOAEL greater than or equal to 100 ppm. No signs of toxicity were observed at any treatment level at any time, and no statistically significant differences were observed in histopathology, hematology, gross pathology and organ weights between treatment and control groups.
Carcinogenicity:	This material is not listed by IARC, NTP or OSHA as a carcinogen. No test data is available that indicates this material is a carcinogen.
Teratogenicity/ Reproduction:	No data available. No data available.
Neurotoxicity:	No data available.
Mutagenicity:	Genotoxic activity was absent (i.e., DNA lesions were not induced and mutagenic activity was not induced) when tested using the following tests: DNA single-strand breaks measurement in V79 cells, HGPRT gene mutation assay in V79 cells, and Salmonella/microsome test.

### SECTION 12: Ecological information

<u>12.1. Toxicity</u>	Aquatic LC50 (96h) Cyprinodon variegatus (sheepshead minnow) = 400 mg/L Aquatic LC50 (96h) Pimephales promelas (fathead minnow) = 403 mg/L
<u>12.2. Persistence and degradability</u>	Multiple tests have shown rapid biodegradation of Gamma Picoline in soil and water in acclimated aerobic systems. Degradation under anaerobic conditions may be slow. Based on environmental modeling, this material is not expected to be persistent in the environment, is not expected to bioaccumulate, and is not expected to be chronically toxic to fish.
<u>12.3. Bioaccumulative potential</u>	No data
<u>12.4. Mobility in soil</u>	No data
<u>12.5. Results of PBT and vPvB assessment</u>	Not available.
<u>12.6. Other adverse effects</u>	No data available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

US EPA Waste Number:	D001
Waste Classification: (per US regulations)	Ignitable. NOTE: Generator is responsible for proper waste characterization. State (USA) hazardous waste regulations may differ substantially from federal (USA) regulations.
Waste Disposal:	Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate





## SAFETY DATA SHEET

code according to the European Waste Catalogue (EWC) should be used. Note that disposal regulations may also apply to empty containers and equipment rinsates.

### SECTION 14: Transport information

<u>14.1. UN number</u>	UN2313
<u>14.2. UN proper shipping name</u>	Picolines
<u>14.3. Transport hazard class(es)</u>	3
<u>14.4. Packing group</u>	PG III
<u>14.5. Environmental hazards</u>	Not applicable
<u>14.6. Special precautions for user</u>	(4-Picoline) Not available.
NA Emergency Guidebook Numbers: 129	IMDG EMS: S-D F-E
<u>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</u>	Not applicable.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

OSHA Hazards: Health: Toxic. Corrosive. Physical: Combustible Liquid.

WHMIS Classification: Class B, Division 3: Combustible Liquid.  
Class E: Corrosive Material.  
Class D, Division 1, Subdivision B: Toxic Material.

Chemical Inventory Lists:	Status
TSCA:	Yes
EINECS:	203-626-4
Canada(DSL/NDL):	Yes - DSL
Japan:	5-3701
Korea:	KE-25316
Australia:	Yes
New Zealand:	Present
China:	Yes
Phillippines:	Yes
Switzerland:	G-3179

New Zealand GHS Classification: 3.1C, 6.1C dermal, 6.1C inhalation, 6.1C oral, 6.3A, 6.4A, 9.3B (Approval number: HSR004309)

Japan GHS Classification: Flammable liquids - Category 3: H226 Flammable liquid and vapour; Acute toxicity - Oral - Category 4: H302 Harmful if swallowed; Acute toxicity - Dermal - Category 3: H311 Toxic in contact with skin; Skin corrosion/irritation - Category 2: H315 Causes skin irritation; Serious eye damage/eye Irritation - Category



## SAFETY DATA SHEET

2A: H319 Causes serious eye irritation; Specific target organ toxicity - Single exposure - Category 3: H336 May cause drowsiness or dizziness; Specific target organ toxicity - Repeated exposure - Category 1: H372 Causes damage to organs through prolonged or repeated exposure (nervous system)

Korea (MOL) GHS Classification:	Not classified by this country.
Australia GHS Classification:	Not classified by this country.
Taiwan GHS Classification:	Flammable liquids - Category 3: H226 Flammable liquid and vapour; Acute toxicity - Oral - Category 4: H302 Harmful if swallowed; Acute toxicity - Dermal - Category 3: H311 Toxic in contact with skin; Skin corrosion/irritation - Category 2: H315 Causes skin irritation; Serious eye damage/eye Irritation - Category 2A: H319 Causes serious eye irritation; Specific target organ toxicity - Single exposure - Category 3: H335 May cause respiratory irritation
SARA 313:	Not applicable.
Reportable Quantities:	Not applicable.
State Regulations:	This product contains chemicals listed on the Pennsylvania Department of Labor and Industry Hazardous Substance List. This product contains chemicals listed on the Massachusetts Substance List for Right-to-Know Law.

### 15.2. Chemical safety assessment

A chemical safety assessment has been prepared for this product.

## SECTION 16: Other information

Full text of R phrases in Section 3:	R24: Toxic in contact with skin. R36/37/38: Irritating to eyes, respiratory system and skin. R20/22: Harmful by inhalation and if swallowed. R10: Flammable.
Legend of abbreviations:	ACGIH = American Conference on Governmental Industrial Hygienists. CAS = Chemical Abstracts Service. CERCLA = Comprehensive Environmental, Response, Compensation and Liability Act (1990). CFR = Code of Federal Regulations. DSL/NDSL = Domestic Substances List/Non-Domestic Substances List. EC = European Community. EEC = European Economic Community. EINECS = European Inventory of Existing Commercial chemical Substances. ELINCS = European List of Notified Chemical Substances. EU = European Union. GHS = Globally Harmonized System. LC = Lethal concentration.



## SAFETY DATA SHEET

LD = Lethal dose.  
MOL = Ministry of Labor.  
NEMA = National Emergency Management Agency.  
NFPA = National Fire Protection Association.  
NIOSH = National Institute of Occupational Safety and Health.  
NTP = National Toxicological Program.  
OSHA = Occupational Safety and Health Administration  
PEL = Permissible exposure limit.  
RQ = Reportable quantity.  
SARA = Superfund Amendments and Reauthorization Act of 1986.  
TLV = Threshold limit value.  
WHMIS = Workplace Hazardous Materials Information System.

**Precautionary Statement:** Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

Revision Date: May 25, 2011

Original Date of Issue: 26 March 1985

Issued By: Regulatory Management Department

Revision Details: Revised CLP classifications in section 2 to align with EC/1272/2008.

## SAFETY DATA SHEET

### eSDS Annex

eSDS Section	Exposure Scenario Content	
1.2 Use of Substance		Application for all ES
7.1 Handling	General occupational RMM and OC other than personal protective equipment	- Use of appropriate equipment:
		o Impervious secondary containment with volume greater than the largest container / vessel
		o Closed systems
		o Bonded and grounded tanks, lines and vessels
		o Applicable storage tank controls , i.e. pressure and temperature gauging, pressure relief venting with routing to safe areas
		o Applicable processing vessel controls, i.e. rupture discs with routing to overfill vessels of adequate capacity
		o Ventilation for storage areas
		o Processing in areas of good ventilation or in closed systems
		o Transfers in closed, dedicated lines
		o Electrical equipment with explosion proof rating
o Other equipment, including fire control systems, consistent with and required for the storage and use of flammable materials		
o Local Exhaust Ventilation: 90% efficiency		

## SAFETY DATA SHEET

		<ul style="list-style-type: none"> <li>o Fire extinguishing media: water fog, alcohol foam, carbon dioxide, dry chemical</li> </ul>
		<ul style="list-style-type: none"> <li>- Proper operations and storage conditions           <ul style="list-style-type: none"> <li>o Controls to maintain the substance at appropriate temperature and pressure</li> <li>o Isolation from uncontrolled heat sources, such as steam lines</li> </ul> </li> </ul>
		<ul style="list-style-type: none"> <li>□ Organization Controls           <ul style="list-style-type: none"> <li>o Store in well ventilated cool places</li> <li>o Proper labeling of the substance in storage and lines used ion transfer</li> <li>o Training of worker in substance hazards and associated precautions / actions</li> <li>o Training of employees on chemical process safety and emergency response</li> <li>o Access to SDS</li> <li>o Written operating procedures for storage, transfer, substance use and emergency</li> <li>o Monitor of substance vapor concentration prior to activities such as equipment maintenance and repair</li> <li>o Implementation of formal hot work procedures</li> <li>o Keep container tightly closed</li> <li>o Use of non sparking tools</li> <li>o Ground/bond container and receiving equipment</li> <li>o Keep away from ignition sources</li> <li>o Keep away from heat / sparks/ open flames/ hot surfaces</li> <li>o Keep away from oxidizers and acids</li> </ul> </li> </ul>

### SAFETY DATA SHEET

		<ul style="list-style-type: none"> <li>o Take precautionary measures against static discharge</li> </ul>		
		<ul style="list-style-type: none"> <li>o Management / Supervision in place to check that the RMMs in place are being used correctly and OCs followed</li> </ul>		
	Environmental RMM controlling emission from local exhaust ventilation (LEV), collective ventilation, or collection and disposal of spillage	<ul style="list-style-type: none"> <li>▫ Compliance with local water discharge regulations</li> </ul>		
		<ul style="list-style-type: none"> <li>▫ Compliance with local air discharge regulations</li> </ul>		
		<ul style="list-style-type: none"> <li>▫ Impermeable surfaces</li> </ul>		
		<ul style="list-style-type: none"> <li>▫ Avoid release to the environment</li> </ul>		
		<ul style="list-style-type: none"> <li>▫ Keep away from drains / Do not empty into drains</li> </ul>		
		<ul style="list-style-type: none"> <li>▫ Substance must not enter sewage system</li> </ul>		
		<ul style="list-style-type: none"> <li>▫ This material and its container must be disposed in a safe way as a hazardous waste</li> </ul>		
7.3 Specific Uses	Recommendations related to end products with specific uses	No uses defined		
8.1 Exposure limit values	DNELs		Acute Toxicity	Repeat Dose Toxicity

### SAFETY DATA SHEET

		Oral / Dermal systemic (mg/kg bw/day)	0.42	0.14
		Inhalation systemic (mg/m3)	22.8	7.6
		Oral / Dermal Local (mg/kg bw/day)	---	
	PNECs	Endpoint	Value	
		Aquatic freshwater	0.3 mg/l	
		Aquatic Marine	0.03 mg/l	
		Aquatic intermittent	3 mg/l	
		Micro-organisms	2 mg/l	
		Sediment freshwater	4.5 mg/kg dw	
		Sediment marine	0.45 mg/kg dw	
		Soil	0.73 mg/kg dw	
		Oral	NA	
8.2.1 Occupational exposure controls	Full range of specific occupational RMM and OC			
	Details on equipment if individual measures (PPE) is needed	☐ Wear protective clothing with long sleeves		



### SAFETY DATA SHEET

		<ul style="list-style-type: none"> <li>☐ Wear face shield or tight fitting chemical goggles</li> </ul>
		<ul style="list-style-type: none"> <li>☐ Wear chemically resistant gloves. Suitable glove materials including neoprene, PVC, nitrile rubber Control efficiency: 80%</li> </ul>
Summary of occupational RMM for all identified uses set out in the SDS		
	efficiency	☐ Local exhaust except outside unload : 90 %
	near vicinity	☐ Safety showers and eyewash stations in
		☐ Prevent formation of aerosols
		☐ Keep away from food, drink
	material	☐ Do not eat drink or smoke when using this
		☐ Avoid contact with skin and eyes
	spray	☐ Do not breathe dust/fume/gas/mist/vapours/
		☐ Avoid contact with skin and eyes
		☐ Contaminated work clothing should not be allowed out of workplace
		☐ Store protective clothing separately
	☐ Prevent formation of aerosols	
near vicinity	☐ Safety showers and eyewash stations in	

## SAFETY DATA SHEET

8.2.2 Environmental Exposure Controls	Information on the full range of RMM and OC, required to fulfill commitment under community environmental regulation	
	Summary of environmental RMM for all identified uses set out in the SDS	<ul style="list-style-type: none"> <li data-bbox="686 770 1333 961">☐ Compliance with local water discharge regulations</li> <li data-bbox="686 970 1333 1045">☐ Compliance with local air discharge regulations</li> <li data-bbox="686 1054 1333 1087">☐ Impermeable surfaces</li> <li data-bbox="686 1096 1333 1129">☐ Avoid release to the environment</li> <li data-bbox="686 1171 1333 1247">☐ Keep away from drains / Do not empty into drains</li> <li data-bbox="686 1255 1333 1289">☐ Substance must not enter sewage system</li> </ul>
13 Waste related measures		<ul style="list-style-type: none"> <li data-bbox="686 1333 1333 1465">☐ This material must be disposed of in a safe way, as a hazardous waste.</li> <li data-bbox="686 1474 1333 1583">☐ Clean / destroy container at approved facility. EU waste code: 15 01 10</li> <li data-bbox="686 1591 1333 1734">☐ Solids from waste water or air treatment: send to approved hazardous waste incinerator. EU waste code 16 10 01</li> </ul>

## SAFETY DATA SHEET

		□ Absorbents filter materials, wiping cloths and protective clothing: send offsite for incineration. EU waste code 15 02 02
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### Summary of RMM

Beta Picoline

Risk Management Measures are defined below:

- Proper labeling of the substance in storage and lines used for transfer
- Use of appropriate equipment:
  - o Bonded and grounded tanks, lines and vessels
  - o Applicable storage tank controls , i.e. pressure and temperature gauging, pressure relief venting with routing to safe areas
  - o Applicable processing vessel controls, i.e. rupture discs with routing to overfill vessels of adequate capacity
  - o Ventilation for storage areas
  - o Inside storage in rooms compliant for flammable materials
  - o Processing in areas of good ventilation, with local exhaust or in closed systems
  - o Transfers in closed, dedicated lines
  - o Electrical equipment with explosion proof rating
  - o Impervious secondary containment with volume greater than the largest container / vessel in the area
  - o Other equipment, including fire control systems, consistent with and required for the storage and use of flammable materials
  - o Fire extinguishing media: Water fog, Alcohol foam, Carbon Dioxide, Dry chemical
- Proper operations and storage conditions
  - o Controls to maintain the substance at appropriate temperature and pressure
  - o Isolation from uncontrolled heat sources, such as steam lines
- Organization Controls
  - o Written operating procedures for storage, transfer, substance use and emergency
  - o Keep away from heat/sparks/open flames/hot surfaces
  - o Ground / bond container and receiving equipment
  - o Take precautionary measures against static discharge
  - o Store in well ventilated area, keep cool
  - o Keep containers tightly closed
  - o No smoking



## SAFETY DATA SHEET

- o Monitor of substance vapor concentration prior to activities such as equipment maintenance and repair
- o Implementation of formal hot work procedures
- o Training of employees on chemical process safety and emergency response
- o Access to SDS
- o Use of non sparking tools
- o Avoid contact with strong acids and oxidizing agents