1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT NAME : Picloram 240G/L SL

COMPANY NAME: Global Agrichemical (PTY) LTD

ADDRESS: Unit 7, 108 Battery Park, Bofors Circle, Epping
          Industria 2, 7460 PO Box 39027, Crawford, 7770,
          Cape Town, South Africa

PHONE No: +27 21 534 4734

2. COMPOSITION / INFORMATION ON INGREDIENTS:

COMMON NAME: Picloram potassium salt 240 g/l
CAS NO: 002545-60-0
EINECS NO: 219-829-6

Inert ingredients Balance
NIOSH/RTEC no: TJ7525000 (for acid)
UN No.: Not regulated
USE : Herbicide

3. HAZARD IDENTIFICATION:

Harmful to aquatic organisms. May cause sensitisation by skin contact. May cause severe eye irritation.
4. FIRST-AID MEASURES:

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

**EYES:**
Irrigate immediately with water for at least 5 minutes. Consult a physician if irritation persists.

**SKIN:**
Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Wash contaminated clothing before reuse.

**INGESTION:**
Do not induce vomiting. Call a physician. The decision of whether to induce vomiting or not should be made by an attending physician.

**INHALATION:**
Remove to fresh air. Consult a physician.

**NOTE TO PHYSICIAN:**
Supportive care. Treatment based on judgement of the physician in response to symptoms of the patient.

5. FIRE-FIGHTING MEASURES:

**EXTINGUISHING MEDIA:** Water fog or fine spray. Carbon dioxide. Dry chemical. Foam.

**HAZARDOUS COMBUSTION PRODUCTS:**
During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.

**FIRE-FIGHTING EQUIPMENT:**
Wear protective clothing and use self-contained breathing apparatus.

**ADDITIONAL INFORMATION:**
Keep containers cool by spraying with water. Contain runoff to prevent entry into water or drainage systems.

6. ACCIDENTAL RELEASE MEASURES:

**PERSONAL PRECAUTIONS**
Wear appropriate safety clothing and eye/face protection (see section 8). Prevent skin contact.
ENVIRONMENTAL PRECAUTIONS
Do not wash into sewers or into any body of water. Advise water authority if spillage has entered water course or drainage system.

METHODS OF CLEANING UP
Soak up with sand or other non-combustible absorbent material and place into containers for disposal. For large spills, barricade area and consult manufacturer. If further assistance is required, telephone the emergency contact number.

7. HANDLING AND STORAGE: HANDLING
Use good personal hygiene. Do not consume or store food in the work area. Wash hands and exposed skin before eating, drinking or smoking and after work. Avoid skin contact. Remove contaminated clothing immediately and wash skin area with plenty of water.

STORAGE
Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children.

8. EXPOSURE CONTROL / PERSONAL PROTECTION:

EXPOSURE GUIDELINE(S):
Picloram: ACGIH Threshold Limit Value (TLV) is 10 mg/m$^3$ TWA-8 hours.

ENGINEERING CONTROLS:
Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION:
When airborne exposure guidelines and/or comfort levels may be exceeded, use an approved air-purifying respirator. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.
For brief contact, no precautions other than clean body-covering clothing and chemical resistant gloves should be needed. For emergency conditions: Use protective clothing impervious to this material. Selection of specific items will depend on operation.

EYE /FACE PROTECTION:
Use safety glasses. Where contact with the liquid is likely, chemical goggles are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES:

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPEARANCE</td>
<td>Dark brown liquid</td>
</tr>
<tr>
<td>REL. DENSITY (water=1)</td>
<td>1.148 g/m3 (approx)</td>
</tr>
<tr>
<td>BOILING POINT</td>
<td>100°c (approx)</td>
</tr>
<tr>
<td>PH</td>
<td>9.0 - 11.2</td>
</tr>
<tr>
<td>VAPOR PRESSURE</td>
<td>22 mmHg/20°C</td>
</tr>
<tr>
<td>FLASH POINT</td>
<td>(approx) &gt;100°C (TCC)</td>
</tr>
<tr>
<td>WATER SOLUBILITY</td>
<td>Miscible</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY:

CONDITIONS TO AVOID: Avoid extremes of temperature
CHEMICAL STABILITY: Is stable under normal storage conditions
MATERIALS TO AVOID: Strong basic, acidic or oxidising materials
HAZARDOUS DECOMPOSITION PRODUCTS: None under normal conditions of storage and use

11. TOXICOLOGY INFORMATION:

INGESTION
Single dose oral toxicity is considered to be low. The oral LD50 for rats is >5000 mg/kg
The dermal LD50 for rabbits is >5000 mg/kg. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Prolonged or repeated exposure may cause slight skin irritation.

SENSITISATION
Sensitising to guinea pig skin

EYE CONTACT
May cause severe eye irritation. Corneal injury is unlikely. Effects likely to heal readily

INHALATION
No adverse effects anticipated by this route of exposure incidental to proper handling. The LC50 for rats for 4 hours is >8.11 mg/L.

12. ECOLOGICAL INFORMATION: Assessment largely or completely based on data for active ingredient.

DEGRADATION & PERSISTENCE:
The major route of degradation is by photolysis and photodegradation. Microbial degradation leads to formation of parent acid which undergoes further degradation. Half-life of the parent acid in soil is dependent on conditions and is approximately 10-278 days. Bio-concentration potential is low (BCF <100 or Log Pow <3).

AQUATIC TOXICITY
Based on the acid. Slightly toxic to aquatic organisms. Acute oral LC50 for daphnids is reported to be 68 mg/L. Algal toxicity EC50 for green algae is 37mg/L

Based on data for the formulation.
Acute LC50 for sheepshead minnow (Cyprinodon variegatus) is >100 mg/L AVIAN

TOXICITY
Based on data for the formulation. Practically non-toxic to birds. Dietary LC50 for mallard duck is >10mg/kg of diet. Dietary LC50 for bobwhite quail is >10mg/kg in the diet.

OTHER INFORMATION
Active ingredient. Material is practically non-toxic to bees on an acute basis.
13. DISPOSAL CONSIDERATIONS:

Do not contaminate ponds, waterways or ditches with chemical or used container. Wash out thoroughly. Container and washings must be disposed of safely and in accordance with applicable regulations. The preferred options are to send to licensed reclaimer or to permitted incinerators. Do not re-use container for any purpose.

14. TRANSPORT INFORMATION:

Sample shipment not allowed by mail. Product is not classified for any mode of transportation.

15. REGULATORY INFORMATION:

Hazard symbol: Xi - irritant
Risk phrases: May cause sensitisation by skin contact (R43)
Irritating to eyes (R36)
Safety phrases: Keep out of reach of children (S2)
Keep away from food, drink and animal feeding stuffs. (S13) When using do not eat, drink or smoke (S20/21)
Avoid contact with skin (S24)
Wear suitable protective clothing, gloves and eye/face protection (S36/37/39)

16. OTHER INFORMATION:

Picloram 240G/L SL ................. is the property of Global Agrichemical (PTY) LTD

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.
All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors or omissions or the consequence thereof.

REFERENCES

• Similar product MSDS.
• The Pesticide Manual; Eleventh Edition; Editor Clive Tomlin; Crop Protection Publications, 1997.
• EXTOXNET, Pesticide Information Profiles, Revised June 1996. The primary files are maintained and archived at the Oregon State University.