

4-NITROANILINE

0308

December 2001

CAS No: 100-01-6

RTECS No: BY7000000

UN No: 1661

EC No: 612-012-00-9

p-Nitroaniline

1-Amino-4-nitrobenzene

C.I. 37035

 $C_6H_6N_2O_2$

Molecular mass: 138.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible. Many reactions may cause fire or explosion.	NO open flames. NO contact with combustible substances.	Powder, water spray, foam, carbon dioxide.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	In case of fire: keep drums, etc., cool by spraying with water. Combat fire from a sheltered position.

EXPOSURE		PREVENT DISPERSION OF DUST!	
Inhalation	Blue lips or finger nails. Blue skin. Headache. Dizziness. Nausea. Confusion. Convulsions. Laboured breathing. Unconsciousness.	Local exhaust or breathing protection.	Fresh air, rest. Artificial respiration if indicated. Refer for medical attention.
Skin	MAY BE ABSORBED! (Further see Inhalation).	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Redness. Pain.	Face shield, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	(Further see Inhalation).	Do not eat, drink, or smoke during work. Wash hands before eating.	Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water. (Extra personal protection: P3 filter respirator for toxic particles.) Do NOT let this chemical enter the environment.	<p>EU classification</p> <p>T Symbol</p> <p>R: 23/24/25-33-52/53</p> <p>S: (1/2-)28-36/37-45-61</p> <p>Note: C</p> <p>UN classification</p> <p>UN Hazard Class: 6.1</p> <p>UN Pack Group: II</p> <p>Do not transport with food and feedstuffs.</p>

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-61G12b NFPA Code: H 3; F 1; R 2	Separated from strong acids, strong oxidants, combustible and reducing substances, food and feedstuffs. Dry.

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Programme on
Chemical SafetyPrepared in the context of cooperation between the International
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SEE IMPORTANT INFORMATION ON THE BACK.

IMPORTANT DATA

Physical State; Appearance

YELLOW CRYSTALS OR POWDER.

Physical dangers

Dust explosion possible if in powder or granular form, mixed with air.

Chemical dangers

May explode on heating. On combustion, forms toxic fumes of nitrogen oxides. Reacts with strong acids, strong oxidants and strong reducing agents. Reacts with organic materials in presence of moisture causing fire hazard.

Occupational exposure limits

TLV: 3 mg/m³ (as TWA) (skin) A4 (not classifiable as a human carcinogen); BEI issued (ACGIH 2005).
MAK: skin absorption (H); Carcinogen category: 3A (DFG 2005).

Routes of exposure

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

Inhalation risk

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20/C; on spraying or dispersing, however, much faster.

Effects of short-term exposure

The substance is mildly irritating to the eyes. The substance may cause effects on the blood, resulting in formation of methaemoglobin. The effects may be delayed. Medical observation is indicated. See Notes.

Effects of long-term or repeated exposure

The substance may have effects on the blood, resulting in the formation of methaemoglobin. See Notes.

PHYSICAL PROPERTIES

Boiling point: 332/C

Melting point: 148/C

Density: 1.4 g/cm³

Solubility in water, g/100 ml at 18.5/C: 0.08

Vapour pressure, Pa at 20/C: 0.2

Relative vapour density (air = 1): 4.8

Flash point: 199/C

Octanol/water partition coefficient as log Pow: 2.66

ENVIRONMENTAL DATA

The substance is harmful to aquatic organisms. Do not let this chemical enter the environment.

NOTES

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.

Also consult ICSC 0306 2-Nitroaniline, and ICSC 0307 3-Nitroaniline.

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