Preparing for the New Era of Laboratories

MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

2,4-DINITROPHENYL HYDRAZINE 98% AR

PRODUCT CODE : O-5001

CAS No : 119-26-6

FORMULA : $C_6H_6N_4O_4$

UN No : 3380

website : www.labotiq.net

MATERIAL SAFETY DATA SHEET (SDS/MSDS)
2,4-DINITROPHENYL HYDRAZINE 98% AR

MSDS Number : 0007 | Date : February 27, 2025 | Version : 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Name : **2,4-DINITROPHENYL HYDRAZINE 98% AR**
Synonyms : DNPH
CAS No. : 119-26-6
HS Code : 2928 0090
Chemical Formula : $C_6H_6N_4O_4$
Molecular Weight : 198,14 g/mol
Product Code : O-5001
Brand : Labotiq
1.2 Manufacturer : Labotiq
Address : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
Website : www.labotiq.net
Email : labotiq.id@gmail.com
For information : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
Emergency number : +6281316894650
1.3 Application : Laboratory chemicals, Manufacture of substances, General Chemical reagent

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

Desensitized explosives, (Category 1)	H206: Fire, blast or projection hazard; increased risk of explosion if desensitizing agent is reduced.
Acute toxicity, (Category 4)	H302: Harmful if swallowed.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word	Danger
Hazard statement(s)	
H206	Fire, blast or projection hazard; increased risk of explosion if desensitizing agent is reduced.
H302	Harmful if swallowed.
Precautionary statement(s)	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P212	Avoid heating under confinement or reduction of the desensitizing agent.
P230	Keep wetted with water.
P233	Keep container tightly closed.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P370 + P380 + P375	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

P501	Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard information (EU)
EUH044 Risk of explosion if heated under confinement.

Reduced Labeling (<= 125 ml)
Pictogram

Signal Word Danger

Hazard Statements

H206	Fire, blast or projection hazard; increased risk of explosion if desensitizing agent is reduced.

Precautionary Statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P212	Avoid heating under confinement or reduction of the desensitizing agent.
P230	Keep wetted with water.
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P370 + P380 + P375	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
P501	Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard information (EU)
EUH044 Risk of explosion if heated under confinement.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : DNPH
Formula : $C_6H_6N_4O_4$
Molecular weight : 198,14 g/mol
CAS-No. : 119-26-6

3.2 Mixture

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
2,4-Dinitrophenylhydrazine CAS-No. 119-26-6 EC-No. 204-309-3	Expl. 1.1; Acute Tox. 4; H201, H302	>= 50 - < 70 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx)
Explosive decomposition possible on heating. Combustible. Avoid shock and friction.
In the event of decomposition: danger of explosion!
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed and away from sources of ignition and heat. Observe national regulations.

Storage class

Storage class (TRGS 510): 4.1A: Other explosive hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure control

Appropriat engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Fluorinated rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type: Filter type P2

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	powder
Odour	dark orange, dark red
Odour Threshold	No data available
pH	No data available
Melting point/freezingpoint	Melting point/range: 197 - 200 °C
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	The substance or mixture is a flammable solid with the category 1.
Upper/lower flammability or explosive limits	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Vapour pressure	No data available
Vapour density	No data available
Density	No data available
Relative density	No data available
Water solubility	No data available
Partition coefficient: noctanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Risk of explosion if heated under confinement. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) . Contains the following stabilizer(s): water (33 %)

10.3 Possibility of hazardous reactions

Violent reactions possible with: Strong oxidizing agents

10.4 Conditions to avoid

May be shock-sensitive if dry. no information available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Oral: No data available
Acute toxicity estimate Oral - 746,42 mg/kg (Calculation method)
Acute toxicity estimate Oral - 500,1 mg/kg (2,4-Dinitrophenylhydrazine) (Expert judgment)
Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

May be fatal if swallowed and enters airways

Additional Information

Endocrine disrupting properties

Product:

Assessment :

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration, causes cyanosis. (2,4-Dinitrophenylhydrazine) To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (2,4-Dinitrophenylhydrazine)

SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
No data available

Endocrine disrupting properties
Product:
Assessment :
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
No data available

SECTION 14: Transport information

14.1 UN number
ADR/RID: 3380 IMDG: 3380 IATA: 3380

14.2 UN proper shipping name
ADR/RID: DESENSITIZED EXPLOSIVE, SOLID, N.O.S. (2,4-Dinitrophenylhydrazine)
IMDG: DESENSITIZED EXPLOSIVE, SOLID, N.O.S. (2,4-Dinitrophenylhydrazine)
IATA: Desensitized explosive, solid, n.o.s. (2,4-Dinitrophenylhydrazine)
Passenger Aircraft: Not permitted for transport Cargo Aircraft: Not permitted for transport

14.3 Transport hazard class(es)
ADR/RID: 4.1 IMDG: 4.1 IATA: 4.1

14.4 Packaging group
ADR/RID: I IMDG: I IATA: -

14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

Further information

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H201 Explosive; mass explosion hazard.
H302 Harmful if swallowed.

National Fire Protection Association (U.S.A.):

Health: 1
Flammability: 0
Reactivity: 0

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.

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