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

Catalogue Number	CS-ED-01990
Product Name	Mexacarbate
CAS No.	315-18-4
Category	Pesticide Standards
Synonyms	[4-(dimethylamino)-3,5-dimethylphenyl] N-methylcarbamate
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:

Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning



Hazard Statement(s)

Code	Statement
H300	Not available
H312	Harmful in contact with skin.
H400	Not available
H410	Not available

H330	Not available

Precautionary Statement(s)

Code	Statement
P264	Wash hands thoroughly after handling.
P270	Not available
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P316	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P317	Not available
P321	Specific treatment (see … on this label).
P330	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
P271	Use only outdoors or in a well-ventilated area.
P284	Not available
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P316	Not available
P320	Not available
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Mexacarbate
CAS Number : 315-18-4
Molecular Formula : C12H18N2O2
Molecular Weight : 222.28
Parent Chemical : -

Synonyms : [4-(dimethylamino)-3,5-dimethylphenyl] N-methylcarbamate
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 Safety Data Sheet to the physician.
Inhalation: Move person to fresh air. Keep at rest. If breathing is difficult, seek medical attention.
Skin contact: Remove contaminated clothing and shoes. Wash skin with plenty of water and soap. Seek medical attention if irritation or symptoms occur.
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. Never give anything by mouth to an unconscious person. 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
Treat symptomatically. No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical, carbon dioxide.
Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products: Carbon oxides; nitrogen oxides. Other decomposition products: Not available.

5.3 Advice for firefighters
Wear self-contained breathing apparatus (SCBA) and full protective gear. Use water spray to cool unopened containers. Avoid inhalation of combustion products.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid breathing dust. Avoid contact with skin and eyes. Provide adequate ventilation. Use appropriate personal protective equipment.

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, and soil.

6.3 Methods and material for containment and cleaning up

Contain spill. Collect using non-sparking tools and place in a suitable, labeled container for disposal. Avoid generating dust. Clean contaminated area with suitable cleaning methods. Dispose of waste in accordance with local regulations.

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 and aerosols. Avoid contact with skin, eyes, and clothing. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product.

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

7.3 Specific end use(s)
Pesticide standard / laboratory use. 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 exposure.
Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Protective gloves (material not available). Wear protective clothing.
- Respiratory protection: If ventilation is inadequate or dust is generated, use a suitable particulate respirator.
Specific respirator type: Not available.
- Hygiene measures: Wash hands and exposed skin after handling. Remove contaminated clothing and wash before reuse.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available

Test	Result
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
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
Heat, open flames, and sources of ignition. Dust generation. Other conditions: Not available.

10.5 Incompatible materials
Not available.

10.6 Hazardous decomposition products
Carbon oxides; nitrogen oxides. Other decomposition products: Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: Acute exposure to cholinesterase inhibitors can cause a cholinergic crisis characterized by severe nausea/vomiting, salivation, sweating, bradycardia, hypotension, collapse, and convulsions. Increasing muscle weakness is a possibility and may result in death if respiratory muscles are involved. Accumulation of ACh at motor nerves causes overstimulation of nicotinic expression at the neuromuscular junction. When this occurs symptoms such as muscle weakness, fatigue, muscle cramps, fasciculation, and paralysis can be seen. When there is an accumulation of ACh at autonomic ganglia this causes overstimulation of nicotinic expression in the sympathetic system. Symptoms associated with this are hypertension, and hypoglycemia. Overstimulation of nicotinic acetylcholine receptors in the central nervous system, due to accumulation of ACh, results in anxiety, headache, convulsions, ataxia, depression of respiration and circulation, tremor, general weakness, and potentially coma. When there is expression of muscarinic overstimulation due to excess acetylcholine at muscarinic acetylcholine receptors symptoms of visual disturbances, tightness in chest, wheezing due to bronchoconstriction, increased bronchial secretions, increased salivation, lacrimation, sweating, peristalsis, and urination can occur. Chronically high (>10 years) exposure leads to neuropsychological consequences including disturbances in perception and visuo-motor processing (A15321). Laborator trials for the control of North Indian snail pests, Lymnaea acuminata (an livestock parasite vector) and Plia globosa (a rice pest) were carried out. Three carbamate compounds were tested for molluscicidal activity. On the basis of LD50 values calculated for exposure times ranging from 48 to 240 hr the order to toxicity for the carabamates was zectran > carbaryl > aldicarb. L. acuminata was more sensitive to all the pesticides tested.
- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: No data are available in humans. Inadequate evidence of carcinogenicity in animals. OVERALL EVALUATION: Group 3: The agent is not classifiable as to its carcinogenicity to humans. GROUPS OF 18 MALE & 18 FEMALE (C57BL/6XC3H/ANF)F1 MICE & 18 MALE & 18 FEMALE (C57BL/6XAKR)F1 MICE RECEIVED COMMERCIAL ZECTRAN (95% PURE) ACCORDING TO THE FOLLOWING SCHEDULE: 4.64 MG/KG BODY WT IN GELATIN AT 7 DAYS OF AGE BY STOMACH TUBE & THE SAME AMOUNT (NOT ADJUSTED FOR INCREASING BODY WEIGHT) DAILY UP TO 4 WK OF AGE; SUBSEQUENTLY THE MICE WERE GIVEN 11 MG ZECTRAN PER KG OF DIET. THE DOSE WAS THE MAXIMUM TOLERATED DOSE FOR INFANT & YOUNG MICE BUT NOT NECESSARILY SO FOR ADULTS. THE EXPERIMENT WAS TERMINATED WHEN THE ANIMALS WERE ABOUT 78 WK OF AGE, AT WHICH TIME 14, 17, 17 & 16 MICE IN THE FOUR GROUPS, RESPECTIVELY, WERE STILL ALIVE. TUMOR INCIDENCES WERE COMPARED WITH THOSE OBSERVED AMONG 79-90 NECROPSIED MICE OF EACH SEX & STRAIN, WHICH EITHER HAD BEEN UNTREATED OR HAD RECEIVED GELATIN ONLY: THE INCIDENCES WERE INCREASED IN MALES OF THE FIRST STRAIN

(9/16 VERSUS 22/79) (P= <0.05) BUT NOT IN FEMALES OF THE SAME STRAIN NOR IN EITHER SEX OF THE SECOND STRAIN. THE INCIDENCE OF LUNG ADENOMAS WAS INCREASED IN BOTH SEXES OF THE FIRST STRAIN (4/16 IN MALES & 3/17 IN FEMALES VERSUS 5/79 & 3/87 CONTROLS; IF BOTH SEXES ARE CONSIDERED TOGETHER (P= <0.01). HEPATOMAS WERE FOUND IN 5/16 MALES OF THE FIRST STRAIN, COMPARED WITH 8/79 IN CONTROLS (P= <0.05), & IN 2/17 MALES OF THE SECOND STRAIN, COMPARED WITH 5/90 IN CONTROLS (P= >0.05). NO HEPATOMAS WERE SEEN IN FEMALES.
- Reproductive toxicity: No data available.
- STOT-single exposure: No data available.
- STOT-repeated exposure: Acute exposure to cholinesterase inhibitors can cause a cholinergic crisis characterized by severe nausea/vomiting, salivation, sweating, bradycardia, hypotension, collapse, and convulsions. Increasing muscle weakness is a possibility and may result in death if respiratory muscles are involved. Accumulation of ACh at motor nerves causes overstimulation of nicotinic expression at the neuromuscular junction. When this occurs symptoms such as muscle weakness, fatigue, muscle cramps, fasciculation, and paralysis can be seen. When there is an accumulation of ACh at autonomic ganglia this causes overstimulation of nicotinic expression in the sympathetic system. Symptoms associated with this are hypertension, and hypoglycemia. Overstimulation of nicotinic acetylcholine receptors in the central nervous system, due to accumulation of ACh, results in anxiety, headache, convulsions, ataxia, depression of respiration and circulation, tremor, general weakness, and potentially coma. When there is expression of muscarinic overstimulation due to excess acetylcholine at muscarinic acetylcholine receptors symptoms of visual disturbances, tightness in chest, wheezing due to bronchoconstriction, increased bronchial secretions, increased salivation, lacrimation, sweating, peristalsis, and urination can occur. Chronically high (>10 years) exposure leads to neuropsychological consequences including disturbances in perception and visuo-motor processing (A15321).
- Aspiration hazard: No data available.

Likely routes of exposure
- No data available.

Symptoms related to the physical, chemical and toxicological characteristics
- Acute exposure to cholinesterase inhibitors can cause a cholinergic crisis characterized by severe nausea/vomiting, salivation, sweating, bradycardia, hypotension, collapse, and convulsions. Increasing muscle weakness is a possibility and may result in death if respiratory muscles are involved. Accumulation of ACh at motor nerves causes overstimulation of nicotinic expression at the neuromuscular junction. When this occurs symptoms such as muscle weakness, fatigue, muscle cramps, fasciculation, and paralysis can be seen. When there is an accumulation of ACh at autonomic ganglia this causes overstimulation of nicotinic expression in the sympathetic system. Symptoms associated with this are hypertension, and hypoglycemia. Overstimulation of nicotinic acetylcholine receptors in the central nervous system, due to accumulation of ACh, results in anxiety, headache, convulsions, ataxia, depression of respiration and circulation, tremor, general weakness, and potentially coma. When there is expression of muscarinic overstimulation due to excess acetylcholine at muscarinic acetylcholine receptors symptoms of visual disturbances, tightness in chest, wheezing due to bronchoconstriction, increased bronchial secretions, increased salivation, lacrimation, sweating, peristalsis, and urination can occur. Chronically high (>10 years) exposure leads to neuropsychological consequences including disturbances in perception and visuo-motor processing (A15321).

SECTION 12: Ecological information

SECTION 12: Ecological information

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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
Not available.

12.6 Endocrine disrupting properties
No data available.

12.7 Other adverse effects
No data available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product: Dispose of contents/container in accordance with local/regional/national/international regulations. Do not discharge to drains.
Contaminated packaging: Dispose of as unused product. Empty containers may retain residues.
Waste code: Not available.

SECTION 14: Transport information

SECTION 14: Transport information

14.1 UN number
Not available.

14.2 UN proper shipping name
Not available.

14.3 Transport hazard class(es)
Not available.

14.4 Packing group
Not available.

14.5 Environmental hazards
Not available.

14.6 Special precautions for user
Not available.

14.7 Maritime 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.

SECTION 16: Other information

SECTION 16: Other information

Product name: Mexacarbate
Catalog No.: CS-ED-01990
CAS No.: 315-18-4
Synonyms: [4-(dimethylamino)-3,5-dimethylphenyl] N-methylcarbamate
Supplier: Clearsynth Labs Ltd., Mumbai, India
Emergency phone: +91-22-245045900

Disclaimer: The information provided is believed to be accurate based on available data, but no warranty is expressed or implied. Users are responsible for determining suitability for their particular application and for compliance with applicable laws and regulations.
Revision date: Not available.

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