



# MATERIAL SAFETY DATA SHEET

## Section 1 - Product and Company Information

### Product detail

**Product Name:** Ketoconazole

**Synonym:** Piperazine, 1-acetyl-4-(4-((2-(2,4-dichlorophenyl)-2-(1H-imidazol-1-ylmethyl)-1,3-dioxolan-4-yl)methoxy)phenyl)-, cis-

**Chemical Formula:** C<sub>26</sub>H<sub>28</sub>CL<sub>2</sub>N<sub>4</sub>O<sub>4</sub>

### Manufacturer/Supplier

Lonwin Industry Group Limited

Address: Room A407, Tower A, Fagina Building, No 966 Huaxu Road, Qingpu District, Shanghai, 201702, P.R. China.

Tel: 86-21-59885030

Tax: 86-21-65080210

Website: <http://www.lonwinchem.com>

## Section 2 - Composition/Information on Ingredients

Product Name: Ketoconazole

CAS No.: 65277-42-1

Hazard Symbols: No

## Section 3 - Hazards Identification

### **Potential Acute Health Effects:**

Slightly hazardous in case of skin contact (irritant), of eye contact (irritant). Severe over-exposure can result in death.

### **Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE]. Classified Development toxin [NONE]. The substance is toxic to liver, endocrine.

## Section 4 - First Aid Measures

**Eye Contact:** NO known EFFECT on eye contact, rinse with water for a few minutes.

### **Skin Contact:**

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Serious Skin Contact:** Not available.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

### **Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention

### **Ingestion:**

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available

## Section 5 - Fire Fighting Measures

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...).

**Fire Hazards in Presence of Various Substances:** Slightly flammable to flammable 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, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available

### Section 6 - Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:** Use a shovel to put the material into a convenient waste disposal container.

### Section 7 - Handling and Storage

**Precautions:**

Keep locked up Keep away from heat Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust Wear suitable protective clothing If ingested, seek medical advice immediately and show the container or the label.

**Storage:**

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

### Section 8 - Exposure Controls / Personal Protection

**Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available

### Section 9 - Physical/Chemical Properties

**Physical state and appearance:** Solid.

**Odor:** Not available.

**Taste:** Not available

**Molecular Weight:** 531.48 g/mole  
**Color:** White Crystal Powder  
**pH (1% soln/water):** Not available  
**Boiling Point:** Not available  
**Melting Point:** Not available.  
**Critical Temperature:** Not available.  
**Specific Gravity:** Not available  
**Vapor Pressure:** Not applicable  
**Vapor Density:** Not available  
**Volatility:** Not available  
**Odor Threshold:** Not available  
**Water/Oil Dist. Coeff.:** Not available  
**Ionicity (in Water):** Not available.  
**Dispersion Properties:** Not available.  
**Solubility:** Not available

## Section 10 - Stability and Reactivity

### **Stability:**

The product  
is stable.

### **Instability**

#### **Temperature:**

Not available.

#### **Conditions**

#### **of Instability:**

Not available.

**Incompatibility with various substances:** Not available.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Not available. **Special Remarks on Corrosivity:** Not available. **Polymerization:** No.

### Section 11 - Toxicological Information

**Routes of Entry:** Absorbed through skin. Eye contact. Ingestion. **Toxicity to Animals:** Acute oral toxicity (LD50): 166 mg/kg [Rat]. **Chronic**

**Effects on Humans:**

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE]. Classified Development toxin [NONE]. The substance is toxic to liver, endocrine.

**Other Toxic Effects on Humans:** Slightly hazardous in case of skin contact (irritant).

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

### Section 12 - Ecological Information

**Ecotoxicity:** Not available. **BOD5 and COD:** Not available

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13 - Disposal Considerations

**Waste Disposal:**

### Section 14 - Transport Information

**DOT Classification:** Class 6.1: Poisonous material.

**Identification:** Shipping name: Toxic Solid, Organic, n.o.s. (Ketoconazole) UNNA: UN2811 PG: III

**Special Provisions for Transport:** Not available.

### Section 15 - Regulatory Information

**Federal and State Regulations:** No products were found.

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

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

**DSCL (EEC):**

R25- Toxic if swallowed. R40- Possible risks of irreversible effects. 62- Possible risk of impaired fertility.

**HMIS (U.S.A.):**

**Health Hazard:** 3

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** E

**National Fire Protection Association (U.S.A.):**

**Health:** 3

**Flammability:** 1

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses

## Section 16 - Other Information

### Warranty

The information above is believed to be accurate and represents the best information currently available to us. 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 **Lonwin Industry Group Limited** 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, howsoever arising, even if **Lonwin Industry Group Limited** has been advise the possibility of such damages.