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

Catalogue Number	CS-MM-12766
Product Name	2-(Hydroxymethyl)-2-nitropropane-1,3-diol
CAS No.	126-11-4
Category	Intermediate
Synonyms	-
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Skin irritation (Category 2)
Serious eye damage/eye irritation (Category 2)
Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H302+H332	Harmful if swallowed. Harmful if inhaled.
H302	Harmful if swallowed.

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	Not available
H400	Not available
H410	Not available

Precautionary Statement(s)

Code	Statement
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P264+P265	Not available
P270	Not available
P271	Use only outdoors or in a well-ventilated area.
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P317	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if presen
P317	Not available
P319	Get medical help if you feel unwell.
P321	Specific treatment (see … on this label).
P330	Not available
P332+P317	If skin irritation occurs: Get medical help.
P337+P317	If eye irritation persists: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Not available
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

P501	Dispose of contents/container in accordance with local/regional/national/international regulation

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : 2-(Hydroxymethyl)-2-nitropropane-1,3-diol
CAS Number : 126-11-4
Molecular Formula : C4H9NO5
Molecular Weight : 151.1
Parent Chemical : Bronopol
Synonyms : -
Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures
- General advice: Seek medical attention if symptoms persist or develop. Show this Safety Data Sheet to the physician in attendance.
- Inhalation: Move person to fresh air. If breathing is difficult, seek medical attention.
- Skin contact: Wash with plenty of soap and water. Remove contaminated clothing and wash before reuse. Seek medical attention if irritation occurs.
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.
- Ingestion: Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed
- Not available.

4.3 Indication of any immediate medical attention and special treatment needed
- Not available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
- Suitable extinguishing media: Use extinguishing measures appropriate to local circumstances and the surrounding environment (e.g., water spray, dry chemical, foam, carbon dioxide).
- Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture
- Hazardous combustion products: Not available.

5.3 Advice for firefighters
- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Cool containers exposed to fire with water spray.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Avoid breathing dust/mist/vapors.
- Avoid contact with skin and eyes.
- Use appropriate personal protective equipment (see Section 8).

6.2 Environmental precautions
- Prevent further leakage or spillage if safe to do so.
- Avoid release to the environment. Prevent entry into drains, surface waters, or soil.

6.3 Methods and material for containment and cleaning up
- Contain spill.
- Collect spillage using suitable absorbent material or mechanical means.
- Place in a suitable, labeled container for disposal.
- Clean contaminated area with water and detergent as appropriate.

6.4 Reference to other sections
- See Section 8 for personal protective equipment and Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling
- Handle in accordance with good industrial hygiene and safety practice.
- Avoid formation of dust.
- Avoid contact with skin, eyes, and clothing.
- Avoid breathing dust/mist.
- Provide adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities
- Store in a cool, dry, well-ventilated place.
- Keep container tightly closed.
- Protect from moisture.
- Incompatible materials: Not available.

7.3 Specific end use(s)
- Intermediate. Additional specific uses: Not available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
- Occupational exposure limits: Not available.
- Biological limit values: Not available.

8.2 Exposure controls

- Appropriate engineering controls: Use local exhaust ventilation or general ventilation to minimize exposure.

Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Protective gloves (material selection dependent on use conditions). Protective clothing as needed.
- Respiratory protection: If ventilation is inadequate or dust/aerosols are generated, use a suitable particulate respirator in accordance with applicable standards.
- Hygiene measures: Wash hands after handling. Do not eat, drink, or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available

Property	Value
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 10: Stability and reactivity

10.1 Reactivity
- Not available.

10.2 Chemical stability
- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
- Not available.

10.4 Conditions to avoid
- Avoid excessive heat. Avoid dust generation.

10.5 Incompatible materials
- Not available.

10.6 Hazardous decomposition products
- Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: In a 90-day subchronic dermal toxicity study, male and female Crl:CD BR rats were treated dermally for 6 hr per day, 5 days per week with a paste of 2-(hydroxymethyl)-2-nitro-1,3-propanediol in deionized water at 0, 250, 500 and 1000 mg/kg/day. There were no treatment-related effects observed at any dosage level. The NOEL for systemic toxicity is >/+ 1000 mg/kg/day. In a developmental toxicity study in pregnant Sprague Dawley Crl:CD BR rats administered 0, 50, 375 or 750 mg/kg/day by gavage on days 6 through 15 of gestation, treatment-related maternal effects were observed only in the high-dose group and included increased mortality (7/25 or 28% of the group), decreased mean body weight gain, and clinical signs of toxicity (including head bobbing, tremors, and circling motions).
- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: A Salmonella typhimurium reverse mutation assay (Ames assay) using strains TA 98, TA 100, TA 1535, TA 1537 and TA 1538 without and with S-9 metabolic activation reported no increases in reverse mutations at concentrations up to 1000 ug/plate.
- Carcinogenicity: No data available.
- Reproductive toxicity: In a developmental toxicity study in pregnant Sprague Dawley Crl:CD BR rats administered 0, 50, 375 or 750 mg/kg/day by gavage on days 6 through 15 of gestation, treatment-related maternal effects were observed only in the high-dose group and included increased mortality (7/25 or 28% of the group), decreased mean

body weight gain, and clinical signs of toxicity (including head bobbing, tremors, and circling motions). A treatment-related developmental effect at 375 mg/kg/day and 750 mg/kg/day was increased mean number of resorptions per dam; at 750 mg/kg/day fetal body weights were reduced. The NOEL and LOEL for maternal toxicity are 375 mg/kg/day and 750 mg/kg/day, respectively. The NOEL and LOEL for developmental toxicity are 50 mg/kg/day and 375 mg/kg/day, respectively. A slightly increased incidence of omphalocele in the 750 mg/kg/day fetuses, when compared to historical control data, suggested the possibility of an additional developmental effect. In pregnant New Zealand White rabbits administered 0, 10, 30 or 75 mg/kg/day by gavage on days 7 through 19 of gestation, treatment-related maternal effects were observed only in the high-dose group and included decreased mean body weight gain and decreased mean food consumption; no treatment-related developmental effects were observed. The NOEL and LOEL for maternal toxicity are 30 mg/kg/day and 75 mg/kg/day, respectively. The NOEL for developmental toxicity is >/+ 75 mg/kg/day.
- STOT-single exposure: No data available.
- STOT-repeated exposure: Two machinists were seen whose chronic hand dermatitis was explained by allergic sensitivity to a biocide, Tris Nitro (2-[hydroxymethyl]-2-nitro-1,3-propanediol). In a 90-day subchronic dermal toxicity study in male and female Crl:CD BR rats treated dermally for 6 hr per day, 5 days per week at 0, 250, 500 and 1000 mg/kg/day, the test material was essentially non-irritating to the skin, although yellowish discoloration was noted at test sites; there were no treatment-related effects observed at any dosage level. The NOEL for systemic toxicity is >/+ 1000 mg/kg/day.
- Aspiration hazard: No data available.

Likely routes of exposure
- No data available.

Symptoms related to the physical, chemical and toxicological characteristics
- In a 90-day subchronic dermal toxicity study in male and female Crl:CD BR rats treated dermally for 6 hr per day, 5 days per week at 0, 250, 500 and 1000 mg/kg/day, the test material was essentially non-irritating to the skin, although yellowish discoloration was noted at test sites. There were no treatment-related effects observed at any dosage level. The NOEL for systemic toxicity is >/+ 1000 mg/kg/day.

SECTION 12: Ecological information

SECTION 12: Ecological information

12.1 Toxicity
- Not available.

12.2 Persistence and degradability
- Not available.

12.3 Bioaccumulative potential
- Not available.

12.4 Mobility in soil
- Not available.

12.5 Results of PBT and vPvB assessment
- Not available.

12.6 Endocrine disrupting properties
- Not available.

12.7 Other adverse effects
- Not available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge to drains or the environment.
- Contaminated packaging: Dispose of as unused product unless cleaned according to applicable regulations.

SECTION 14: Transport information

SECTION 14: Transport information

- UN number: Not available.
- UN proper shipping name: Not available.
- Transport hazard class(es): Not available.
- Packing group: Not available.
- Environmental hazards: Not available.
- Special precautions for user: Not available.
- Transport in bulk according to IMO instruments: Not available.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Not available.

15.2 Chemical safety assessment
- Not available.

SECTION 16: Other information

SECTION 16: Other information

- Product name: 2-(Hydroxymethyl)-2-nitropropane-1,3-diol
- CAS No.: 126-11-4
- Catalog No.: CS-MM-12766
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

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