



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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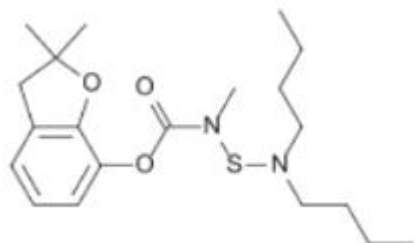
1. Chemical Product Identification

Product Name: Carbosulfan 25% EC

Molecular Formula: $C_{20}H_{32}N_2O_3S$

Molecular Weight: 380.55 g/mol

Structural Formula:



Chemical Name: 2,3-dihydro-2,2-dimethylbenzofuran-7-yl (dibutylaminothio) methyl carbamate

Form: Liquid

CAS No.: 55285-14-8

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Carbosulfan	55285-14-8	25.0
Other ingredients		75.0

3. Hazards Identification

Harmful by inhalation.



Toxic to aquatic organisms.

May cause long-term adverse effects in the environment.

4. First Aid Measures

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin contact: Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.

Inhalation: Move to fresh air. If symptoms persist, call a physician.

Ingestion: Do not induce vomiting. Rinse mouth. If conscious, drink plenty of water. If symptoms persist, call a physician.

Notes to physician

Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Specific hazards during fire: In the event of fire (HCl, Cl₂, CO) may be formed.

Special protective: Use personal protective equipment. Wear self contained equipment for fire-fighters breathing apparatus for fire fighting if necessary.

Suitable extinguishing: water spray, carbon dioxide (CO₂), dry powder, alcohol-media resistant foam.

Extinguishing media which: high volume water jet must not be used for safety reasons.

Further information: Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6. Accidental Release Measures

Personal precautions : Wear personal protective equipment. (see Chapter 8)

Environmental precautions: Do not flush into surface water or sanitary sewer system.

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Sweep up and shovel into suitable containers for disposal.

Additional advice: Never return spills in original containers for re-use.

7. Handling And Storage



Handling

Safe handling advice: Wear personal protective equipment.

Storage

Requirements for storage: Store in original container. Keep containers tightly closed in a areas and containers cool, well-ventilated place. Protect from frost.

Advice on common storage: Keep out of reach of children. Keep away from food, drink and animal feeding stuffs.

8. Exposure Controls / Personal Protection

Personal protective equipment

Respiratory protection: No special protective equipment required.

Hand protection: PVC or nitrile-rubber gloves.

Eye protection: Safety glasses, or, goggles.

Skin and body protection: Protective suit.

Hygiene measures: Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

Protective measures: Avoid contact with skin, eyes and clothing. Keep working clothes separately.

9. Physical And Chemical Properties

Appearance: Stable homogeneous liquid

pH: 6.0-10.5

Moisture: $\leq 0.5\%$

pH: 7.0-9.0

Emulsion content: Qualified

10. Stability And Reactivity

Conditions to avoid: None under normal use

Materials to avoid: Strong acids

Hazardous Polymerization: Will not occur.

11. Toxicological Information



Acute oral LD₅₀ for rats is 101 a.i.mg/kg.

Acute percutaneous LD₅₀ for rabbits is 3700 a.i.mg/kg.

Acute inhalation toxicity LC₅₀ (4 h) for rats is 0.61 a.i.mg/l.

Skin irritation: Moderate-irritating to skin (rabbits).

Eye irritation: Moderate-irritating to eyes (rabbits).

Skin sensitization for guinea pig: Not a skin sensitiser.

12. Ecological And Ecotoxicological Information

Effect on birds: high toxicity to birds, acute oral LD₅₀ for Mallard ducks is 10 a.i.mg/kg.

Effect on fish: high toxicity to fish, acute 96 hour LC₅₀ for Bluegill sunfish is 0.015 a.i.mg/L.

Effect on aquatic invertebrates: high toxicity to aquatic invertebrates, acute 48 hour EC₅₀ for Daphnia magna is 0.0015 a.i.mg/L.

Effect on algae: low toxicity to algae, acute 72 hour EC₅₀ for Raphidocelis subcapitata is 47 a.i.mg/L.

Effect on honeybees: moderate to high toxicity to honeybees, contact acute 48 hour LD₅₀ is 0.18 a.i.µg/bee; Oral acute 48 hour LD₅₀ is 1.04 a.i.µg/bee.

Effect on earthworms: high toxicity to earthworms, acute 14 day LC₅₀ for Lumbricus terrestris is 4.8 a.i.mg/kg.

13. Disposal Considerations

Product: dispose of in compliance with all state and local laws and regulations.

14. Transport Information

Not applicable

15. Regulatory Information

Not applicable

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to



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ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.