

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.1  
Creation Date: July 15, 2019  
Revision Date: April 19, 2024

## SECTION 1: Identification

### 1.1 GHS Product identifier

Product name N-Phenyl-1-naphthylamine

### 1.2 Other means of identification

Product number CCHM704168

Other names 1-Naphthalenamine, N-phenyl-; N-phenylnaphthalen-1-amine

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

Identified uses For laboratory and Industrial use only.

Uses advised against no data available

### 1.4 Supplier's details

Company CATO Research Chemicals Inc.

Address 3/F,Building B,No.179 BASIGO, Guangpu Rd East,Huangpu Dist,Guangzhou

Telephone +86-20-81960175

### 1.5 Emergency phone number

Emergency phone number +86-20-81960175

Service hours 'Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral

Skin sensitization, Sub-category 1B

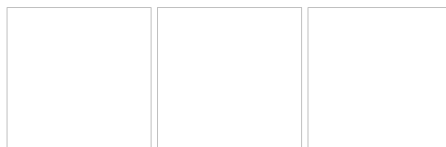
Specific target organ toxicity – repeated exposure, Category 2

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

### 2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed

H317 May cause an allergic skin reaction

H373 May cause damage to organs through prolonged or repeated exposure

H410 Very 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.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Response</b> | <p>P301+P317 IF SWALLOWED: Get medical help.</p> <p>P330 Rinse mouth.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water/...</p> <p>P333+P317 If skin irritation or rash occurs: Get medical help.</p> <p>P321 Specific treatment (see ... on this label).</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P319 Get medical help if you feel unwell.</p> <p>P391 Collect spillage.</p> |
| <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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

| Chemical name            | Common names and synonyms | CAS number | EC number | Concentration |
|--------------------------|---------------------------|------------|-----------|---------------|
| N-Phenyl-1-naphthylamine | N-1-naphthylaniline       | 90-30-2    | 201-983-0 | 100%          |

## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### If inhaled

Fresh air, rest. Refer for medical attention.

#### Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

#### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### Following ingestion

Rinse mouth. Refer for medical attention .

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

ACUTE/CHRONIC HAZARDS: When heated to decomposition this compound emits toxic fumes. (NTP, 1992)

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

#### Absorption, Distribution and Excretion

In male Sprague-Dawley rats administered a single oral dose of 160 mg [<sup>14</sup>C] N-phenyl-1-naphthylamine/kg bw, the chemical was well absorbed, metabolized almost completely, and excreted primarily in the feces. Radioactivity was detected in plasma within 60 min, with the maximum concentration measured after 4 hr. After 24 hr, 20% of the radioactivity was found in the GI tract (including contents), 2.4% in fatty tissue, 0.4% in the liver, and 0.1% in the kidneys. 90% of the administered radioactivity was excreted within 48 hr; 95% was excreted within 72 hr (60% in the feces and 35% in the urine).

## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Powder, water spray, foam, carbon dioxide. ...In case of fire: keep drums, etc., cool by spraying with water. from table

### 5.2 Specific hazards arising from the chemical

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

### 5.3 Special protective actions for fire-fighters

Use water spray, powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

## SECTION 6: Accidental release measures

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

Sweep spilled substance into covered sealable containers. Carefully collect remainder. Then store and dispose of according to local regulations. Do NOT let this chemical enter the environment. Personal protection: P2 filter respirator for harmful particles.

### 6.2 Environmental precautions

Sweep spilled substance into covered sealable containers. Carefully collect remainder. Then store and dispose of according to local regulations. Do NOT let this chemical enter the environment. Personal protection: P2 filter respirator for harmful particles.

### 6.3 Methods and materials for containment and cleaning up

Sweep spilled substance into sealable containers. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

NO open flames. 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

Well closed. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing./Keep/ well closed.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational Exposure limit values**

MAK sensitization of skin (SH)

**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 face shield.

**Skin protection**

Protective gloves. Protective clothing.

**Respiratory protection**

Use local exhaust or breathing protection.

**Thermal hazards**

no data available

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

|                                                                 |                                                                                                           |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Physical state</b>                                           | PHYSICAL DESCRIPTION: White to slightly yellowish prisms or reddish brown crystalline powder. (NTP, 1992) |
| <b>Colour</b>                                                   | Prisms or needles from alcohol; leaflets from ligroin.                                                    |
| <b>Odour</b>                                                    | Amine-like                                                                                                |
| <b>Melting point/freezing point</b>                             | 300°C(dec.)(lit.)                                                                                         |
| <b>Boiling point or initial boiling point and boiling range</b> | 200°C/10mmHg(lit.)                                                                                        |
| <b>Flammability</b>                                             | Combustible. Gives off irritating or toxic fumes (or gases) in a fire.                                    |
| <b>Lower and upper explosion limit/flammability limit</b>       | no data available                                                                                         |
| <b>Flash point</b>                                              | 80°C(lit.)                                                                                                |
| <b>Auto-ignition temperature</b>                                | no data available                                                                                         |
| <b>Decomposition temperature</b>                                | no data available                                                                                         |
| <b>pH</b>                                                       | no data available                                                                                         |
| <b>Kinematic viscosity</b>                                      | no data available                                                                                         |
| <b>Solubility</b>                                               | 1.5 [ug/mL]                                                                                               |
| <b>Partition coefficient n-octanol/water</b>                    | log Kow = 4.20                                                                                            |
| <b>Vapour pressure</b>                                          | 1.13X10 <sup>-5</sup> mm Hg @ 25 deg C /Extrapolated/                                                     |
| <b>Density and/or relative density</b>                          | 1.1                                                                                                       |
| <b>Relative vapour density</b>                                  | no data available                                                                                         |
| <b>Particle characteristics</b>                                 | no data available                                                                                         |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Decomposes on burning. This produces toxic fumes including nitrogen oxides.

## 10.2 Chemical stability

no data available

## 10.3 Possibility of hazardous reactions

N-PHENYL-1-NAPHTHYLAMINE neutralizes acids in exothermic reactions to form salts plus water. May be incompatible with isocyanates, halogenated organics, peroxides, phenols (acidic), epoxides, anhydrides, and acid halides. Flammable gaseous hydrogen may be generated in combination with strong reducing agents, such as hydrides.

## 10.4 Conditions to avoid

no data available

## 10.5 Incompatible materials

no data available

## 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: LD50 Rat oral 1625 mg/kg
- Inhalation: no data available
- Dermal: no data available

### 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

The substance may cause effects on the blood. This may result in the formation of methaemoglobin. The effects may be delayed. Medical observation is indicated.

### STOT-repeated exposure

Repeated or prolonged contact may cause skin sensitization.

### Aspiration hazard

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

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# SECTION 12: Ecological information

## 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: LC50 Daphnia magna 0.06 mg/L/21 day; semi-static
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

## 12.2 Persistence and degradability

AEROBIC: N-Phenyl-1-naphthylamine, present at 100 mg/L, reached 0% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L and the Japanese MITI test(1). In contrast, another test showed a 50% theoretical BOD in 5 days using a freshwater inoculum(2). Using an activated sewage inoculum, N-phenyl-1-naphthylamine (concentration of 2 ug/g) reached 70% of its theoretical BOD in 2 days(2). In screening tests, N-phenyl-1-naphthylamine present in a concentration of 2 ug/mL, reached 50% of its theoretical BOD in 10 days in Oneida Lake, NY water(2). Using acclimated lake water supplemented with nutrient broth, N-phenyl-1-naphthylamine (concentration of 2 ppm) reached 90% of its theoretical BOD after 10 days. N-Phenyl-1-naphthylamine was observed to degrade in a soil study, based on carbon dioxide evolution at rates of 7 and 17% <sup>14</sup>CO<sub>2</sub> evolution (40 nCi of <sup>14</sup>CO<sub>2</sub>-test compound/g soil) after 2 and 11 days, respectively(2).

### 12.3 Bioaccumulative potential

BCF ranges of 427-2,730 and 889 to 2,490 at 0.1 and 0.01 mg/L, respectively, were measured for N-phenyl-1-naphthylamine (SRC), using orange-red killifish (*Oryzias latipes*) which were exposed over an 8-week period(1). BCFs ranging from 432 to 1,285 (relative to radioactivity) and 233 to 694 (relative to test compound) were determined in a flow-through system for bluegill sunfish (*Lepomis macrochirus*) at steady state(2). According to a classification scheme(3), these BCF values suggest bioconcentration in aquatic organisms is high to very high (SRC), provided the compound is not altered physically or chemically once released into the environment.

### 12.4 Mobility in soil

The Koc of N-phenyl-1-naphthylamine is estimated as 4,600 (SRC), using a measured log Kow of 4.2(1), and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that N-phenyl-1-naphthylamine is expected to have slight mobility in soil. The pKa of N-phenyl-1-naphthylamine is 4.93 at 25 deg C(4) indicating that this compound will partially exist in the cation form in the environment(3). Since N-phenyl-1-naphthylamine exists in the protonated form, it will adsorb more strongly to organic carbon and clay than its neutral counterparts(5).

### 12.5 Other adverse effects

no data available

## 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.

## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: UN3077 (For reference only, please check.) IMDG: UN3077 (For reference only, please check.) IATA: UN3077 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.) IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.) IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 9 (For reference only, please check.) IMDG: 9 (For reference only, please check.) IATA: 9 (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

## 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   |
|------------------------------------------------------------------------|---------------------------|------------|-------------|
| N-1-naphthylaniline                                                    | N-1-naphthylaniline       | 90-30-2    | 201-983-0   |
| 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                              |                           |            | Not 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. |

## SECTION 16: Other information

### Information on revision

Creation Date July 15, 2019

Revision Date April 19, 2024

### 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/>

### Other Information

Depending on the degree of exposure, periodic medical examination is indicated. Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available.

**Any questions regarding this SDS, Please send your inquiry to [info@cato-chem.com](mailto:info@cato-chem.com)**

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