

BENZIDINE**0224**

March 1995

CAS No: 92-87-5
 RTECS No: DC9625000
 UN No: 1885
 EC No: 612-042-00-2

(1,1'-Biphenyl)-4,4'-diamine
 4,4'-Diaminobiphenyl
 p-Diaminodiphenyl
 $C_{12}H_{12}N_2 / NH_2C_6H_4-C_6H_4NH_2$
 Molecular mass: 184.2

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible. See Notes. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames.	Powder, carbon dioxide.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation		Closed system and ventilation.	Fresh air, rest. Refer for medical attention.
Skin	MAY BE ABSORBED!	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes		Face shield or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion		Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Give a slurry of activated charcoal in water to drink. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.

SPILLAGE DISPOSAL

Evacuate danger area! Consult an expert! Personal protection: complete protective clothing including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place.

PACKAGING & LABELLING

T Symbol
 N Symbol
 R: 45-22-50/53
 S: 53-45-60-61
 Note: E
 UN Hazard Class: 6.1
 UN Pack Group: II

Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.

EMERGENCY RESPONSE

Transport Emergency Card: TEC (R)-61GT2-II

SAFE STORAGE

Separated from strong oxidants, food and feedstuffs. Keep in the dark. Well closed.

IPCS

International
 Programme on
 Chemical Safety



Prepared in the context of cooperation between the International Programme on Chemical Safety and the European Commission ©
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SEE IMPORTANT INFORMATION ON THE BACK.

IMPORTANT DATA

Physical State; Appearance

WHITE OR REDDISH CRYSTALLINE POWDER, TURNS DARK ON EXPOSURE TO AIR AND LIGHT.

Chemical dangers

The substance decomposes on heating and on burning producing toxic fumes including nitrogen oxides. Reacts violently with strong oxidants, especially nitric acid.

Occupational exposure limits

TLV: (skin) A1 (confirmed human carcinogen); (ACGIH 2004).
MAK: skin absorption (H); Carcinogen category: 1; (DFG 2004).

Routes of exposure

The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion.

Inhalation risk

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed, especially if powdered.

Effects of long-term or repeated exposure

This substance is carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: 401°C

Melting point: (see Notes) 128°C

Relative density (water = 1): 1.25

Solubility in water: none

Relative vapour density (air = 1): 6.36

Octanol/water partition coefficient as log Pow: 1.34

ENVIRONMENTAL DATA

The substance is toxic to aquatic organisms.

NOTES

Given melting point when anhydrous and rapidly heated, when slowly heated: 115-120°C.

Addition of small amounts of a flammable substance or an increase in the oxygen content of the air strongly enhances combustibility.

Card has been partly updated in October 2005. See sections Occupational Exposure Limits, EU classification, Emergency Response.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information