

**SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

GHS Product identifier: Pharma-Chemical Piperazine Solution  
 Other means of identification: Piperazine Solution  
 Recommended use of the product and restrictions on use: For the removal of worms from poultry, pigs, and caged birds.  
 Supplier's Details: Pharmachem Australia Pty Ltd  
 Unit 6, 70 Fison Ave West  
 Eagle Farm QLD 4009  
 Telephone: (07) 3868 0333

**Emergency phone number: 13 11 26 (Poisons Information Hotline)**

**SECTION 2 HAZARDS IDENTIFICATION**

Classification of Product:  
 This product is classified as not hazardous in accordance with the classification criteria of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Third Revised Edition.  
 In general, there are no significant data to suggest any specific hazard to humans. Exposure to small quantities is not expected to cause major adverse health effects.

**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients	Cas No.	Proportion
Piperazine Citrate	41372-10-5	450 g/L
Proprietary non-hazardous inert ingredients		Not applicable
QS 1L		

**SECTION 4 FIRST AID MEASURES**

This product has been registered by the APVMA and assessed by the Office of Chemical Safety (OCSEH) of the Commonwealth Department of Health and Aging and the following First Aid directions have been set (*FAISD Handbook, Handbook of First Aid Instructions, Safety Directions, Warning Statements, and General Safety Precautions for, Agricultural and Veterinary Chemicals*).

If poisoning occurs contact a doctor or Poisons Information Centre (Phone Australia 13 11 26)

However, the following information is provided should emergency exposure occur:

Eye Contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment.  
 Skin Contact: No known effect on skin contact, rinse with water for a few minutes.  
 Inhalation: Allow the victim to rest in a well ventilated area.  
 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.

**SECTION 5 FIRE FIGHTING MEASURES**

Suitable extinguishing media: Foam, dry chemical, carbon dioxide  
Hazards from combustion products : Noxious or toxic vapours (carbon and nitrogen oxides) may be released in a fire situation  
Special protective precautions and equipment for fire fighters: Fire fighters should wear self-contained breathing apparatus.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

Emergency procedures: Slippery when spilt. Contain spilled liquid with impervious material or inert absorbent material. Avoid accidents, clean up immediately. Wash area down with excess water.  
Methods and materials for containment and clean up: Collect absorbed material in drums for disposal in an approved local authority landfill. Wash down contaminated area with excess water after collecting absorbed material.

**SECTION 7 HANDLING AND STORAGE**

Precautions for safe handling: Handle with care to avoid accidental release of product  
Conditions for safe storage, including any incompatibilities: Store below 30°C (Room Temperature) in the original container out of direct sunlight.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

National exposure standards: No values set for this material  
Biological limit values: No values set for this material  
Engineering controls: Natural ventilation only required  
Personal protective equipment: No specific personal protective equipment required.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Yellow, transparent free flowing liquid.  
Solubility: Soluble in water

**SECTION 10 STABILITY AND REACTIVITY**

Chemical stability: Stable  
Conditions to avoid: Protect from light and moisture  
Incompatible materials: Strong oxidizing agents  
Hazardous decomposition products: Thermal decomposition or burning may produce toxic oxides of nitrogen and carbon.  
Hazardous reactions: Hazardous polymerisation has not been reported

**SECTION 11 TOXICOLOGICAL INFORMATION**

Routes of Exposure:  
Exposure to Piperazine Solution can occur through ingestion and eye or skin contact. The major routes of exposure are expected to be eye and skin contact. There are no toxicology data available for Piperazine Solution.

Signs and symptoms of exposure: Not known.

Summary of Toxicology:

Toxicity to mammals (Piperazine Citrate):

Acute toxicity:

Acute oral LD <sub>50</sub>	Rats	11200 mg/kg
	Mice	13200 mg/kg
Acute dermal LD <sub>50</sub>	Rabbit	4000 mg/kg

Note: Piperazine citrate powder may cause transient eye irritation and discomfort and is reported as a mild skin irritant in rabbits. Ingestion of piperazine citrate is unlikely to cause any adverse effects.

**SECTION 12 ECOLOGICAL INFORMATION**

Ecotoxicity:

Piperazine salts form the same ionic species in the environment as piperazine itself, irrespective of the compound originally used. Therefore, the environmental implications of exposure to piperazine citrate are as for piperazine parent compound.

Toxicity to Aquatic Species (Piperazine):

Guppy ( <i>Poecilia reticulata</i> ):	LC <sub>50</sub>	>1800 mg/L
<i>Daphnia magna</i> :	EC <sub>50</sub> (48 hours)	21 mg/L

Persistence and degradability: Not readily biodegradable

Bioaccumulative potential: Bioaccumulation is not considered to be of major importance for piperazine.

**SECTION 13 DISPOSAL CONSIDERATIONS**

Disposal methods and containers: Do not burn unused product or containers. Dispose of unused product and containers in accordance with local authority requirements.

Special precautions for landfill: No special precautions required for landfill

**SECTION 14 TRANSPORT INFORMATION**

This material is not classified as Dangerous Goods under the Australian Dangerous Goods Code. No special precautions are required for transport of this material.

**SECTION 15 REGULATORY INFORMATION**

This product has been registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA). In granting registration to any product, the APVMA has exercised its legislative responsibility to ensure that the product is suitably formulated and properly labelled and, when used according to instructions is:

- safe to the host, the user, consumers and the environment;
- efficacious (that is, the product does the job it claims it shall do); and
- not unduly prejudicial to trade.

The APVMA uses the services of a number of Australian and State government agencies as advisers to help with some of these evaluations of applications for registration of agricultural and veterinary chemical products. These include:

- the Office of Chemical Safety (OCS) of the Commonwealth Department of Health and Ageing which:

- evaluates and reports on toxicology and metabolism studies; proposes first aid and safety directions; determines poison schedule classifications; and establishes acceptable daily intakes (ADIs) and acute reference doses (ARfD); and
- evaluates the occupational health and safety aspects of an application and recommends safety directions and occupational controls on use and advises on a Material Safety Data Sheet (MSDS);
- the Commonwealth Department of the Environment and Heritage (DEH) which evaluates environmental data and recommends appropriate use controls and instructions for the product that will protect the environment; and
- State and Territory departments responsible for agricultural and primary industries which evaluate and reports on efficacy and target crop or animal safety data for new agricultural chemicals and new uses of registered products. In some cases the APVMA contracts this work out to other agencies such as universities, the CSIRO or to other experts.

Although the ingredients in this material appear in the Australian Inventory of Chemical Substances (AICS), it has not been assessed by NICNAS (National Industrial Chemicals Notification and Assessment Scheme).

### SECTION 16 OTHER INFORMATION

#### References:

1. FAISD Handbook, Handbook of First Aid Instructions, Safety Directions, Warning Statements, and General Safety Precautions for, Agricultural and Veterinary Chemicals, (as updated)
2. Approved Criteria For Classifying Hazardous Substances, NOHSC:1008 (2004)
3. National Code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSC:2011]
4. AICS (Australian Inventory of Chemical Substances), Safework Australia
5. APVMA Manual of Requirements and Guidelines for Agricultural Chemicals, Version 4.1, (as updated)
6. ADI [Acceptable Daily Intake] List, Commonwealth Department of Health & Aged Care, TGA, (as updated)
7. The Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) 7<sup>th</sup> Edition
8. The Poisons Standard (as updated), National Drugs and Poisons Schedule Committee
9. Hazardous Substances Information System, Safework Australia (as updated)
10. Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Third Revised Edition, United Nations, New York and Geneva, 2009
11. NIOSH Pocket Guide to Chemical Hazards
12. Chemical Classification and Information Database (CCID) (as updated), New Zealand Environmental Protection Authority, <http://www.epa.govt.nz/search-databases/Pages/HSNO-CCID.aspx>

All information contained in this Material Safety Data Sheet is as accurate and up to date as possible. Since Pharmachem cannot anticipate or control the conditions under which this information may be used, each user should review the information in the specific context of the intended application. Pharmachem will not be responsible for damages of any nature resulting from use of or reliance upon the information. No expressed or implied warranties are given other than those implied as mandatory by Commonwealth State or Territory legislation.