

Common Name: 1,2-DIPHENYLHYDRAZINE

Synonyms: Hydrazobenzene; DPH

CAS No: 122-66-7

Molecular Formula: C₁₂H₁₂N₂

RTK Substance No: 0800

Description: Odorless, white to yellow or orange crystalline powder

HAZARD DATA

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

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

Odor Threshold: Odorless

Flash Point: Combustible

Vapor Density: 1.158 (air = 1)

Vapor Pressure: 1 mm Hg at 217°F (103°C)

Specific Gravity: 1.158 (water = 1)

Water Solubility: Slightly soluble

Boiling Point: 559°F (293°C)

Melting Point: 253° to 259°F (123° to 126°C)

Molecular Weight: 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/m³; PAC-2 = 1,300 mg/m³;
PAC-3 = 7,900 mg/m³

PROTECTIVE EQUIPMENT

Gloves: Natural Rubber and Nitrile

Coveralls: DuPont Tyvek®

Respirator: Pressure demand supplied air

HEALTH EFFECTS

Eyes: Irritation

Skin: Irritation

Inhalation: Nose and throat irritation with coughing and wheezing

Headache, fatigue, dizziness and blue color to the skin and lips (*methemoglobinemia*)

Chronic: 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.