



# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 9/22/2017 Revision date: 4/26/2023 Supersedes: 3/1/2023 Version: 2.1

### SECTION 1: Identification

#### 1.1. Identification

Product form : Substance  
Substance name : 4-AMINOPHENOL (D7, 98%)  
CAS-No. : 123-30-8  
Product code : DLM-3674  
Formula : D2NC6D4OD  
Synonyms : 4-Hydroxyaniline

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Cambridge Isotope Laboratories, Inc.  
50 Frontage Rd  
01810  
ANDOVER, MA, 01810  
USA  
T 1-800-322-1174  
[cilsales@isotope.com](mailto:cilsales@isotope.com) - [www.isotope.com](http://www.isotope.com)

#### 1.4. Emergency telephone number

Emergency number : 1-703-741-5970  
Chemtrec 1-800-424-9300 24 hours

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (inhalation) Category 4	H332	Harmful if inhaled
Germ cell mutagenicity Category 2	H341	Suspected of causing genetic defects (Dermal, Inhalation, oral)
Hazardous to the aquatic environment – Acute Hazard Category 1	H400	Very toxic to aquatic life
Hazardous to the aquatic environment – Chronic Hazard Category 1	H410	Very toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H302+H332 - Harmful if swallowed or if inhaled  
H341 - Suspected of causing genetic defects (Dermal, Inhalation, oral)  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) :

P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.

# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment.  
P280 - Wear protective clothing, protective gloves.  
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell.  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P312 - Call a doctor, a POISON CENTER if you feel unwell.  
P330 - Rinse mouth.  
P391 - Collect spillage.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Name	Product identifier	%	GHS US classification
4-AMINOPHENOL (D7, 98%) (Main constituent)	CAS-No.: 123-30-8	100	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Muta. 2, H341 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : If medical advice is needed, have product container or label at hand. Call a physician immediately. Evacuate danger area.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Call a doctor.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Wash with plenty of soap and water, Get immediate medical advice/attention. Get medical advice/attention. Specific treatment (see Hazard pictograms (CLP) on this label).

First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. Harmful if swallowed. Stomach - Irregularities - Based on Human Evidence. This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
Symptoms/effects	: Suspected of causing genetic defects (in contact with skin, if inhaled, if swallowed).
Symptoms/effects after inhalation	: Harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: May be harmful in contact with skin. May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

### 5.2. Specific hazards arising from the chemical

No additional information available

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Wear recommended personal protective equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment as required. Wear respiratory protection. Do not breathe dust, mist, gas, spray, vapors, fume. Avoid contact with skin, eyes and clothing. Ensure adequate air ventilation. Evacuate unnecessary personnel. Evacuate danger area.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment	: Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal.
Methods for cleaning up	: This material and its container must be disposed of in a safe way, and as per local legislation.
Other information	: Dispose of materials or solid residues at an authorized site.

# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed	: Avoid all eye and skin contact and do not breathe vapor and mist. Avoid dust formation. Avoid : Aerosols. Caution. Combustible Dust. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places of dust forming.
Precautions for safe handling	: Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Storage conditions	: Store at room temperature away from light and moisture.
Storage area	: Store in a dry place. Under inert gas.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 4-AMINOPHENOL (D7, 98%) (123-30-8)

No additional information available

Additional information	: Contains no substances with occupational exposure limits
------------------------	--

### 8.2. Appropriate engineering controls

Appropriate engineering controls	: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Environmental exposure controls	: Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.

#### Materials for protective clothing:

Wear suitable protective clothing and gloves

#### Hand protection:

Wear suitable protective clothing and gloves

#### Eye protection:

Wear eye protection. Chemical goggles or face shield with safety glasses

# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Color	: light brown
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: 185 - 189 °C (365 - 372 °F) - lit.
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 195 °C (383 °F) - closed cup
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Molecular mass	: 116.17 g/mol (Labeled)
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: 0.04
Auto-ignition temperature	: No data available
Decomposition temperature	: 284 °C (543 °F) - lit.
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable if stored under recommended conditions.

# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Air contact. Light (daylight). Moisture sensitive.

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO<sub>2</sub>). Nitrogen oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Harmful if inhaled.

4-AMINOPHENOL (D7, 98%) (123-30-8)	
LD50 oral rat	375 mg/kg Remarks: Behavioral: Muscle weakness. Cyanosis Nutritional and Gross Metabolic: Changes in: Body temperature decrease.
LD50 dermal rabbit	> 10,000 mg/kg
LC50 Inhalation - Rat	5.91 mg/l - 1 h
ATE US (oral)	375 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	5.91 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Suspected of causing genetic defects (Dermal, Inhalation, oral).  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Potential Adverse human health effects and symptoms : Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. Harmful if swallowed. Stomach - Irregularities - Based on Human Evidence. This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.  
Symptoms/effects : Suspected of causing genetic defects (in contact with skin, if inhaled, if swallowed).  
Symptoms/effects after inhalation : Harmful if inhaled. May cause respiratory irritation.  
Symptoms/effects after skin contact : May be harmful in contact with skin. May cause skin irritation.  
Symptoms/effects after eye contact : May cause eye irritation.  
Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

4-AMINOPHENOL (D7, 98%) (123-30-8)	
LC50 - Fish [1]	1.2 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 - Crustacea [1]	0.2 mg/l Daphnia magna (Water flea) - 48 h

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

4-AMINOPHENOL (D7, 98%) (123-30-8)	
Partition coefficient n-octanol/water (Log Pow)	0.04

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other adverse effects : Environmental precautions. Very toxic to aquatic life with long lasting effects. Disposal must be done according to official regulations.

Other information : Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.

Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Ecology - waste materials : Dispose of as unused product.

### SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

#### 14.1. UN number

DOT NA No	: UN2512
UN-No. (TDG)	: UN2512
UN-No. (IMDG)	: 2512
UN-No. (IATA)	: 2512

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Aminophenols (o-, m-, p-)
Proper Shipping Name (TDG)	: AMINOPHENOLS (o-, m-, p-)
Proper Shipping Name (IMDG)	: AMINOPHENOLS (o-, m-, p-)
Proper Shipping Name (IATA)	: Aminophenols

# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT) : 6.1  
Hazard labels (DOT) : 6.1



#### TDG

Transport hazard class(es) (TDG) : 6.1  
Hazard labels (TDG) : 6.1



#### IMDG

Transport hazard class(es) (IMDG) : 6.1  
Hazard labels (IMDG) : 6.1



#### IATA

Transport hazard class(es) (IATA) : 6.1  
Hazard labels (IATA) : 6.1



### 14.4. Packing group

Packing group (DOT) : III  
Packing group (TDG) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III

### 14.5. Environmental hazards

Dangerous for the environment : Yes  
Marine pollutant : Yes



Other information : No supplementary information available.

### 14.6. Special precautions for user

#### DOT

UN-No.(DOT) : UN2512



# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Special Provisions (49 CFR 172.102)	: IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner. T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 213
DOT Packaging Bulk (49 CFR 173.xxx)	: 240
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 100 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 200 kg
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

### TDG

UN-No. (TDG)	: UN2512
TDG Special Provisions	: 43 - Despite section 2.1 of Part 2 (Classification), these dangerous goods are assigned to this classification based on human experience.
Explosive Limit and Limited Quantity Index	: 5 kg
Excepted quantities (TDG)	: E1
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 100 kg
Emergency Response Guide (ERG) Number	: 152

### IMDG

Special provision (IMDG)	: 279
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P002, LP02
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-A - SPILLAGE SCHEDULE Alfa - TOXIC SUBSTANCES
Stowage category (IMDG)	: A
Flash point (IMDG)	: '
Properties and observations (IMDG)	: White or brownish (ortho-and para-) or reddish-yellow (meta-) crystals. Soluble in water. Toxic if swallowed, by skin contact or by inhalation.
MFAG-No	: 152

### IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y645
PCA limited quantity max net quantity (IATA)	: 10kg

# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

PCA packing instructions (IATA)	: 670
PCA max net quantity (IATA)	: 100kg
CAO packing instructions (IATA)	: 677
CAO max net quantity (IATA)	: 200kg
Special provision (IATA)	: A113
ERG code (IATA)	: 6L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 4-AMINOPHENOL (D7, 98%) (123-30-8)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
4-AMINOPHENOL (D7, 98%)	123-30-8	Not present	-	

### 15.2. International regulations

#### CANADA

#### 4-AMINOPHENOL (D7, 98%) (123-30-8)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

#### 4-AMINOPHENOL (D7, 98%) (123-30-8)

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

### 15.3. US State regulations

#### 4-AMINOPHENOL (D7, 98%) (123-30-8)

State or local regulations	U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
----------------------------	--

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 04/26/2023

# 4-AMINOPHENOL (D7, 98%)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of H-phrases	
H302	Harmful if swallowed
H332	Harmful if inhaled
H341	Suspected of causing genetic defects
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.