1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers
Product name : Perphenazine

Product Number : P6402
Brand : Sigma
CAS-No. : 58-39-9

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
Company : Sigma-Aldrich Pte Ltd
1 Science Park Road
#02-14 The Capricorn
Singapore Science Park Road II
SINGAPORE 117528
SINGAPORE

Telephone : +65 6779 1200
Fax : +65 6779 1822

1.4 Emergency telephone number
Emergency Phone # : 1-800-262-8200

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, Oral (Category 4)
Skin sensitization (Category 1)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Harmful if swallowed. May cause sensitization by skin contact.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008 [CLP]
Pictogram

Signal word : Warning
Hazard statement(s) :
H302 : Harmful if swallowed.
H317 : May cause an allergic skin reaction.

Precautionary statement(s) :
P280 : Wear protective gloves.

Supplemental Hazard Statements : none

Hazard symbol(s)  

R-phrase(s)  
R22 Harmful if swallowed.  
R43 May cause sensitization by skin contact.  

S-phrase(s)  
S28 After contact with skin, wash immediately with plenty of water.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances  
Formula: \(C_{21}H_{26}ClN_{3}OS\)  
Molecular Weight: 403.97 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perphenazine</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>58-39-9</td>
</tr>
<tr>
<td>EC-No.</td>
<td>200-381-5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice  
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled  
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact  
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact  
Flush eyes with water as a precaution.

If swallowed  
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed  
Parkinson-like symptoms, Headache, Drowsiness, sedation, Dizziness, Nausea, Vomiting, Gastrointestinal disturbance, nervousness, Rash, hypotension, Palpitation, Tightness of; muscles, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed  
no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture  
Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas

5.3 Advice for firefighters  
Wear self contained breathing apparatus for fire fighting if necessary.
5.4 Further information
  no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
  Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure
  adequate ventilation. Avoid breathing dust.

6.2 Environmental precautions
  Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
  Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed
  containers for disposal.

6.4 Reference to other sections
  For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
  Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
  Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire
  protection.

7.2 Conditions for safe storage, including any incompatibilities
  Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
  Recommended storage temperature: 2 - 8 °C

7.3 Specific end uses
  no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.2 Exposure controls
  Appropriate engineering controls
  Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and
  at the end of workday.

Personal protective equipment
  Eye/face protection
  Face shield and safety glasses. Use equipment for eye protection tested and approved under
  appropriate government standards such as NIOSH (US) or EN 166(EU).

  Skin protection
  Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique
  (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of
  contaminated gloves after use in accordance with applicable laws and good laboratory practices.
  Wash and dry hands.
  The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and
  the standard EN 374 derived from it.

  Body Protection
  Complete suit protecting against chemicals. The type of protective equipment must be selected
  according to the concentration and amount of the dangerous substance at the specific workplace.

  Respiratory protection
  For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher
  level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges.
9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: solid

b) Odour
   no data available

c) Odour Threshold
   no data available

d) pH
   no data available

e) Melting point/freezing point
   no data available

f) Initial boiling point and boiling range
   no data available

g) Flash point
   no data available

h) Evaporation rate
   no data available

i) Flammability (solid, gas)
   no data available

j) Upper/lower flammability or explosive limits
   no data available

k) Vapour pressure
   no data available

l) Vapour density
   no data available

m) Relative density
   no data available

n) Water solubility
   no data available

o) Partition coefficient: n-octanol/water
   no data available

p) Autoignition temperature
   no data available

q) Decomposition temperature
   no data available

r) Viscosity
   no data available

s) Explosive properties
   no data available

t) Oxidizing properties
   no data available

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Light.

10.5 Incompatible materials

no data available
10.6 Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - rat - 318 mg/kg

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
May cause allergic skin reaction.

Germ cell mutagenicity
no data available

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

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion Harmful if swallowed.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.

Signs and Symptoms of Exposure
Parkinson-like symptoms, Headache, Drowsiness, sedation, Dizziness, Nausea, Vomiting, Gastrointestinal disturbance, nervousness, Rash, hypotension, Palpitation, Tightness of; muscles, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available
12.6 Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. 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.

14. TRANSPORT INFORMATION
14.1 UN number
ADR/RID: -  IMDG: -  IATA: -

14.2 UN proper shipping name
ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3 Transport hazard class(es)
ADR/RID: -  IMDG: -  IATA: -

14.4 Packaging group
ADR/RID: -  IMDG: -  IATA: -

14.5 Environmental hazards
ADR/RID: no  IMDG Marine pollutant: no  IATA: no

14.6 Special precautions for user
no data available

15. REGULATORY INFORMATION
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION

Further information
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