

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

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## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** 3-aminophenol

### 1.2 Other means of identification

**Product number** -  
**Other names** m-Hydroxyaniline; Futramine EG; amino-3-hydroxybenzene

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research use.  
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Yansheng Internet Technology Co., Ltd  
**Address** 513, A3 / F, green space future center, Fengxian District, Shanghai, 201400, China  
**Telephone** +86-4000-6969-66

### 1.5 Emergency phone number

**Emergency phone number** +86-4000-6969-66  
**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

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## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral  
Acute toxicity - Category 4, Inhalation  
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Warning  
**Hazard statement(s)** H302 Harmful if swallowed  
H332 Harmful if inhaled  
H411 Toxic to aquatic life with long lasting effects

**Precautionary statement(s)**

**Prevention** P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

<b>Response</b>	P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P301+P317 IF SWALLOWED: Get medical help. P330 Rinse mouth. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P317 Get medical help. P391 Collect spillage.
<b>Storage</b>	none
<b>Disposal</b>	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

### 2.3 Other hazards which do not result in classification

no data available

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
3-aminophenol	3-aminophenol	591-27-5	209-711-2	100%

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### 4.2 Most important symptoms/effects, acute and delayed

SYMPTOMS: Symptoms of exposure to this compound may include irritation of the skin, eyes and mucous membranes. ACUTE/CHRONIC HAZARDS: This chemical causes irritation of the eyes, skin and mucous membranes. When heated to decomposition it emits toxic fumes. (NTP, 1992)

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Aniline and related compounds

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## SECTION 5: Fire-fighting measures

## 5.1 Suitable extinguishing media

Use dry chemical, carbon dioxide, water spray, or alcohol foam extinguishers ... If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Notify local health and fire officials and pollution control agencies. From a secure, explosion-proof location, use water spray to cool exposed containers. If cooling streams are ineffective (venting sound increases in volume and pitch, tank discolors or shows any signs of deforming), withdraw immediately to a secure position ... The only respirators recommended for fire fighting are self-contained breathing apparatuses that have full facepieces and are operated in a pressure-demand or other positive-pressure mode. Aminophenols

## 5.2 Specific hazards arising from the chemical

Flash point data for this chemical are not available. It is probably combustible. (NTP, 1992)

## 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

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# SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

## 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

## 6.3 Methods and materials for containment and cleaning up

Spill handling: keep dust under control. Use a vacuum or wet method to reduce dust during clean-up. Do not sweep. Evacuate persons not wearing protective equipment from area of spill or leak until clean-up is complete. Remove all ignition sources. Collect powdered material in the most convenient and safe manner and deposit in sealed containers. Ventilate area after clean-up is complete. It may be necessary to contain and dispose of this chemical as a hazardous waste. If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Contact your Department of Environmental Protection of your regional office of the federal EPA for specific recommendations. Aminophenols

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# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

## 7.2 Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in a cool, well-ventilated area. Aminophenols must be stored to avoid contact with strong oxidizers (such as chlorine, bromine, and fluorine), since violent reactions occur. Aminophenols

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# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

### Occupational Exposure limit values

Component	3-aminophenol	
CAS No.	591-27-5	
	Limit value - Eight hours	Limit value - Short term

<b>Component</b>	3-aminophenol			
<b>CAS No.</b>	591-27-5			
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Latvia</b>		1		
	<b>Remarks</b>			

#### Biological limit values

no data available

## 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

## 8.3 Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. 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.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties and safety characteristics

<b>Physical state</b>	Solid. Crystalline.
<b>Colour</b>	White.
<b>Odour</b>	no data available
<b>Melting point/freezing point</b>	103.4 °C. Atm. press.:960 hPa.
<b>Boiling point or initial boiling point and boiling range</b>	110.5 °C. Atm. press.:960 hPa.
<b>Flammability</b>	no data available
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	106 °C. Atm. press.:960 hPa.
<b>Auto-ignition temperature</b>	Atm. press.:960 hPa. Remarks:3-aminophenol did not catch fire on being exposed to air at room temperature of 35°C.
<b>Decomposition temperature</b>	no data available
<b>pH</b>	7.06. Remarks:Neutral.
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	Partially miscible with water
<b>Partition coefficient n-octanol/water</b>	log Pow = 0.183. Temperature:20 °C.
<b>Vapour pressure</b>	0.248 Pa. Temperature:25 °C.
<b>Density and/or relative density</b>	0.669 g/cm <sup>3</sup> . Temperature:35 °C.

**Relative vapour density** no data available

**Particle characteristics** no data available

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## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

This compound may be sensitive to prolonged exposure to air and light. Slightly soluble in water.

### **10.2 Chemical stability**

no data available

### **10.3 Possibility of hazardous reactions**

M-AMINOPHENOL may react with strong oxidizers and mineral acids or bases. (NTP, 1992)

### **10.4 Conditions to avoid**

no data available

### **10.5 Incompatible materials**

Strong oxidants. Aminophenols

### **10.6 Hazardous decomposition products**

When heated to decomposition it emits toxic fumes of /nitrogen oxides/.

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## **SECTION 11: Toxicological information**

### **Acute toxicity**

- Oral: maximal non-lethal dose - rat (female) - > 500 mg/kg bw. Remarks:Based on overall effects.
- Inhalation: LC50 - rat - 1 162 mg/m<sup>3</sup> air.
- Dermal: LD50 - Mammal - species unspecified - 6 400 mg/kg.

### **Skin corrosion/irritation**

no data available

### **Serious eye damage/irritation**

no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

no data available

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

no data available

### **STOT-repeated exposure**

no data available

### **Aspiration hazard**

no data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

- Toxicity to fish: LC50 - Danio rerio (previous name: Brachydanio rerio) - 22.34 mg/L - 72 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 1.1 mg/L - 48 h. Remarks: Intoxication.
- Toxicity to algae: LDLo - Microcystis aeruginosa - 20 mg/L - 24 h.
- Toxicity to microorganisms: IC50 - Tetrahymena pyriformis - 361 mg/L - 40 h.

### 12.2 Persistence and degradability

AEROBIC: 3-Aminophenol, present at 100 mg/L, reached 0% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(1). 3-Aminophenol is generally resistant to biodegradation in a series of screening tests; 0% theoretical BOD was reached in a 14-day MITI test, 0% CO<sub>2</sub> was reported over 28 days in the Sturm test, 7% dissolved organic carbon removal over 19 days was reported in a conventional OECD screening test and 0% theoretical BOD was reached in 30 days in a conventional closed bottle test(2). In the Zahn-Wellens test, 93% dissolved organic carbon removal was reported after 10 days while in a coupled units test, 94% dissolved organic carbon was removed after 14 days(2). When the inoculum was preacclimated, 97% dissolved organic carbon removal in 19 days was reported in the modified OECD screening test but only 1% theoretical BOD was reached in 30 days in the closed bottle test(3). A ring test using a respirometric method similar to the Modified MITI I method (OECD Method 310C) was conducted on 3-aminophenol; after 28 days, 6 of 12 laboratories reported 0% theoretical oxygen demand, with the remaining laboratories reporting mean and median of 5 and 27% theoretical oxygen demand, respectively(4). In a wastewater treatment simulation test with a 13-hour sewage retention time, 99% dissolved organic carbon removal was reported following a lag phase of 29 days(5).

### 12.3 Bioaccumulative potential

BCFs of <4 and <40 in carp (*Cyprinus carpio*) were reported for a 6 week study using 1 and 0.1 mg/L 3-aminophenol, respectively(1). According to a classification scheme(2), these BCFs suggest the potential for bioconcentration in aquatic organisms is low(SRC).

### 12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of 3-aminophenol can be estimated to be 90(SRC). According to a classification scheme(2), this estimated Koc value suggests that 3-aminophenol is expected to have high mobility in soil. However, anilines are expected to bind strongly to humus or organic matter in soils due to the high reactivity of the aromatic amino group(3,4), suggesting that mobility may be much lower in some soils(SRC). Measured pKa values are 4.37 and 9.815(5) for the amine and hydroxy functional groups, respectively(6). 3-Aminophenol is amphoteric and behaves either as a weak acid or weak base; the basic character usually predominates(7). At pH 7.7, 12% of added 3-aminophenol was sorbed by an organoclay(8).

### 12.5 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and

then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: UN2512 (For reference only, please check.)      IMDG: UN2512 (For reference only, please check.)      IATA: UN2512 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: AMINOPHENOLS (o-, m-, p-) (For reference only, please check.)      IMDG: AMINOPHENOLS (o-, m-, p-) (For reference only, please check.)      IATA: AMINOPHENOLS (o-, m-, p-) (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)      IMDG: 6.1 (For reference only, please check.)      IATA: 6.1 (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: III (For reference only, please check.)      IMDG: III (For reference only, please check.)      IATA: III (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: Yes      IMDG: Yes      IATA: Yes

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
3-aminophenol	3-aminophenol	591-27-5	209-711-2
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

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## SECTION 16: Other information

### Information on revision

Creation Date      July 15, 2019

Revision Date      July 15, 2019

### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

## References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

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