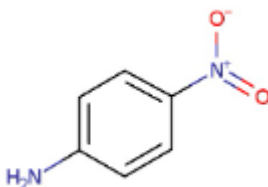


1. General Statement

Combustible substance, poorly flammable. Slightly soluble in water. Non volatile. Acute or chronic health hazards result from the substance. The substance is hazardous to the aquatic environment.

2. Chemical identity

Name : 4-nitroaniline
CAS number : 100-01-6
EC number : 202-810-1
Molecular formula : C₆H₄CINO₂
Structure :



3. Uses and Benefits

4-nitroaniline is used in the manufacture of bulk, large scale chemicals (including petroleum products). Manufacture of textiles, leather, fur. It is used in the manufacture of fine chemicals.

4. Physical / chemical properties

Property	Value
Physical state :	Solid
Colour :	Yellow-orange.
Odour :	Amine-like odour. Mild odour.
pH :	7.45 (1 vol %, 24 °C)
Melting point	158 °C (975 hPa)
Boiling point :	> 800 °C (975 hPa)
Flash point :	100.8 °C (975 hPa)
Density :	1424 kg/m ³
Solubility in Water:	0.1 g/100ml (30 °C)

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4-nitroaniline

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5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal)	Toxic if swallowed.Toxic in contact with skin.Toxic if inhaled.
Irrit/ corrosion Skin / eye/ respiratory tractation	NA
Respiratory or skin sensitisation	NA
Toxicity after repeated exposure Oral / inhalation / dermal	May cause damage to organs through prolonged or repeated exposure.
Genotoxicity / Mutagenicity	NA
Carcinogenicity	NA
Toxicity for reproduction	NA

6. Environmental Effects

Effect Assessment	Result
Aquatic toxicity	Yes
Fate and behavior	Result
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500)

7. Exposure

Human health

4-nitroaniline Toxic if swallowed,Not irritant to skin,Toxic in contact with skin,Toxic if inhaled,Slightlyirritant to eyes,Caution! Substance is absorbed through the skin.The probability of exposure to workers is expected to be low because this product is manufactured in an enclosed controlled environment and is transported in well sealed containers. Workers may be exposed during (un)loading, mixing, sampling, analysis or maintenance operations and particularly in case of batch processes.The exposure must be kept as minimum as possible by the use of appropriate risk management measures as suitable collective and personal protective equipment,good industrial hygiene practices and risk communication through appropriate training of

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workers. Careless handling or accidental spillage of the chemical could result in exposure to potentially hazardous levels of chemicals. Industrial workers should ensure that they follow the advice found in the extended safety data sheet (SDS).

Environment

Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. Spillage shall be quickly collected in the event of an accidental release. More information about release measures and accidental release measures are available in the extended safety data sheet.

8. Risk Management Recommendations

Human health measures

Organizational	A basic standard of occupational hygiene is recommended. Ensure operatives are well informed of the hazards and trained to minimise exposures. Ensure regular inspection and maintenance of equipment and machines. Handle and store according to the indications of the Safety Data Sheet.	
Protection	Eye protection:	Face shield (EN 166). In case of dust production: protective goggles (EN 166)
	Skin and body protection:	In case of dust production: head/neck protection. Protective clothing (EN 14605 or EN 13034). In case of dust production: dustproof clothing(EN13982)
	Respiratory protection:	Dust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus (EN 136 + EN 137)
Engineering controls	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.Ensure good ventilation of the work station.	
Environment protective measures		
Do not attempt to take action without suitable protective equipment. Exposure controls/personal protection".		

9. First-aid measures

First-aid measures after inhalation : Remove the victim into fresh air. Immediately consult a doctor/medical service

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First-aid measures after skin contact: Wash immediately with lots of water. Do not apply (chemical) neutralizing agents without medical advice. Consult a doctor/medical service

First-aid measures after eye contact : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice

First-aid measures after ingestion : Rinse mouth with water. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.html). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital.

10. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Carbon dioxide.

Unsuitable extinguishing media: : Quick-acting BC powder extinguisher.

Hazardous decomposition products in case of fire :On heating/burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

Precautionary measures fire:Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood closed doors and windows.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

11. Accidental release measures

Protective equipment : Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137).

Emergency procedures: Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. In case of reactivity hazard: consider evacuation.

For containment: Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Take account of toxic/corrosive precipitation water. Provide equipment/receptacles with earthing. Powdered form: no compressed air for pumping over spills.

12. Disposal consideration

Regional legislation (waste) : Disposal must be done according to official regulations.

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Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations: Disposal must be done according to official regulations.

13. Handling and storage

Precautions for safe handling: Avoid raising dust. Take precautions against electrostatic charges. Keep away from naked flames/heat. In a finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Powdered form: no compressed air for pumping over. Keep container tightly closed

Hygiene measures : Observe strict hygiene.

14. Classification and Labeling

Hazard pictograms (CLP)

:



GHS06

GHS08

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.
H373 - May cause damage to organs through prolonged or repeated exposure.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P260 - Do not breathe dust.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER, a doctor.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311 - Call a POISON CENTER, doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents, container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

15. Conclusion

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4-nitroaniline is a light yellow to yellow-green liquid. Combustible substance, poorly flammable. Very slightly soluble in water. Steam-distillable. Acute or chronic health hazards result from the substance. The substance is hazardous to the aquatic environment. This is a common intermediate in the production. 4-nitroaniline is rapidly absorbed via skin, gastrointestinal tract or respiratory tract. It is suspected of causing genetic defects & causing cancer. Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. Spillage shall be quickly collected in the event of an accidental release. More information about release measures and accidental release measures are available in the extended safety data sheet.

16. Contact Information within company

Manufacturer

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This GPS safety summary is intended to give general information about the health, safety and environmental and not intended to provide in-depth details. To obtain the most accurate and current information, consult the appropriate Safety Data Sheet (SDS) prior to use of the material named herein.