MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT

Substance: Para Amino Phenol

Trade Name:
4-Aminophenol, 99.0% (PAP)

Synonyms:
4-Amino-1-Hydroxybenzene; 4-Aminophenol; 4-Hydroxyaniline; 4-Hyroxyaniline; P-minophenol.

2. COMPOSITION, INFORMATION ON INGREDIENTS

Component: 4-Aminophenol
Cas Number: 123-30-8
Molecular Formula: C₆H₇NO
Molecular Weight: 109
Ec Number (Einecs): 204-616-2
Percentage: 99.0%

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance:
Very slightly beige solid.
Warning! Harmful if swallowed. May cause allergic respiratory and skin reaction. May be harmful if inhaled. May cause eye and skin irritation. May cause respiratory tract irritation. Light sensitive. Air sensitive.

Target Organs: Blood, respiratory system, skin.

Potential Health Effects

Eye: May cause eye irritation.
**Skin:** May cause skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

**Ingestion:** Harmful if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, and death.

**Inhalation:** Causes respiratory tract irritation. May cause asthmatic attacks due to allergic sensitization of the respiratory tract. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown blood. May cause methemoglobinemia.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis.

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### 4. FIRST AID MEASURES

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**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. Notes to

**Physician:** Treat symptomatically and supportively.

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### 5. FIRE FIGHTING MEASURES

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

**Extinguishing Media:**
In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.
Flash Point: > 188 Deg C (> 370.40 Deg F)

Autoignition Temperature: Not Applicable.

Explosion Limits, Lower: Not Available.

Upper: Not Available.

6. 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. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

7. HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Do not ingest or inhale.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits: Chemical Name ACGIH NIOSH OSHA - Final PELs 4-Aminophenol none listed none listed none listed Aminophenol none listed none listed none listed OSHA Vacated PELs: 4-Aminophenol: No OSHA Vacated PELs are listed for this chemical. Amino phenols: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment
**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Solid

**Appearance:** Very Slightly Beige

**Odor:** None Reported.

**Ph:** Not Available.

**Vapor Pressure:** 0.075 Mm Hg @ 20 Deg C

**Vapor Density:** Not Available.

**Evaporation Rate:** Not Available.

**Viscosity:** Not Available.

**Boiling Point:** 284 Deg C (Decomposes)

**Freezing/Melting Point:** 188 Deg C

**Decomposition Temperature:** 284 Deg C

**Solubility:** 1.5 G/100 ML In Water.

**Specific Gravity/Density:** Not Available.

**Molecular Formula:** C6h7no

**Molecular Weight:** 109.13
10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures. May discolor on exposure to light. Conditions to Avoid: Light, dust generation, exposure to air. Incompatibilities with Other Materials: Acids, chloroformates, strong oxidizing agents.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide. Hazardous Polymerization: Has not been reported.

11. TOXICOLOGICAL INFORMATION

Rtecs#: 

CAS# 123-30-8: SJ5075000 
CAS# 27598-85-2 unlisted. 
LD50/LC50: 
CAS# 123-30-8:
- **Draize Test, Rabbit, Eye**: 100 Mg Mild;  
- **Draize Test, Rabbit, Skin**: 12500 Ug/ 24h Mild;  
- **Inhalation, Rat**: Lc50 = >5 Mg/M3/1h;  
- **Oral, Rabbit**: Ld50 = 10 Gm/Kg;  
- **Oral, Rat**: Ld50 = 375 Mg/Kg;  
- **Skin, Rabbit**: Ld50 = >10 Gm/Kg; 

CAS# 27598-85-2:
- Carcinogenicity: 
  CAS# 123-30-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65. 
  CAS# 27598-85-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65. 

Epidemiology: No Data Available. 

Teratogenicity: No Data Available.

12. ECOLOGICAL INFORMATION  ECOTOXICITY

Daphnia: 
Fathead Minnow: EC50=0.032 mg/l; cas#123-30-8Fish: Fathead Minnow: LC50 = 24 mg/L; 96 Hr.; Static Conditions, 22 degrees C Fish: Goldfish: LC50 = 2 mg/L; 48 Hr.; 
Unspecified
**Conditions bacteria:** Phytobacterium phosphoreum: EC50 = 0.77-3.97 mg/L; 5,15,30 minutes; Microtox test No data available.

**Environmental:** No information available.

**Physical:** No information available.

**Other:** LC50=0.32 mg/l in Gammarus fasciatus and Dugesia tigrina; CAS#123-30-8: LC50=0.032 mg/l in Pimephales promelas and 3.2 mg/l in Helisoma trivolvis.

### 13. DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.

### 14. TRANSPORT INFORMATION

**UN number**
ADR/RID: 2512  
IMDG: 2512  
IATA: 2512

**UN proper shipping name**
ADR/RID: AMINOPHENOLS  
IMDG: AMINOPHENOLS  
IATA: Aminophenols

**Transport hazard class(es)**
ADR/RID: 6.1  
IMDG: 6.1  
IATA: 6.1

**Packaging group**
ADR/RID: III  
IMDG: III  
IATA: III

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

**Special precautions for user:** No data available

### 15. REGULATORY INFORMATION

**Hazard Symbols:** Xn N

**Risk Phrases:**
R 20/22 Harmful by inhalation and if swallowed. R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R 68 Possible risk of irreversible effects.

Safety Phrases: S 36/37 Wear suitable protective clothing and gloves. S 60 This material and its container must be disposed of as hazardous waste. S 28 After contact with skin, wash immediately with plenty of water S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Wgk (Water Danger/Protection)
   CAS# 123-30-8: 2   CAS# 27598-85-2: No information available.

16. ADDITIONAL INFORMATION MSDS

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 event shall Jay Organics 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 Jay Organics has been advised of the possibility of such damages.