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

Catalogue Number	CS-IP-00056
Product Name	Fenbendazole impurity A
CAS No.	10605-21-7
Category	Pesticide Standards
Synonyms	methyl 1H-benzo[d]imidazol-2-ylcarbamate
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:

Serious eye damage/eye irritation (Category 2)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H317	May cause an allergic skin reaction.
H340	Not available
H400	Not available
H410	Not available

H360	Not available
H371	Not available
H373	Not available
H319	Causes serious eye irritation.
H341	Not available

Precautionary Statement(s)

Code	Statement
P203	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P272	Not available
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P318	Not available
P321	Specific treatment (see … on this label).
P333+P317	Not available
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Not available
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio
P260	Not available
P264	Wash hands thoroughly after handling.
P270	Not available
P308+P316	Not available
P319	Get medical help if you feel unwell.
P264+P265	Not available
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if presen
P337+P317	If eye irritation persists: Get medical help.

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Fenbendazole impurity A
CAS Number : 10605-21-7
Molecular Formula : C9H9N3O2
Molecular Weight : 191.19 g/mol
Parent Chemical : Fenbendazole
Synonyms : methyl 1H-benzo[d]imidazol-2-ylcarbamate
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 occur or persist. Show this SDS to medical personnel.
- Inhalation: Move person to fresh air. If breathing is difficult, seek medical attention.
- Skin contact: Wash with soap and water. Remove contaminated clothing and wash before reuse.
- 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/effects, acute and delayed
- Not available.

4.3 Indication of immediate medical attention and special treatment needed
- Treat symptomatically. No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
- Suitable extinguishing media: Use extinguishing measures appropriate to surrounding fire (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.
- Avoid inhalation of combustion products.
- Use water spray to cool unopened containers exposed to heat.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Avoid dust formation and inhalation.
- Use appropriate personal protective equipment (see Section 8).
- Ensure adequate ventilation.

6.2 Environmental precautions
- Avoid release to the environment. Prevent entry into drains, surface water, or soil.

6.3 Methods and material for containment and cleaning up
- Collect spilled material using methods that minimize dust generation.
- Place in a suitable, labeled container for disposal.
- Clean contaminated area after material pickup.

6.4 Reference to other sections
- See Section 8 for exposure controls/personal protection 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 contact with skin and eyes.
- Avoid breathing dust.
- Use with adequate ventilation.

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

7.3 Specific end use(s)
- Laboratory/research standard. Not for food, drug, or household use.

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
- Engineering controls: Use local exhaust ventilation or general ventilation to minimize dust exposure.
- Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Protective gloves. Protective clothing as appropriate.
- Respiratory protection: If dust or aerosols are generated and ventilation is inadequate, use an appropriate particulate respirator.
- 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	2.7
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
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
- No data available.

10.2 Chemical stability
- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
- No data 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: Moderately toxic by skin contact. Mildly toxic by ingestion. Acute oral LD50 for rats is >15000 mg/kg and >2500 mg/kg for dogs. Male rats (6 per dose level) were gavaged with 200, 3400 and 5000 mg/kg 5 days/wk for 2 wk; two out of the 6 rats died at the dose level of 3400 mg/kg per day. Carbendazim even at low dose exhibited toxicity, affected the liver and also caused specific changes in hematological and biochemical parameters in the rat.
- Skin corrosion/irritation: Skin redness and skin irritation.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: Carbendazim induced chromosome aberrations in spermatids with a high incidence of aneuploidy. Carbendazim induced micronuclei in mouse bone marrow cells. Carbendazim samples containing 2,3-diaminophenazine (DAP) or 2-amino-3-hydroxyphenazine (AHP) were positive in the Salmonella/Ames test with activation; purified carbendazim was not mutagenic. Human lymphocytes exposed in vitro showed chromosome non-disjunction and chromosome loss; elimination of aneuploid cells may occur via apoptosis.
- Carcinogenicity: Cancer Classification: Group C Possible Human Carcinogen
- Reproductive toxicity: Carbendazim is a suspected endocrine disruptor and a developmental toxin. Animals exposed in the womb to have serious deformities such as lack of eyes and hydrocephalus (water on the brain). Carbendazim can disrupt the development of sperm and damage testicular development in adult rats. In male rats gavaged with 200, 3400 and 5000 mg/kg 5 days/wk for 2 wk, gross and microscopic evidence of adverse effects on the testes and reduction or absence of sperm in the epididymides was seen. In pregnant rats administered carbendazim by gavage on days 6-15 of gestation at dose levels up to 80 mg/kg/day, dead and resorbed fetuses increased versus controls; in pregnant rabbits administered up to 160 mg/kg/day on days 6-18 of gestation, dead/resorbed fetuses were found in treated animals; there were no malformations reported in these studies. Premating treatment of male and female rats with carbendazim produced androgenic effects in female offspring; reproductive toxicity induced by carbendazim was blocked by an androgen receptor antagonist in male rats.
- STOT-single exposure: No data available.
- STOT-repeated exposure: Carbendazim affected the liver and caused specific changes in hematological and biochemical parameters in the rat. In beagles administered carbendazim in the diet for 3 months at dietary levels of 0, 100, 500 and 2500 mg/kg, females at mid and high dose levels had elevated cholesterol levels; organ to body weight changes were observed (thymus of low and mid dose males; prostate of mid dose males). In male rats

administered carbendazim by gavage for 15 weeks (0, 150, 300 and 600 mg/kg/day), fibrosis and oedema were observed in the thymus at 300 and 600 mg/kg/day and thymus weights decreased compared with controls.
- Aspiration hazard: No data available.

Likely routes of exposure
- Skin contact; ingestion.

Symptoms related to the physical, chemical and toxicological characteristics
- Skin redness and skin irritation. In animal studies: adverse effects on testes with reduction or absence of sperm; liver effects; changes in hematological and biochemical parameters; duodenum edema and focal necrosis; bone marrow reduction in blood forming elements; thymus fibrosis and oedema with decreased thymus weight; increased cholesterol levels in female beagles. Fetuses exposed to high levels may exhibit microphthalmia (small eyes) or anaphthalmia (no eyes); developmental effects reported include lack of eyes and hydrocephalus (water on the brain).

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.
- Recommended disposal method: Not available.

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
- Regulatory status: Not available.
- Chemical inventories (e.g., TSCA/DSL/EINECS/ENCS/AICS/IECSC): Not available.

15.2 Chemical safety assessment
- Not available.

SECTION 16: Other information

SECTION 16: Other information

- Product name: Fenbendazole impurity A
- CAS No.: 10605-21-7
- Synonyms: methyl 1H-benzo[d]imidazol-2-ylcarbamate
- Catalog No.: CS-IP-00056
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

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