



# Safety Data Sheet

## Section 1. Preparation \ Substance Identification

**Chemical Name of Substance:** 1-(2-cyanoethyl)-2-ethyl-4-methylimidazole  
**Product Name:** Technicure® EMI-24-CN  
**Synonyms:** 2-Ethyl-4-methyl-1H-imidazole-1-propanenitrile

**Details of the supplier of the safety data sheet**

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## Section 2. Hazards Identification

**OSHA Hazards:** Toxic by ingestion, Irritant  
**GHS Classification:** Toxic if ingested or inhaled



**Signal Word:** Danger

Health	Environmental	Physical
Acute toxicity- Category 3 Eye Corrosion- Category 2 Respiratory Irritation- mild Skin Sensitization- Category 2 Target Organ Toxicity (Single) - Cat. Aspiration Toxicity- Cat. 2	Acute Aquatic Toxicity- N/A Chronic Aquatic Toxicity-	Liquid, Clear

**Risk Phrases:** R23/24/25: Toxic by inhalation, in contact with skin, and ingestion.  
 R36/37/38: Irritating to eyes respiratory system, and skin.

**Hazard Statements:**

H301 Toxic if swallowed.  
 H315 Causes skin irritation.  
 H318 Causes eye damage.  
 H335 May cause respiratory irritation.

**Precautionary statements:**

P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.  
 P280 Wear protective gloves/eye/face protection.  
 P301/310 IF SWALLOWED; immediately call a POISON CENTER or Physician.  
 P305+351+338 IF IN EYES; Rinse cautiously with copious amounts of tepid water for at least 15 minutes. Remove contact lenses, if present, before rinsing.

**Safety Phrases: S 37/39: Wear suitable gloves and eye/face protection.**

**Hazard Overview: Toxic if ingested or inhaled.** Avoid prolonged contact with this material. Overexposure may result in serious illness or death. Irritating to the skin and eyes upon contact. Inhalation causes mild to severe irritation to the lungs and respiratory tract. Inflammation to the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or occasionally, blistering.

**Potential Health Effects**

**Eye:** Causes painful eye irritation on contact.  
**Skin:** Cause skin irritation on contact  
**Ingestion:** Toxic if swallowed in excessive amounts.  
**Inhalation:** Causes severe irritation of the mucous membrane and upper respiratory tract.

**Carcinogenic Effects:** Not available.

**Mutagenic Effects:** Not available.

**Teratogenic Effects:** Not available.

**Developmental Toxicity:** Not available.

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**Section 3. Composition**

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<b>Name:</b> 1-(2-cyanoethyl)-2-ethyl-4-methylimidazole	<b>CAS Number:</b> 23996-25-0	<b>Wt. %:</b> 95-96
<b>Name:</b> 4-methylimidazole-2-ethyl-4(5)-methyl imidazole	<b>CAS Number:</b> 931-36-2	<b>Wt. %:</b> 4
<b>Name:</b> Acrylonitrile	<b>CAS Number:</b> 107-13-1	<b>Wt. %:</b> 500 ppm
<b>Formula:</b> C <sub>9</sub> H <sub>13</sub> N <sub>3</sub>		

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**Section 4. First Aid Measures**

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**Eyes:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Immediately flush skin with plenty of soap and water for at least 15 minutes, while removing any contaminated clothing. Seek medical attention if any unusual symptoms develop

**Ingestion:** Never give anything by mouth to an unconscious person. **Induce vomiting**, if conscious and alert, rinse mouth and drink 2-4 cupful's of water. Examine lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested, the absence of such signs is not conclusive.

**Inhalation:** Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Notes to Physician:** Treat symptomatically and supportively. Symptoms may mimic cyanide poisoning.

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**Section 5. Fire Fighting Measures**

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**Auto-Ignition Temperature:** N/A

**Flash Points:** CLOSED CUP: 176°C (349°F).

**Flammable Limits:** N/A.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...)  
**Warning:** Very toxic acrylonitrile gas may be produced in a fire or temperatures approaching 100 Deg C

**Fire Hazards in Presence of Various Substances:** Combustible in presence of open flames and sparks..

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

**SMALL FIRE:** Use DRY chemical powder.

**LARGE FIRE:** Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

**Special Remarks on Fire Hazards:** **Cyanide gas may be generated during any fire.** During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

**Special Remarks on Explosion Hazards:** None

**Section 6. Accidental Release Measures**

**Health and Safety Precautions: Toxic material!** Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements, or confined areas. Dike material if needed. Eliminate all sources of ignition.

**Measures for Cleaning / Collecting:** Contain the source of spill if it is safe to do so. Collect the spilled material by a method that controls vapor generation. Clean spill area thoroughly. Use appropriate tools to put the spilled liquid in a convenient waste disposal container. Finish cleaning the area by spreading soapy hot water on the contaminated surface and dispose of according to local and regional authority requirements.

**Measures for Environmental Protections:** Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

**Additional Consideration for Large Spills:** Non-essential personnel should be evacuated from affected area. Report all emergency situations immediately. Clean up operations should only be undertaken by trained personnel

This material is not regulated under RCRA or CERCLA. ("Superfund").

**Section 7. Handling & Storage**

**Handling Precautions: TOXIC, IRRITANT.** Avoid open handling to skin contact. Use local exhaust ventilation or perform work under hood/fume cupboard. If engineering controls are not available, a hierarchy of controls should be utilized, including PPE and administrative controls (See Section 8, Personal Protective Equipment).

**Avoid inhalation and contact with skin eyes, and clothing.** When handling, use appropriate personal protective equipment, protective clothing and gloves. Respiratory protection is required if aerosols or vapors can be generated during handling. All tools, exposed equipment or work area surfaces must be decontaminated after use, to avoid spread of contamination. Secondary containment is suggested during transportation of the compound. Minimize traffic through designated work areas.

**Storage:** Keep dry. Store in properly labeled and sealed containers. Keep away from heat, sparks and flames.

**Section 8. Exposure Controls \ Personal Protection**

**Exposure Limits:** Not established as a composite mixture.

Component	OSHA	TWA	PEL
Acrylonitrile		10 ppm	2 ppm

**Laboratory Scale:**

**Engineering Controls:** Engineering controls should be used as a primary means of containment. Perform operations in a ventilated enclosure. **Material is an inhalation hazard.**

**Personal Protective Equipment:** Wear safety glasses, protective gloves and a laboratory coat when handling this compound. Owing to the presence of health hazard characterization data, this material should be handled according to procedures designed to provide protection from known hazards. Respiratory protection shall be provided in instances where exposures to mists, aerosols or vapors are likely. Disposable PPE must be discarded after each use or completion of unit operation. Reusable PPE shall be decontaminated after each use. Wash hands and any exposed skin after removal of PPE.

**Plant Scale:**

**Engineering Controls:** Engineering controls shall be used as a primary means of containment. Handle material in

enclosed systems or under suitable local exhaust systems.

### Personal Protective Equipment:

Wear protective gloves, coverall, and protective boots when handling this compound. Respiratory protection must be worn to avoid the inhalation of the product. Respiratory protection must be provided in accordance with OSHA 29 CFR 1910.134. It may be an air purified full face or air supplied respirator.

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## Section 9. Physical & Chemical Properties

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<b>Specific Gravity</b>	0.95 gm/cm <sup>3</sup> @ 25°C (water =1)
<b>Melting Point</b>	11°C (51.8° F)
<b>Boiling Point</b>	246°C (474.8° F)
<b>Molecular Weight</b>	163.22 g/mole
<b>Molecular Formula:</b>	C <sub>9</sub> H <sub>13</sub> N <sub>3</sub>
<b>Appearance:</b>	Liquid, clear amber.
<b>Odor:</b>	Mild
<b>Solubility in Water:</b>	Not available
<b>Refractive Index</b>	1.507
<b>Vapor Pressure:</b>	Unknown
<b>Flash Point</b>	>110 C ( >230 F) Closed Cup
<b>Partial Coefficient: n octanol/water</b>	log Pow: 1.073

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## Section 10. Stability & Reactivity

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**Conditions to Avoid:** Excessive heat, light, moisture, and open air.

**Materials to Avoid:** Keep away from strong acids, bases, and oxidizers.

**Stability:** Stable under normal handling conditions.

**Hazardous Combustion/Decomposition of Product:** **May emit toxic acrylonitrile vapors above IDLH (83 ppm) if heated above 100 Deg C (212 F).** Material may emit toxic gases of combustion such as cyanide, carbon dioxide and carbon monoxide upon thermal decomposition.

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## Section 11. Toxicological Information

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**Signs and symptoms of Overexposure:** Overexposure may result in serious injury or death. Over exposure symptoms may include immediate eye and nasal irritation, headache, dizziness, reddening or blistering of the skin, itching of the skin, and nausea.

### Potential Health Effects:

#### Routes of exposure

Skin Contact: Irritation upon contact.

Skin Absorption: Reddening and possible blistering of the skin.

Eye Contact: Irritation upon contact. Severe eye damage may result.

Inhalation: **Toxic if inhaled** May cause irritation and burns to the mucous membranes and respiratory tract if inhaled in large quantities. Symptoms may include coughing and shortness of breath.

Ingestion: **Toxic if ingested.** May cause burning pain in the stomach, coughing, vomiting, diarrhea, mental confusion and weakness, and death.

Sensitization: None reported.

Respiratory: No allergic respiratory reaction noted.

Skin: No allergic skin reaction noted.

Target Organ: Not specifically identified

### Toxicity Data;

**Acute toxicity: No data available.**

LD50 Oral - rat – N/A

LD50 Dermal - rabbit – N/A

**Chronic Exposure** : Unknown.

**Carcinogenicity**

IARC: No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a Carcinogen or potential carcinogen by ACGIH

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 identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity: No data available.**

**Specific target organ toxicity: single exposure; (Globally Harmonized System)**

Inhalation: Toxic if inhaled May causes serious respiratory damage.

Ingestion: Toxic if swallowed.

**Specific target organ toxicity: repeated exposure; (Globally Harmonized System)**

Category-2. Presumed harmful to human health.

**Aspiration Hazard:** No data available

**Section 12. Ecological Information**

<b>Aquatic 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>PBT and vPvB assessment</b>	No data available
<b>Other adverse effects</b>	No data available

**Section 13. Disposal Consideration**

**Product**

Recycle to process if possible. Observe all federal, state, and local environmental regulations. 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.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

**Section 14. Transportation Information**



**DOT (US)**

UN-Number: 2810 Class: 6.1 Packing group: III

Proper shipping name: Toxic, liquids, organic, n.o.s. (2-Ethyl-4-methyl-1H-imidazole-1-propionitrile)

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG**

UN-Number: 2810 Class: 6.1 Packing group: III EMS-No: F-A, S-A  
Proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S. (2-Ethyl-4-methyl-1H-imidazole-1-propionitrile)  
Marine pollutant: No

**IATA**

UN-Number: 2810 Class: 6.1 Packing group: III  
Proper shipping name: Toxic liquid, organic n.o.s. (2-Ethyl-4-methyl-1H-imidazole-1-propionitrile)

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**Section 15. Regulatory Information**

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**US FEDERAL**

**OSHA Hazards:** Toxic by ingestion, Irritant,

**TSCA :** Material is listed on the TSCA inventory.

**RTECS:** N/A

**Health & Safety Reporting List:** N/A.

**Chemical Test Rules:** None of the chemicals in this product are under a Chemical Test Rule.

**TSCA Section 12b:** None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule:** None of the chemicals in this material have a SNUR under TSCA.

**CERCLA Hazardous Substances and corresponding RQs :**None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances:** N/A.

**SARA Section 313** No chemicals are reportable under Section 313.

**SARA Section 311/312 Hazards:** Acute Health hazard

**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**STATE :**

**California Prop 65:** California No Significant Risk Level: None of the chemicals in this product are listed.

**Massachusetts Right to Know Components: None**

**Pennsylvania Right to Know Components:**

2-Ethyl-4-methyl-1H-imidazole-1-propionitrile CAS#. 23996-25-0

**New Jersey Right TO Know Components:**

2-Ethyl-4-methyl-1H-imidazole-1-propionitrile CAS#. 23996-25-0

**European/International Regulations:**

**EINECS Number (EEC): 245-95-5**

European Labeling in Accordance with EC Directives

**WGK (Water Danger/Protection); No** information available.

**Canada - DSL/NDSL:** This product is listed on the DSL or NDSL list.

**Canada – WHMIS: Class D-1B: Material causing immediate and serious toxic effects. (TOXIC)**

**Japanese Regulatory Data: ENCS No. 5-401**

<b>Australia (NICNAS)</b>	<b>Not assessed</b>
<b>China (CCISS)</b>	<b>Listed</b>
<b>Korea</b>	<b>KE-13921</b>
<b>New Zealand (CCID)</b>	<b>Not assessed</b>
<b>Philippines (EMB)</b>	<b>listed</b>
<b>Taiwan (CSNN)</b>	<b>listed</b>

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#### **Section 16. Other Information**

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ACCI Specialty Materials provide the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. A properly trained person using this product intends this document only as a guide to the appropriate precautionary handling of the material. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose, ACCI Specialty Materials makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, ACCI Specialty Materials will not be responsible for damages resulting from use of or reliance upon this information.

#### **History**

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