

Common Name: **1,2-DIPHENYLHYDRAZINE**

Synonyms: Hydrazobenzene; DPH

CAS No: 122-66-7

Molecular Formula:  $C_{12}H_{12}N_2$

RTK Substance No: 0800

Description: Odorless, white to yellow or orange crystalline powder

## HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<b>3 - Health</b> <b>2 - Fire</b> <b>1 - Reactivity</b> <b>DOT#:</b> UN 3077 <b>ERG Guide #:</b> 171 <b>Hazard Class:</b> 9 (Environmentally Hazardous Material)	<b>1,2-Diphenylhydrazine</b> is a COMBUSTIBLE SOLID. Use dry chemical, CO <sub>2</sub> , water spray or foam as extinguishing agents. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Nitrogen Oxides</i> . CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool.	<b>1,2-Diphenylhydrazine</b> is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE). <b>1,2-Diphenylhydrazine</b> reacts with MINERAL ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); ACID CHLORIDES; and ACID ANHYDRIDES to produce toxic <i>Benzidine</i> .

## SPILL/LEAKS

### Isolation Distance:

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

Moisten spilled material first or use a HEPA-filter vacuum for clean-up, and deposit in sealed containers.

DO NOT wash into sewer.

**1,2-Diphenylhydrazine** is toxic to aquatic life and will bioaccumulate in fish.

## PHYSICAL PROPERTIES

<b>Odor Threshold:</b>	Odorless
<b>Flash Point:</b>	Combustible
<b>Vapor Density:</b>	1.158 (air = 1)
<b>Vapor Pressure:</b>	1 mm Hg at 217°F (103°C)
<b>Specific Gravity:</b>	1.158 (water = 1)
<b>Water Solubility:</b>	Slightly soluble
<b>Boiling Point:</b>	559°F (293°C)
<b>Melting Point:</b>	253° to 259°F (123° to 126°C)
<b>Molecular Weight:</b>	184.24

## EXPOSURE LIMITS

No occupational exposure limits have been established for **1,2-Diphenylhydrazine**.

The Protective Action Criteria values are:

PAC-1 = 120 mg/m<sup>3</sup>; PAC-2 = 1,300 mg/m<sup>3</sup>;

PAC-3 = 7,900 mg/m<sup>3</sup>

## PROTECTIVE EQUIPMENT

<b>Gloves:</b>	Natural Rubber and Nitrile
<b>Coveralls:</b>	DuPont Tyvek®
<b>Respirator:</b>	Pressure demand supplied air

## HEALTH EFFECTS

<b>Eyes:</b>	Irritation
<b>Skin:</b>	Irritation
<b>Inhalation:</b>	Nose and throat irritation with coughing and wheezing  Headache, fatigue, dizziness and blue color to the skin and lips ( <i>methemoglobinemia</i> )
<b>Chronic:</b>	Cancer (liver and mammary gland) in animals

## FIRST AID AND DECONTAMINATION

**Remove** the person from exposure.  
**Flush** eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.  
**Remove** contaminated clothing and wash contaminated skin with soap and water.  
**Begin** artificial respiration if breathing has stopped and CPR if necessary.  
**Transfer** to a medical facility.