

**SAFETY DATA SHEET**

Creation Date 20-May-2010

Revision Date 29-March-2024

Revision Number 4

**1. Identification**

**Product Name** 4-Fluorophenol

**Cat No. :** A11945

**CAS-No** 371-41-5  
**Synonyms** No information available

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

**Details of the supplier of the safety data sheet****Company****Importer/Distributor**

Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

**Emergency Telephone Number**For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887**2. Hazard(s) identification****Classification****WHMIS 2015 Classification**

Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

|  |            |
|--|------------|
| <b>Acute oral toxicity</b>               | Category 4 |
| <b>Acute dermal toxicity</b>             | Category 4 |
| <b>Acute Inhalation Toxicity</b>         | Category 4 |
| <b>Skin Corrosion/Irritation</b>         | Category 2 |
| <b>Serious Eye Damage/Eye Irritation</b> | Category 2 |

**Label Elements****Signal Word**

Warning

**Hazard Statements**

Harmful if swallowed, in contact with skin or if inhaled

Causes skin irritation

Causes serious eye irritation

**Precautionary Statements****Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF ON SKIN: Wash with plenty of soap and water  
IF INHALED: Remove person to fresh air and keep comfortable for breathing  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Call a POISON CENTER/ doctor if you feel unwell  
Rinse mouth  
Take off contaminated clothing and wash it before reuse

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Hazards**

Harmful to aquatic life with long lasting effects

### 3. Composition/Information on Ingredients

| Component         | CAS-No   | Weight % |
|-------------------|----------|----------|
| Phenol, 4-fluoro- | 371-41-5 | <=100    |

### 4. First-aid measures

|  |   |
|--|---|
| <b>General Advice</b>                  | If symptoms persist, call a physician.  |
| <b>Eye Contact</b>                     | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.   |
| <b>Skin Contact</b>                    | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. |
| <b>Inhalation</b>                      | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.      |
| <b>Ingestion</b>                       | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.             |
| <b>Most important symptoms/effects</b> | None reasonably foreseeable.  |
| <b>Notes to Physician</b>              | Treat symptomatically   |

### 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam. Water mist may

|   |                                    |
|---|------------------------------------|
|   | be used to cool closed containers. |
| <b>Unsuitable Extinguishing Media</b>   | No information available           |
| <b>Flash Point</b>                      | 68 °C / 154.4 °F                   |
| <b>Method -</b>                         | No information available           |
| <b>Autoignition Temperature</b>         | No information available           |
| <b>Explosion Limits</b>                 |                                    |
| <b>Upper</b>                            | No data available                  |
| <b>Lower</b>                            | No data available                  |
| <b>Sensitivity to Mechanical Impact</b> | No information available           |
| <b>Sensitivity to Static Discharge</b>  | No information available           |

**Specific Hazards Arising from the Chemical**

Combustible material. Containers may explode when heated.

**Hazardous Combustion Products**

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrocarbons. Gaseous hydrogen fluoride (HF). Fluorine.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

**Health**  
2

**Flammability**  
2

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

|   |  |
|---|--|
| <b>Personal Precautions</b>                 | Use personal protective equipment as required. Avoid dust formation. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges. |
| <b>Environmental Precautions</b>            | Should not be released into the environment. Do not flush into surface water or sanitary sewer system.   |
| <b>Methods for Containment and Clean Up</b> | Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Remove all sources of ignition.   |

## 7. Handling and storage

|                 |   |
|-----------------|---|
| <b>Handling</b> | Wear personal protective equipment/face protection. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. |
| <b>Storage.</b> | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Incompatible Materials. Strong oxidizing agents. Strong acids. Strong bases. Acid anhydrides. Acid chlorides.                         |

## 8. Exposure controls / personal protection

|                             |  |
|-----------------------------|--|
| <b>Exposure Guidelines</b>  | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.  |
| <b>Engineering Measures</b> | Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.<br>Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control |

hazardous materials at source

**Personal protective equipment****Eye Protection**  
**Hand Protection**Goggles  
Protective gloves

| Glove material | Breakthrough time | Glove thickness | Glove comments         |
|----------------|-------------------|-----------------|------------------------|
| Nitrile rubber | See manufacturers | -               | Splash protection only |
| Neoprene       | recommendations   |                 |                        |
| Natural rubber |                   |                 |                        |
| PVC            |                   |                 |                        |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified 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.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Recommended Filter type:** Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**

Prevent product from entering drains.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

|   |                               |
|---|-------------------------------|
| <b>Physical State</b>                         | Solid                         |
| <b>Appearance</b>                             | Beige                         |
| <b>Odor</b>                                   | Characteristic                |
| <b>Odor Threshold</b>                         | No information available      |
| <b>pH</b>                                     | 5-6 5% aq. sol                |
| <b>Melting Point/Range</b>                    | 44 - 49 °C / 111.2 - 120.2 °F |
| <b>Boiling Point/Range</b>                    | 185 °C / 365 °F 760 mmHg      |
| <b>Flash Point</b>                            | 68 °C / 154.4 °F              |
| <b>Evaporation Rate</b>                       | Not applicable                |
| <b>Flammability (solid,gas)</b>               | No information available      |
| <b>Flammability or explosive limits</b>       |                               |
| Upper   | No data available             |
| Lower   | No data available             |
| <b>Vapor Pressure</b>                         | No information available      |
| <b>Vapor Density</b>                          | Not applicable                |
| <b>Specific Gravity</b>                       | No information available      |
| <b>Solubility</b>                             | No information available      |
| <b>Partition coefficient; n-octanol/water</b> | No data available             |
| <b>Autoignition Temperature</b>               | No information available      |
| <b>Decomposition Temperature</b>              | No information available      |
| <b>Viscosity</b>                              | Not applicable                |
| <b>Molecular Formula</b>                      | C6 H5 F O                     |
| <b>Molecular Weight</b>                       | 112.1                         |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactive Hazard</b>                  | Yes   |
| <b>Stability</b>                        | Stable under normal conditions.   |
| <b>Conditions to Avoid</b>              | Avoid dust formation. Incompatible products. Heat, flames and sparks. Keep away from open flames, hot surfaces and sources of ignition. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Strong acids, Strong bases, Acid anhydrides, Acid chlorides  |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrocarbons, Gaseous hydrogen fluoride (HF), Fluorine                         |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.  |
| <b>Hazardous Reactions</b>              | None under normal processing.   |

## 11. Toxicological information

### Acute Toxicity

**Product Information** The toxicological properties have not been fully investigated

### **Component Information**

| Component         | LD50 Oral       | LD50 Dermal | LC50 Inhalation |
|-------------------|-----------------|-------------|-----------------|
| Phenol, 4-fluoro- | 340 mg/kg (rat) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available

### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

|                        |  |
|------------------------|--|
| <b>Irritation</b>      | Irritating to eyes, respiratory system and skin  |
| <b>Sensitization</b>   | No information available   |
| <b>Carcinogenicity</b> | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component         | CAS-No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------|----------|------------|------------|------------|------------|------------|
| Phenol, 4-fluoro- | 371-41-5 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

**Ecotoxicity**

Do not empty into drains. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

**Persistence and Degradability** Persistence is unlikely

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Will likely be mobile in the environment due to its water solubility.

| Component         | log Pow |
|-------------------|---------|
| Phenol, 4-fluoro- | 1.77    |

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

**DOT**

UN-No UN2811  
 Proper Shipping Name Toxic solid, organic, n.o.s.  
 Technical Name (4-FLUOROPHENOL)  
 Hazard Class 6.1  
 Packing Group III

**TDG**

UN-No UN2811  
 Proper Shipping Name Toxic solid, organic, n.o.s.  
 Hazard Class 6.1  
 Packing Group III

**IATA**

UN-No UN2811  
 Proper Shipping Name Toxic solid, organic, n.o.s.  
 Hazard Class 6.1  
 Packing Group III

**IMDG/IMO**

UN-No UN2811  
 Proper Shipping Name Toxic solid, organic, n.o.s.  
 Hazard Class 6.1  
 Packing Group III

### 15. Regulatory information

**International Inventories**

| Component         | CAS-No   | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS    | ELINCS | NLP |
|-------------------|----------|-----|------|------|---|-----------|--------|-----|
| Phenol, 4-fluoro- | 371-41-5 | -   | X    | X    | ACTIVE  | 206-736-0 | -      | -   |

| Component         | CAS-No   | IECSC | KECL     | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|-------------------|----------|-------|----------|------|------|------|------|-------|-------|
| Phenol, 4-fluoro- | 371-41-5 | X     | KE-17038 | X    | X    | X    | X    | X     | X     |

**Legend:**

X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

**Other International Regulations**

**Authorisation/Restrictions according to EU REACH** Not applicable

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component         | CAS-No   | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|-------------------|----------|----------------|------------------------------|---------------------------|--|
| Phenol, 4-fluoro- | 371-41-5 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

| Component         | CAS-No   | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-------------------|----------|---|--|----------------------------|------------------------------------|
| Phenol, 4-fluoro- | 371-41-5 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

**16. Other information**

**Prepared By** Product Safety Department  
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www.thermofisher.com

**Creation Date** 20-May-2010  
**Revision Date** 29-March-2024  
**Print Date** 29-March-2024  
**Revision Summary** New emergency telephone response service provider.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**