

## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

*MSDS Name:* 5-Amino-4-imidazolecarboxamide hydrochloride  
*Synonyms:* 4-Amino-5-imidazolecarboxamide hydrochloride  
*Company Identification:* PI Chemicals Ltd.  
Building B, 633 E Shan Road, Pudong New Area  
Shanghai 200127, China  
*Telephone Number:* 86-21-58953700  
*Fax Number:* 86-21-58953701

### Section 2 - Product Information

*Catalog Number:* PI-31291  
*CAS Number:* 72-40-2  
*MDL Number:* MFCD00012704  
*EC Number:* 200-778-3  
*Purity:* 99%

### Section 3 - Physical and Chemical Properties

*Physical state:* powder  
*Color:* White or Grey-white  
*Odor:* Not determined  
*Molecular Formula:* C<sub>4</sub>H<sub>6</sub>N<sub>4</sub>O.H<sub>2</sub>O  
*Molecular Weight:* 162.58  
*Freezing/Melting Point:* 250-252 °C (dec.)(lit.)  
*Boiling Point:* Not determined  
*Flash Point:* Not determined  
*Autoignition Temperature:* Not determined  
*Refractive Index (n<sub>D20</sub>):* Not determined  
*Density:* Unavailable  
*Decomposition Temperature:* Not determined  
*Solubility:* Soluble in water

### Section 4 - Hazards Identification

*Eye:* Causes eye irritation.  
*Skin:* Causes skin irritation. Harmful if absorbed through the skin.  
*Ingestion:* May cause irritation of the digestive tract. Toxic if swallowed.

*Inhalation:* May be harmful if inhaled. Causes respiratory tract irritation.

### ***Section 5 - First Aid Measures***

*Eye:* Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

*Skin:* Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops and persists.

*Ingestion:* Get medical aid immediately. Wash mouth out with water.

*Inhalation:* Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

### ***Section 6 - Stability and Reactivity***

*Chemical Stability:* Stable under recommended temperatures and pressures.

*Materials to avoid:* Oxidizing agents.

*Conditions to Avoid:* Incompatible materials.

*Hazardous Decomposition Products:* Carbon monoxide and carbon dioxide, Hydrogen chloride (HCl), Nitrogen oxides(NO<sub>x</sub>), Hydrogen cyanide(prussic acid)

*Hazardous Polymerization:* Has not been reported.

### ***Section 7 - Handling and Storage***

*Handling:* Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

*Storage:* Store in cool, dry conditions in well sealed container. Away from oxidizing agents.Keep container tightly sealed.

### ***Section 8 - Personal Protection***

*Eyes:* Wear appropriate protective eyeglasses.

*Skin:* Wear appropriate protective gloves to prevent skin exposure.

*Clothing:* Wear appropriate protective clothing to prevent skin exposure.

*Respirators:* Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### ***Section 9 - Fire Fighting Measures***

*General Information:* As in any fire, wear a self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and protective clothing to prevent contact with skin and eyes.

*Extinguishing Media:* Use water spray, extinguishing powder, CO<sub>2</sub>, or appropriate foam.

## ***Section 10 - Accidental Release Measures***

*General Information:* Use proper personal protective equipment as indicated in Section 8.

*Spills/Leaks:* Vacuum or sweep up material and place into a suitable disposal container.

## ***Section 11 - Toxicological Information***

*RTECS#:* CAS# 72-40-2: NI3911000.

*LD50/LC50:* RTECS: NI3911000.

*Carcinogenicity:* 5-Amino-4-imidazolecarboxamide hydrochloride - Not listed as a carcinogen by ACGIH, IARC, NTP, OSHA or EPA.

## ***Section 12 - Environmental information***

Not available

## ***Section 13 - Disposal Consideration***

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

## ***Section 14 - Transport Information***

*IATA:* This substance is considered to be non-hazardous for transport.

*IMO:* This substance is considered to be non-hazardous for transport.

*RID/ADR:* This substance is considered to be non-hazardous for transport.

## ***Section 15 - Regulatory Information***

### *European/International Regulations*

European Labeling in Accordance with EC Directives

Hazard Symbols: Void

Indication of Danger: Void

Risk Phrases:

No data available

Safety Phrases:

No data available

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Canada

CAS# 72-40-2: Not available.

*US Federal*

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**TSCA**

CAS# 72-40-2 is not listed on the TSCA Inventory. It is for research and development use only.

***Section 16 - Additional Information***

*MSDS Creation Date:* Mar 22, 2010

*Update:* Aug 11, 2011

*The above information is believed to be accurate and represents the best knowledge available to us currently. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall PI Chemicals, be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, even if PI Chemicals has been advised of the possibility of such damages.*