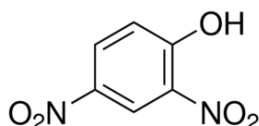


MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form : Substance
:
EC Index-No. : 609-041-00-4
EC-No. : 200-087-7
CAS-No. : 51-28-5
Product code : 03461
Formula : C₆H₄N₂O₅
Chemical structure :



Synonyms : 2,4-DNP

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 3 H301
Acute toxicity (dermal), Category 3 H311
Acute toxicity (inhal.), Category 3 H331
Specific target organ toxicity — Repeated exposure, Category 2 H373

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Hazardous to the aquatic environment — Acute Hazard, Category 1 H400

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

T; R23/24/25
N; R50
R33

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS06

GHS08

GHS09

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.
H400 - Very toxic to aquatic life.

Precautionary statements (CLP) : P261 - Avoid breathing vapours, spray, dust, fume, gas.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor
P311 - Call a POISON CENTER/doctor

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : 2,4-DINITROPHENOL INDICATOR AR
CAS-No. : 51-28-5
EC-No. : 200-087-7
EC Index-No. : 609-041-00-4

Full text of R- and H-statements: see section 16

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3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Immediately call a POISON CENTER/doctor. Take off immediately all contaminated clothing. Wash with plenty of water/....
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: May cause damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation	: Toxic if inhaled.
Symptoms/effects after skin contact	: Toxic in contact with skin.
Symptoms/effects after ingestion	: Toxic if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Very toxic to aquatic life.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers.
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6.4. Reference to other sections

No additional information available

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin and eyes. Do not breathe vapours. Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in a well-ventilated place. Keep container tightly closed.
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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection	: Protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Molecular mass	: 184.1 g/mol
Colour	: Yellow powder.
Odour	: sweet, musty.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 108 - 112 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available

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Vapour pressure	: No data available
Relative vapour density at 20 °C	: 6.35
Relative density	: No data available
Density	: 1.683 g/cm ³
Solubility	: Water: Partially soluble in water
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Air contact. Direct sunlight. Moisture.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation: Toxic if inhaled.

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

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STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Additional information	: There are potential chronic health effects to consider
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Toxic if swallowed. Toxic in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials : Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1320
UN-No. (IMDG) : 1320
UN-No. (IATA) : 1320
UN-No. (ADN) : 1320
UN-No. (RID) : 1320

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14.2. UN proper shipping name

Proper Shipping Name (ADR)	: DINITROPHENOL, WETTED
Proper Shipping Name (IMDG)	: DINITROPHENOL, WETTED
Proper Shipping Name (IATA)	: Dinitrophenol, wetted
Proper Shipping Name (ADN)	: DINITROPHENOL, WETTED
Proper Shipping Name (RID)	: DINITROPHENOL, WETTED
Transport document description (ADR)	: UN 1320 DINITROPHENOL, WETTED, 4.1 (6.1), I, (B), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 1320 DINITROPHENOL, WETTED, 4.1 (6.1), I, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1320 Dinitrophenol, wetted, 4.1, I, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 1320 DINITROPHENOL, WETTED, 4.1 (6.1), I, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 1320 DINITROPHENOL, WETTED, 4.1 (6.1), I, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 4.1 (6.1)
Danger labels (ADR)	: 4.1, 6.1



IMDG

Transport hazard class(es) (IMDG)	: 4.1 (6.1)
Danger labels (IMDG)	: 4.1, 6.1



IATA

Transport hazard class(es) (IATA)	: 4.1 (6.1)
Hazard labels (IATA)	: 4.1, 6.1



ADN

Transport hazard class(es) (ADN)	: 4.1 (6.1)
Danger labels (ADN)	: 4.1, 6.1



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RID

Transport hazard class(es) (RID) : 4.1 (6.1)

Danger labels (RID) : 4.1, 6.1



14.4. Packing group

Packing group (ADR) : I

Packing group (IMDG) : I

Packing group (IATA) : I

Packing group (ADN) : I

Packing group (RID) : I

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : DT

Limited quantities (ADR) : 0

Excepted quantities (ADR) : E0

Packing instructions (ADR) : P406

Special packing provisions (ADR) : PP26

Mixed packing provisions (ADR) : MP2

Transport category (ADR) : 1

Special provisions for carriage - Loading, unloading and handling (ADR) : CV28

Special provisions for carriage - Operation (ADR) : S14

Tunnel restriction code (ADR) : B

EAC code : 1W

- Transport by sea

Special provisions (IMDG) : 28

Limited quantities (IMDG) : 0

Excepted quantities (IMDG) : E0

Packing instructions (IMDG) : P406

Special packing provisions (IMDG) : PP26, PP31

EmS-No. (Fire) : F-B

EmS-No. (Spillage) : S-J

Stowage category (IMDG) : E

Segregation (IMDG) : SG7, SG30

Properties and observations (IMDG) : Desensitized explosive. Substance when pure consists of yellow crystals. Slightly soluble in water. May form extremely sensitive compounds with heavy metals or their salts. Toxic if swallowed, by skin contact or by inhalation.

MFAG-No : 113

- Air transport

PCA Excepted quantities (IATA) : E0

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PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 451
PCA max net quantity (IATA)	: 1kg
CAO packing instructions (IATA)	: 451
CAO max net quantity (IATA)	: 15kg
Special provisions (IATA)	: A40
ERG code (IATA)	: 3EP

- Inland waterway transport

Classification code (ADN)	: DT
Special provisions (ADN)	: 802
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 2

- Rail transport

Classification code (RID)	: DT
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P406
Special packing provisions (RID)	: PP26
Mixed packing provisions (RID)	: MP2
Transport category (RID)	: 1
Special provisions for carriage – Packages (RID)	: W1
Special provisions for carriage - Loading, unloading and handling (RID)	: CW28
Hazard identification number (RID)	: 46

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

2,4-DINITROPHENOL INDICATOR AR is not on the REACH Candidate List

2,4-DINITROPHENOL INDICATOR AR is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

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Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R33	Danger of cumulative effects
R50	Very toxic to aquatic organisms
N	Dangerous for the environment
T	Toxic

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product