

SAFETY DATA SHEET

LOWINOX® 44B25 POWDER



Version	Revision Date:	SDS Number:	Country : US
1.3	2019/04/01	400000002386	Language: Z8

SECTION 1. IDENTIFICATION

Product name : LOWINOX® 44B25 POWDER
Product code : 00000000020002661

Other Identifiers : 6,6'-di-tert-butyl-4,4'-butylidenedi-m-cresol
CAS-No. : 85-60-9

Recommended use of the chemical and restrictions on use

Recommended use : Antioxidant
Restrictions on use : Reserved for industrial and professional use.

Manufacturer or supplier's details

Company:	<u>Supplier</u> SI Group USA (USAA), LLC 4 Mountainview Terrace Suite 200 Danbury, CT United States of America (USA) 06810
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Prepared by SI Group Regulatory Affairs

Further information for the material safety data sheet : msdsrequest@siigroup.com

Emergency telephone

Emergency telephone: +1 703-741-5970(CHEMTREC/US)
+44 (0) 1235 239 670(NCEC/EU)
0 512 8090 3042(NRCC/CHINA)
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

SECTION 2. HAZARDS IDENTIFICATION

Supplemental Hazard Statements : May form combustible dust concentrations in air.

Other hazards

None known.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Substance
Substance name	:	6,6'-di-tert-butyl-4,4'-butylidenedi-m-cresol
CAS-No.	:	85-60-9
Chemical nature	:	Hindered phenols
Hazardous ingredients		
No hazardous ingredients		

SECTION 4. FIRST AID MEASURES

General advice	:	No hazards which require special first aid measures.
If inhaled	:	Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, call a physician.
In case of skin contact	:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.
If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	Product dust may be irritating to eyes, skin and respiratory system.
Notes to physician	:	The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards during fire fighting	:	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Combustible dust May form explosive dust-air mixture.
Further information	:	Standard procedure for chemical fires.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions, protective equipment and emergency procedures | : | Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Non-sparking tools should be used. Avoid dust formation. |
| Environmental precautions | : | No special environmental precautions required. |
| Methods and materials for containment and cleaning up | : | Sweep up and shovel. Keep in suitable, closed containers for disposal. |
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SECTION 7. HANDLING AND STORAGE

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| Advice on protection against fire and explosion | : | Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations.

Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. |
| Advice on safe handling | : | For personal protection see section 8. No special handling advice required. |
| Conditions for safe storage | : | Keep container tightly closed in a dry and well-ventilated place. |
| Materials to avoid | : | No special restrictions on storage with other products. |
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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Exposure controls

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| Engineering measures | : | It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Use mechanical ventilation for general area control. Ensure that extracted air cannot be returned to the workplace |
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through the ventilation system.
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.
Eye protection : Safety glasses
Skin and body protection : Protective suit
Hygiene measures : General industrial hygiene practice.

Environmental exposure controls

Water : Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid, powder, or, granules
Color : white, to, off-white
Odor : typical
Odor Threshold : No data available
pH : No data available
Melting point/range : 208 - 220 °C

Boiling point/boiling range : No data available
Flash point : 222 °C

Evaporation rate : No data available
Flammability (solid, gas) : No data available
Upper explosion limit : No data available
Lower explosion limit : No data available
Vapor pressure : 0.000016 hPa (25 °C)

Relative vapor density : No data available
Relative density : 1.03 (20 °C)

Density : No data available
Bulk density : 328 kg/m³
Solubility(ies)
Water solubility : < 0.00001 g/l (20 °C)

Solubility in other solvents : No data available
Partition coefficient: n-octanol/water : log Pow: 6.4

Autoignition temperature : 360 °C

Decomposition temperature : No data available
Viscosity
Viscosity, dynamic : No data available

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Viscosity, kinematic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Surface tension	: No data available
Oxidizing potential	: No data available

Dust deflagration index (Kst) : 341 m.b_/s

Dust explosion class : St3

Minimum ignition energy : 10 mJ

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: Hazardous polymerization does not occur. No hazards to be specially mentioned.
Conditions to avoid	: No data available
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity : Remarks: Not classified due to lack of data.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg

Skin corrosion/irritation

Product:

Remarks: No significant adverse effects were reported

Serious eye damage/eye irritation

Product:

Remarks: No significant adverse effects were reported

Respiratory or skin sensitization

Product:

Remarks: No data available

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Germ cell mutagenicity

Product:

Germ cell mutagenicity - Assessment : Not classified due to lack of data.

Carcinogenicity

Product:

Carcinogenicity - Assessment : Not classified due to lack of data.

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : Not classified due to lack of data.

STOT-single exposure

Product:

Assessment: Not classified due to lack of data.

STOT-repeated exposure

Product:

Assessment: Not classified due to lack of data.

Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l Exposure time: 96 h Test Type: static test GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test Type: static test GLP: yes
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 d GLP: yes
Toxicity to microorganisms	:	(Pseudomonas putida): Remarks: Non-inhibitory

Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available
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Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: No data available
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Mobility in soil

Product:

Mobility	:	Remarks: No data available
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Other adverse effects

Product:

Environmental fate and pathways	:	Remarks: No data available
Results of PBT and vPvB assessment	:	Remarks: No data available
Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufac-

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tured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : There is no data available for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

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New Jersey Right To Know

6,6'-di-tert-butyl-4,4'-butylidenedi-m-cresol	85-60-9
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California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

REACH	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: Not in compliance with the inventory

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TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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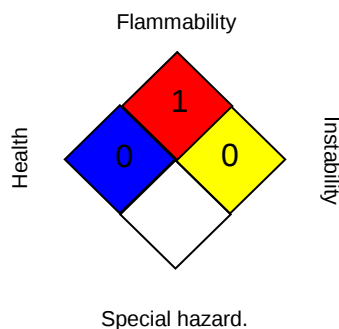
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Further information

NFPA:



HMIS® IV:

HEALTH	/	0
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Revision Date : 2019/04/01

The information and recommendations contained in this safety data sheet are, to the best of SI Group's knowledge, belief and experience, accurate and reliable as of the date of its publication and describe the product only with regard to safety requirements. It is the user's responsibility to confirm that it is using the most current available version of this safety data sheet. The information and recommendations herein are offered for the user's consideration and examination. Identified uses in this safety data sheet do neither represent an agreement on the quality of the Product nor a designated use. For the avoidance of doubt, nothing herein shall be construed as relieving the user of its responsibility to ensure that the product is suitable for the intended use and that any proprietary rights, existing laws and legislation are observed. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING THE PRODUCT DESCRIPTIONS, DATA OR INFORMATION HEREIN. This safety data sheet is neither a Certificate of Analysis (CoA) nor a technical data sheet and shall not be mistaken for a description of the product's specifications. If user repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the packaging. Appropriate warnings and safe-handling procedures should be provided to handlers and further users of the product. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted.

US / Z8

Carechem24 International Worldwide Coverage

Emergency Phone Numbers:

<u>Europe:</u>	All European Countries	+44 (0) 1235 239 670
<u>Asia Pacific:</u>	East / South East Asia	Regional Number : +65 3158 1074
	Australia	+61 2801 44558

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	New Zealand	+64 9929 1483
	China Taiwan	+86 10 5100 3039
	Japan	+81 345 789 341
	Indonesia	00780 3011 0293
	:Malaysia	+60 3 6207 4347
	Thailand	001800 1 2066 6751
	Korea	+65 3158 1285
	Vietnam	+65 3158 1255
	India	+65 3158 1198
	Pakistan	+65 3158 1329
	Philippines	+65 31581203
	Sri Lanka	+65 3158 1195
	Bangladesh	+65 3158 1200
<u>Middle East / Africa:</u>	Arabic speaking countries	+44 (0) 1235 239 671
	All other countries	+44 (0) 1235 239 670
<u>America</u>	United States / Canada	001866 928 0789
<u>Latin America:</u>	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
	Mexico	+52 555 004 8763