

GPS Safety Summary 1,3 -Dinitro Benzene

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1. General Statements

1,3 -Dinitro Benzene is a crystalline yellow solid which is Odourless.It is a Combustible substance, poorly flammable. Very slightly soluble in water. Acute or chronic health hazards result from the substance. The substance is hazardous to the aquatic environment.

2. Chemical identification.

Name :1,3 -Dinitro Benzene

CAS number(s) :99-65-0 EC number :202-776-8 Molecular formula :C6H4N2O4

Structure :

3. Uses and Benefits

This substance has an industrial use resulting in manufacturing Organic syntheses; dyes; camphor substitutes. [~Intermediate ~].

4. Physical / chemical properties

Property	Value	
Physical state :	Solid	
Colour :	Off-white to yellow	
Odour :	Characteristic odour Mild odour	
pH:	6.9 (0.01 %)	
Melting point :	84 - 86 °C	
Boiling point :	297 °C	
Flash point :	150 °C	
Density:	1.5751 g/cm3	
Solubility in Water:	< 0.1 g/100ml	

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5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal)	Fatal if swallowed, in contact with skin or if inhaled
Irritation / corrosion Skin / eye/ respiratory tract	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

1,3 -Dinitro Benzene is Fatal if swallowed, in contact with skin or if inhaled. May cause damage to organs through prolonged or repeated exposure. The exposure must be kept as minimum as possible by the use of appropriate risk management measures suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of 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.

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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:	Safety glasses		
	Skin and body protection:	Wear suitable protective clothing		
	Respiratory protection:	[In case of inadequate ventilation] wear respiratory protection.		
Engineering controls	Ensure good ventilation of the work station.			
Environment protective measures				
Avoid release to the environment				

9. First-aid measures

First-aid measures after inhalation:Remove person to fresh air and keep comfortable for breathing. Call a physician immediately. Take medical advice.

First-aid measures after skin contact: Wash skin with plenty of water. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact: Rinse eyes with water as a precaution.

First-aid measures after ingestion: Rinse mouth. Call a physician immediately.

10. Fire-fighting measures

Extinguishing media

Suitable extinguishing media: Water spray. Dry powder. Foam.

Unsuitable extinguishing media: Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire: Toxic fumes may be released.

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Advice for firefighters

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 close doors and windows.

Firefighting instructions: Fight fire from safe distance and protected location. Do not enter a fire area without proper protective equipment, including respiratory protection.

11. Accidental release measures

Protective equipment :Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137). Dust cloud production: dust-tight suit (EN 13982).

Environmental precautions: Avoid release to the environment.

For containment: Collect spillage.

12. Disposal consideration

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

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: Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only outdoors or in a well-ventilated area.

Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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14. Classification and Labeling

Hazard pictograms (GHS US)







Signal word (GHS US)

Hazard statements (GHS US)

Precautionary statements (GHS US)

: Danger

: H300+H310+H330 - Fatal if swallowed, in contact with skin or if inhaled

H373 - May cause damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

: P260 - Do not breathe dust, fume, gas, mist, vapours, spray.

P262 - Do not get in eyes, on skin, or on clothing.

P264 - Wash hands, forearms and face 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, eye protection, face protection, and hearing

protection.

P284 - Wear respiratory protection.

P301+P310 - If swallowed: Immediately call a poison center or doctor.

P302+P352 - If on skin: Wash with plenty of water.

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

P310 - Immediately call a poison center or doctor.

P314 - Get medical advice or attention if you feel unwell.

P320 - Specific treatment is urgent (see supplemental first aid instruction on this label).

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.

P391 - Collect spillage.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

P501 - Dispose of contents and/or container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulations.

15. Conclusion

1,3 -Dinitro Benzene is a crystalline yellow solid which is Odourless.It is a Combustible substance, poorly flammable. Very slightly soluble in water. Acute or chronic health hazards result from the substance. The substance is hazardous to the aquatic environment. Risk of explosion in contact with: bases, ammonia, nitric acid, heat, impact, friction, tetranitromethane The substance can react dangerously with: fluorine, sodium, oxidizing agents. 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 workers.

16. Contact Information within company

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This GPS safety summary is intended to give general information about the health, safety and environment 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.