

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

1-CHLORO-2,4-DINITROBENZENE 99% AR

CAS-No.: 97-00-7

Product Code : 00767

Molecular Formula: $C_6H_3ClN_2O_4$

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	1-Chloro-2,4-Dinitrobenzene 99% AR
EC-No.	:	202-551-4
CAS No	:	97-00-7
Synonyms	:	2,4-Dinitrochlorobenzene

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

Company : Chemnovo Synthesis Pvt Ltd.
N-226 Near Kumbhavali Naka
Tarapur MIDC, Boisar-401 506
Palghar, Maharashtra
Telephone : +91 7400096089
Email: export@chemnovo.in

1.4. Emergency telephone number

Emergency number : + 91 7400096089 (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
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Repeated exposure, Category 2	H373
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410

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Full text of H statements : see section 16

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

Muta.Cat.3; R68

T; R23/24/25

C; R34

N; R50/53

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) :



Signal word (CLP) :

Hazard statements (CLP) :

Precautionary statements (CLP) :

GHS05

GHS06

GHS08

GHS09

Danger

H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

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

H410 - Very toxic to aquatic life with long lasting effects.

P261 - Avoid breathing vapours, 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

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P311 - Call a doctor.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients**3.1. Substance**

Name	:	1-Chloro-2,4-Dinitrobenzene 99% AR
CAS No	:	97-00-7
EC-No.	:	202-551-4

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

3.2. Mixture

Not applicable

SECTION 4: First aid measures**4.1. Description of first aid measures**

First-aid measures after inhalation	:	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
First-aid measures after skin contact	:	Immediately call a POISON CENTER/doctor. Wash with plenty of water/.... Wash contaminated clothing before reuse.
First-aid measures after eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	:	Rinse mouth. Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.

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. Causes skin irritation.
Symptoms/effects after eye contact	:	Causes serious eye damage.
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	:	Dry powder. Carbon dioxide. 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 firefighter

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

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CAS-No.: 97-00-7

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

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.

6.4. Reference to other sections

No additional information available

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.

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

Technical measures : Comply with applicable regulations.

Storage conditions : Store in a well-ventilated place. Keep container tightly closed.

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 face shield

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 : 202.55 g/mol

Colour : Yellow Crystals.

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CAS-No.: 97-00-7

Odour	:	almond-like.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	48 - 50 °C
Freezing point	:	No data available
Boiling point	:	315 °C
Flash point	:	186 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	6.98
Relative density	:	No data available
Density	:	1.687 g/cm ³
Solubility	:	Water: Insoluble
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	:	0.02 - 0.22 vol %

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

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CAS-No.: 97-00-7

Acute toxicity	:	Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation: Toxic if inhaled.
Skin corrosion/irritation	:	Causes skin irritation.
Serious eye damage/irritation	:	Causes serious eye damage.
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
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 with long lasting effects.

12.2. Persistence and degradability

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Persistence and degradability	May cause long-term adverse effects in the environment.
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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 / AND

14.1. UN number

MATERIAL SAFETY DATA SHEET (SDS/MSDS)**1-CHLORO-2,4-DINITROBENZENE 99% AR****CAS-No.: 97-00-7**

UN-No. (ADR)	:	3441
UN-No. (IMDG)	:	3441
UN-No.(IATA)	:	3441
UN-No.(AND)	:	3441
UN-No. (RID)	:	3441

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	CHLORODINITROBENZENES, SOLID
Proper Shipping Name (IMDG)	:	CHLORODINITROBENZENES, SOLID
Proper Shipping Name (IATA)	:	CHLORODINITROBENZENES, SOLID
Proper Shipping Name (ADN)	:	CHLORODINITROBENZENES, SOLID
Proper Shipping Name (RID)	:	CHLORODINITROBENZENES, SOLID
Transport document description (ADR)	:	UN 3441 CHLORODINITROBENZENES, SOLID, 6.1, II, (D/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	:	UN 3441 CHLORODINITROBENZENES, SOLID, 6.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	:	UN 3441 CHLORODINITROBENZENES, SOLID, 6.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	:	UN 3441 CHLORODINITROBENZENES, SOLID, 6.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	:	UN 3441 CHLORODINITROBENZENES, SOLID, 6.1, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

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



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



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CAS-No.: 97-00-7

IATA

Transport hazard class(es) (IATA) : 6.1

Hazard labels (IATA) : 6.1



AND

Transport hazard class(es) (ADN) : 6.1

Danger labels (ADN) : 6.1



RID

Transport hazard class(es) (RID) : 6.1

Danger labels (RID) : 6.1



14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

14.5. Environmental hazards

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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)	:	T2
Special provisions (ADR)	:	279
Limited quantities (ADR)	:	500g
Excepted quantities (ADR)	:	E4
Packing instructions (ADR)	:	P002, IBC08
Special packing provisions (ADR)	:	B4
Mixed packing provisions (ADR)	:	Mp10
Portable tank and bulk container instructions (ADR)	:	T3
Portable tank and bulk container special provisions (ADR)	:	Tp33
Tank code (ADR)	:	SGAH, L4BH
Tank special provisions (ADR)	:	TU15, Te19
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	2
Special provisions for carriage - Packages (ADR)	:	V11
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV13, Cv28
Special provisions for carriage - Operation (ADR)	:	S9, S19
Hazard identification number (Kemler No.)	:	60
Orange plates	:	

60**3441**

Tunnel restriction code (ADR)	:	D/E
EAC code	:	2X
- Transport by sea		
Special provisions (IMDG)	:	279
Packing instructions (IMDG)	:	P002
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B21, B4
Tank instructions (IMDG)	:	T3
Tank special provisions (IMDG)	:	Tp33
EmS-No. (Fire)	:	F-A

MATERIAL SAFETY DATA SHEET (SDS/MSDS)**1-CHLORO-2,4-DINITROBENZENE 99% AR****CAS-No.: 97-00-7**

EmS-No. (Spillage)	:	S-A
Stowage category (IMDG)	:	A
Segregation (IMDG)	:	Sg15
Properties and observations (IMDG)	:	Crystals. Melting point: 27°C to 53°C. May explode if involved in a fire. Toxic if swallowed, by skin contact or by inhalation.
MFAG-No	:	153
- Air transport		
PCA Excepted quantities (IATA)	:	E4
PCA Limited quantities (IATA)	:	Y644
PCA limited quantity max net quantity (IATA)	:	1kg
PCA packing instructions (IATA)	:	669
PCA max net quantity (IATA)	:	25kg
CAO packing instructions (IATA)	:	676
CAO max net quantity (IATA)	:	100kg
Special provisions (IATA)	:	A113
ERG code (IATA)	:	6L
- Inland waterway transport		
Classification code (ADN)	:	T2
Special provisions (ADN)	:	279, 802
Limited quantities (ADN)	:	500 g
Excepted quantities (ADN)	:	E4
Equipment required (ADN)	:	PP, EP
Number of blue cones/lights (ADN)	:	2
- Rail transport		
Classification code (RID)	:	T2
Special provisions (RID)	:	279
Excepted quantities (RID)	:	E4
Packing instructions (RID)	:	P002, IBC08
Special packing provisions (RID)	:	B4
Mixed packing provisions (RID)	:	Mp10
Portable tank and bulk container instructions (RID)	:	T3
Portable tank and bulk container special provisions (RID)	:	Tp33
Tank codes for RID tanks (RID)	:	SGAH, L4BH
Special provisions for RID tanks (RID)	:	Tu15
Transport category (RID)	:	2
Special provisions for carriage – Packages (RID)	:	W11
Special provisions for carriage – Loading, unloading and handling (RID)	:	CW13, CW28, Cw31
Colis express (express parcels) (RID)	:	Ce9
Hazard identification number (RID)	:	60

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

1-Chloro-2,4-Dinitrobenzene 99% AR is not on the REACH Candidate List

1-Chloro-2,4-Dinitrobenzene 99% AR is not on the REACH Annex XIV List

15.1.2. National regulations**Germany**Reference to AwSV : Water hazard class (WGK) 2, significant hazard to water
(Classification according to AwSV; ID No. 1120)

12th Ordinance Implementing the Federal

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

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 : The substance is not listed

voortplanting giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de : The substance is not listed

voortplanting giftige stoffen –

Vruchtbaarheid

NIET-limitatieve lijst van voor de : The substance is not listed

voortplanting giftige stoffen – Ontwikkeling

DenmarkRecommendations 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
The requirements from the Danish Working Environment
Authorities regarding work with carcinogens must be followed
during use and disposal**15.2. Chemical safety assessment**

No additional information available

SECTION 16: Other information

MATERIAL SAFETY DATA SHEET (SDS/MSDS)**1-CHLORO-2,4-DINITROBENZENE 99% AR****CAS-No.: 97-00-7**

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 Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R33	Danger of cumulative effects
R34	Causes burns
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R68	Possible risk of irreversible effects
C	Corrosive
N	Dangerous for the environment
T	Toxic

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. Chemnovo Synthesis Pvt Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.chemnovo.in for additional terms and conditions of sale.

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