

## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** 5-Fluorouracil  
**Synonyms:** 2,4-Dihydroxy-5-fluoropyrimidine, 5-FU  
5-Fluoro-2,4(1H,3H)-pyrimidinedione  
**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-16620  
**CAS Number:** 51-21-8  
**MDL Number:** MFCD00006018  
**EC Number:** 200-085-6  
**Purity:** 99%

### Section 3 - Physical and Chemical Properties

**Physical state:** Crystalline powder  
**Color:** White or almost white  
**Molecular Formula:**  $C_4H_3FN_2O_2$   
**Molecular Weight:** 130.08  
**Freezing/Melting Point:** 282 - 286 °C (540 - 547 °F) - dec.  
**Boiling Point:** Undetermined  
**Flash Point:** Undetermined  
**Autoignition Temperature:** Undetermined  
**Refractive Index (nD20):** Undetermined  
**Density:** Undetermined  
**Decomposition Temperature:** Undetermined  
**Solubility:** Undetermined

### Section 4 - Hazards Identification

**Eye:** Causes eye irritation.  
**Skin:** Causes skin irritation. Harmful if absorbed through the skin.  
**Ingestion:** May be harmful 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:** Get medical aid. 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:** Strong oxidizing agents, Strong bases.

**Conditions to avoid:** Heat, flames and sparks.

**Hazardous Decomposition Products:** Carbon oxides, hydrogen fluoride, nitrogen oxides(Nox).

**Hazardous Polymerization:** Has not been reported.

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

**Handling:** Avoid breathing dust, vapor, mist, or gas. Keep container tightly closed. Avoid contact with skin and eyes. Wash thoroughly after handling. Mechanical exhaust required.

**Storage:** Keep container tightly closed in a dry and well-ventilated place.

### **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 and Explosion Hazard Data**

**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, dry chemical, carbon dioxide, 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#51-21-8: Not available.

**LD50/LC50:** Oral LD50: LD50 Oral - rat - 230 mg/kg.

**Carcinogenicity:** 5-Fluorouracil  
–Not listed as a carcinogen by ACGIH, IARC, NTP, or OSHA.

### **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:** UN number: 2811 Class: 6.1 Packing group: III.

**IMO:** UN number: 2811 Class: 6.1 Packing group: III.

**RID/ADR:** UN number: 2811 Class: 6.1 Packing group: III.

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

#### **European/International Regulations**

European Labeling in Accordance with EC Directives

Hazard Symbols: Xn

Indication of Danger: Harmful

Risk Phrases:

R 22: Harmful if swallowed.

WGK (Water Danger/Protection)

CAS# 51-21-8: 3

### **Section 16 - Additional Information**

**MSDS Creation Date:** 17 July, 2008

**Update:** 9 December, 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.*

*For R&D Use Only.*