SAFETY DATA SHEET

Revision date 07/16/2026 **Revision Number** 1

1. Identification

Product identifier

Product Name Liandox 225-50

Other means of identification

Product Code(s) Liandox 225-50

UN number or ID number UN3108

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Polymerization initiator Use of the substance/preparation

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Address
1665 Enterprise Parkway
Twinsburg, OH 44087

Emergency telephone number

Emergency Telephone CHEMTREC 1-800-424-9300

2. Hazard(s) identification

Classification of the substance or mixture

Acute toxicity - Inhalation (Dusts/Mists)	Category 4

Hazards not otherwise classified (HNOC)
Not applicable

Label elements



Warning

Hazard statements

Harmful if inhaled.

Precautionary Statements - Prevention
Avoid breathing dust, fume, gas, mist, vapors and spray.
Use only outdoors or in a well-ventilated area.

Precautionary Statements - Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor if you feel unwell.

Unknown acute toxicity
50 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Hazards classified under paragraph (d)(1)(ii) of 1910.1200
No information available.

Other information
May be harmful if swallowed. May be harmful in contact with skin. Toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Trade secret
2,5-dimethyl-2,5di(t-butyl-peroxy) hexane	78-63-7	50	*
Calcium carbonate	471-34-1	25	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If symptoms persist, call a physician.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Get medical attention if irritation develops and persists. Rinse immediately with plenty of water and seek medical advice.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention. If swallowed, call a poison control center or physician immediately.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See

section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Coughing and/ or wheezing. Difficulty in breathing. Dust irritates eyes and air passages.

Effects of Exposure No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Carbon dioxide (CO2). Dry chemical. Foam. Water spray.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical No information available.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Cover powder spill with plastic sheet or tarp to minimize spreading. Do not touch or walk through spilled material. Prevent dust cloud.

Methods for cleaning up Avoid generation of dust. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Pick up and transfer to properly labeled containers. Use personal protective equipment as required.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid generation of dust. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Do not breathe dust. Fine dust dispersed in air, in

sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

General hygiene considerations Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep at temperatures below 38°C / 100°F.

8. Exposure controls/personal protection

Control Parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Calcium carbonate 471-34-1	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³; total dust TWA: 5 mg/m³; respirable dust

Biological occupational exposure limits This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

Hand protection Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

Skin and body protection Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

Respiratory protection Use appropriate respiratory protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Powder
Color	white
Odor (includes odor threshold)	Slight, Menthol

Property	**Values**	**Remarks • Method**
Melting point / freezing point	No data available	None known
Boiling point (or initial boiling point or boiling range)	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	80 °C	None known
SADT (°C)	No data available	None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Solubility	No data available	None known
Water solubility	Insoluble in water	None known
Partition coefficient n-octanol/water (log value)	No data available	None known
Vapor pressure (includes evaporation rate)	0	None known
Evaporation rate	No data available	None known
Density and/or relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		None known
Particle Size	No data available	
Particle Size Distribution	No data available	

Other information

10. Stability and reactivity

Reactivity No information available.

Chemical stability Fire hazard.

Possibility of hazardous reactions Contact with combustible material may cause fire.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Excessive heat.

Incompatible materials Strong acids. Alkali. Strong oxidizing agents. Heavy metals. Reducing agent.

Hazardous decomposition products Burning may produce carbon monoxide/dioxide, acetone, methane, ethane, and other hazardous products.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).

Eye contact Specific test data for the substance or mixture is not available.

Skin contact May be harmful in contact with skin.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Coughing and/ or wheezing.

Acute toxicity Harmful by inhalation.

Numerical measures of toxicity
The following ATE values have been calculated for the mixture

ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapor)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	3.75 mg/l

Unknown acute toxicity
50 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Oral LD50	3200 mg/kg (rat)
Dermal LD50	4100 mg/kg (rabbit)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2,5-dimethyl-2,5di(t-butyl-peroxy) hexane 78-63-7	> 2000 mg/kg (Rat)	= 4100 mg/kg (Rabbit)	-
Calcium carbonate 471-34-1	= 6450 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 3 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2,5-dimethyl-2,5di(t-butyl-peroxy) hexane 78-63-7	-	LC50: =4.5mg/L (96h, Oryzias latipes)	-	-

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
2,5-dimethyl-2,5di(t-butyl-peroxy) hexane 78-63-7	7.34

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT

Notes **ORGANIC PEROXIDE TYPE E, SOLID (2,5-dimethyl-2,5-di(t-butyl-peroxy)hexane, 45%)**
UN number or ID number UN3108
Proper shipping name Organic peroxide type E, solid
Transport hazard class(es) 5.2
DOT Marine Pollutant NP
Description UN3108, Organic peroxide type E, solid (2,5-dimethyl-2,5di(t-butyl-peroxy) hexane), 5.2

15. Regulatory information

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Chemical name	TSCA	DSL	NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AIIC	NZIoC
2,5-dimethyl-2,5di (t-butyl-peroxy) hexane	X	X		X	X	X	X	X	X	Does not have an individual approval but may be used under an appropriate group standard
Calcium carbonate	X	X		X	X	X	X	X	X	Does not have an individual approval but may be used under an appropriate group standard

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
2,5-dimethyl-2,5di(t-butyl-peroxy) hexane	78-63-7	Present	Active
Calcium carbonate	471-34-1	Present	Active
Silicon Dioxide	7631-86-9	Present	Active

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CAA (Clean Air Act)
This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 2	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 2	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend	**Section 8: Exposure controls/personal protection**		
TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal

Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 07/16/2026
Revision Note No information available.

Disclaimer

Information given herein is offered in good faith as accurate, but without guarantee. The conditions of use and suitability of the product for an application is beyond our control. All risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind of nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of this product. Appropriate warnings and safe handling procedures should be provided to handlers and users.

End of Safety Data Sheet

International Inventories

Chemical name	TSCA	DSL	NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AIIC	NZIoC
2,5-dimethyl-2,5di(t-butyl-peroxy) hexane	X	X		X	X	X	X	X	X	Does not have an individual approval but may be used under an appropriate group standard
Calcium carbonate	X	X		X	X	X	X	X	X	Does not have an individual approval but may be used under an appropriate group standard

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
2,5-dimethyl-2,5di(t-butyl-peroxy) hexane	78-63-7	Present	Active
Calcium carbonate	471-34-1	Present	Active
Silicon Dioxide	7631-86-9	Present	Active

Chemical name	Inventory - United States - Section 8(b) Inventory (TSCA)
2,5-dimethyl-2,5di(t-butyl-peroxy) hexane	Present Active
Calcium carbonate	Present Active

Chemical name	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AIIC	NZIoC
2,5-dimethyl-2,5di(t-butyl-peroxy) hexane	X	X	X	X	X	X	X	X	Does not have an individual approval but may be used under an appropriate group standard
Calcium carbonate	X	X	X	X	X	X	X	X	Does not have an individual approval but may be used under an appropriate group standard

US SDS version information - AGHS
UL release:
GHS Revision 7
2025 Q1

United States of America Full process, including GHS and Transportation Wizards

NFPA	**Health hazards** 2	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 2	**Flammability** 0	**Physical hazards** 0	**Personal protection** X
HMIS				