



MSDS Number: 00132
Product Name: Lowinox MD 24

Effective Date: 01/21/2004
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SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lowinox MD 24
Manufacturer: Great Lakes Chemical Corporation
Address: P.O. Box 2200 City: West Lafayette
State: Indiana Zip: 47996-2200
Emergency Telephone Number: 1-800-949-5167
Information Telephone Number: 1-765-497-6100 Fax: 1-765-497-6123
Chemtrec Phone: 1-800-424-9300; Internationally call 703-527-3887
Effective Date: 01/21/2004 Supercede Date: 02/01/2001
MSDS Prepared By: Regulatory Affairs Department/Great Lakes Chemical Corporation
Synonyms: 1,2-Bis(3,5-di-tert-butyl-4-hydroxyhydrocinnamoyl)hydrazine; N,N'-Bis[3',5'-di-tert-butyl-4-hydroxyphenyl]propionyl]hydrazine
Product Use: Antioxidant and metal deactivator
Chemical Name: Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 2-[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]hydrazide
Chemical Family: Hindered phenol

Additional Information

No information available

SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS

Table with 4 columns: INGREDIENT NAME, CAS NO., %, EXPOSURE LIMITS. Row 1: Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 2-[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]hydrazide, 32687788, 98 minimum, Y (Hazardous), 15 mg/m3 (PNOR) (OSHA PEL TWA), Not established (OSHA PEL STEL), Not established (OSHA PEL CEIL), 10 mg/m3 (PNOC) (ACGIH TLV TWA), Not established (ACGIH TLV STEL), Not established (ACGIH TLV CEIL)

*Indented chemicals are components of previous ingredient.

Additional Information

5 mg/m3 Respirable Dust Level (OSHA)
3 mg/m3 Respirable Dust Level (ACGIH)
PNOR = Particulates Not Otherwise Regulated
PNOC = Particulates Not Otherwise Classified

SECTION III - HAZARDS IDENTIFICATION

Emergency Overview: White to off-white crystalline powder
No odor
Dusts can form an explosive mixture with air.
Relevant Routes of Exposure: Ingestion, inhalation and skin absorption
Signs and Symptoms of Overexposure: No known signs and symptoms of exposure.
Medical Conditions Generally Aggravated By Exposure: None reported
Potential Health Effects: See Section XI for additional information.
Eyes: Not expected to be a hazard in normal industrial use.
As with any dust, mechanical irritation is possible to the eye.

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SECTION III - HAZARDS IDENTIFICATION

Skin: Not expected to be a hazard in normal industrial use.
As with any dust, mechanical irritation is possible to the skin.

Ingestion: Long term oral exposure may result in liver damage.

Inhalation: As with any dust, mechanical irritation is possible to mucous membranes and the respiratory tract.

Chronic Health Effects: May cause liver effects based on animal data.

Carcinogenicity:

NTP:	No	ACGIH:	No
IARC:	No	OTHER:	No
OSHA:	No		

Additional Information

No information available

SECTION IV - FIRST AID MEASURES

Eyes: Flush with large volumes of water for at least 15 minutes. Get medical attention.

Skin: Wash with large volumes of soap and water for at least 15 minutes. If irritation develops, get medical attention.

Ingestion: If conscious, give person 1 to 2 glasses of water. Get medical attention immediately.

Inhalation: Remove person to fresh air. Get medical attention.

Antidotes: No information available

Notes to Physicians and/or Protection for First-Aiders: No information available

Additional Information

No information available

SECTION V - FIRE FIGHTING MEASURES

Flammable Limits in Air (% by Volume): Not available

Flash Point: 356 degrees F (Marcusson)

Autoignition Temperature: Not available

Extinguishing Media: All conventional media are suitable.

Fire Fighting Instructions: Wear a self-contained breathing apparatus and protective clothing to prevent skin and eye contact in fire situations.

Unusual Fire and Explosion Hazards: Under fire conditions, toxic and irritating fumes may be emitted. Dusts can form an explosive mixture with air.

Flammability Classification: Combustible dust

Known or Anticipated Hazardous Products of Combustion: Oxides of nitrogen
Carbon monoxide and carbon dioxide

Additional Information

No information available

SECTION VI - ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Shut off all sources of ignition.
Wearing appropriate personal protective equipment, carefully sweep up material and place in suitable labeled containers for disposal.

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SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use only non-sparking tools.
Avoid creating a dusting condition.
Environmental Precautions: See Section VIII.
Avoid releasing to the environment.

Additional Information

No information available

SECTION VII - HANDLING AND STORAGE

Handling: Use appropriate personal protection equipment.
Avoid eye, skin and clothing contact.
Avoid breathing dust.
Avoid repeated and prolonged contact.
Prevent buildup of static electricity.
All equipment should be properly grounded.
Keep away from heat, sparks and flame.
Avoid creating a dusting situation.

Storage: Store in a cool, dry, well-ventilated area away from incompatible materials.
Store away from heat, sparks, and flame.
Keep container tightly closed.

Other Precautions: No information available

Additional Information

No information available

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Adequate general ventilation is recommended when handling to control airborne levels.

Ventilation Requirements: Use local exhaust to minimize dusting.
Use mechanical ventilation for general area control.

Personal Protective Equipment:

Eye/Face Protection: Chemical safety glasses with side shields or chemical safety goggles

Skin Protection: Chemical resistant gloves
Clothing designed to minimize skin contact

Respiratory Protection: Wear a NIOSH/MSHA approved dust respirator if dusting occurs, or there is potential for airborne exposures to exceed established threshold values.
Consult the OSHA respiratory protection information located at 29CFR 1910.134 and the American National Standard Institute's Practices of Respiratory Protection Z88.2.

Other Protective Clothing or Equipment: No information available

Exposure Guidelines: See Section II.

Work Hygienic Practices: Wash thoroughly after handling.
Wash contaminated clothing before reuse.

Additional Information

No information available

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SECTION IX - PHYSICAL [□] CHEMICAL PROPERTIES

Appearance:	White to off-white crystalline powder	Percent Volatile:	<0.5
Boiling Point:	Not available	pH Value:	Not available
Bulk Density:	Not available	pH Concentration:	Not available
Color:	White to off-white	Physical State:	Solid
Decomposition Temperature:	>220 degrees C	Reactivity in Water:	Not water reactive
Evaporation Rate:	Not available	Saturated Vapor Concentration:	Not available
Freezing Point:	Not available	Softening Point:	Not available
Heat Value:	Not available	Solubility in Water:	Insoluble
Melting Point:	221-232 degrees C	Specific Gravity or Density (Water=1):	1.11
Molecular/Chemical Formula:	C34H52N2O4	Vapor Density:	Not available
Molecular Weight:	553	Vapor Pressure:	~1 x 10E-12 mm Hg at 20 degrees C
Octanol/Water Partition Coefficient:	Not available	Viscosity:	Not available
Odor:	No odor	Volatile Organic Compounds:	Not available
Odor Threshold:	Not available	Water/Oil Distribution Coefficient:	Not available
Particle Size:	Not available	Weight Per Gallon:	Not available

Additional Information

No information available

SECTION X - STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of handling and use.
Conditions to Avoid:	High temperatures, heat, open flames, static electricity and other sources of ignition
Incompatibility With Other Materials:	Strong oxidizers
Hazardous Decomposition Products:	Thermal decomposition may produce the following: Oxides of nitrogen Carbon monoxide and carbon dioxide
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	None

Additional Information

No information available

SECTION XI - TOXICOLOGICAL INFORMATION

VALUE (LD50 OR LC50)	ANIMAL	ROUTES	COMPONENTS
>7,000 mg/kg	Rat	Acute Oral	1,2-Bis(3,5-di-tert-butyl-4-hydroxyhydrocinnamoyl)hydrazine

Toxicological Information:

The toxicological properties of this material have not been fully determined.
 This material has been determined not to be a primary eye irritant in rabbits.
 This material has been determined not to be a primary skin irritant in rabbits.
 This material did not cause sensitization in a guinea pig maximization study.
 This material was not determined to be mutagenic in the Ames Test. No evidence of mutagenic activity was seen in a nucleus anomaly test using Chinese hamsters.

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SECTION XI - TOXICOLOGICAL INFORMATION

Liver effects were seen in a 90 day subchronic feeding study in rats at high dose levels. The NOEL was determined to be 24.6-27.0 mg/kg/day.

Other acute and chronic health hazards, as well as target organs, are unknown. As with all dusts, inhalation of air concentration levels above the PNOR may cause irritation and adverse lung effects.

Additional Information

No information available

SECTION XII - ECOLOGICAL INFORMATION

Ecological Information: The following ecological information is offered:
LC50 (96 hour) in golden orfe >100 ppm
LC50 (96 hour) in rainbow trout >100 ppm
LC50 (96 hour) in carp >100 ppm
LC50 (96 hour) in bluegill >100 ppm
EC50 (Acute 24 hour) in Daphnia magna = 15 ppm
IC20, IC50, IC80 (inhibitory concentration) on respiration of aerobic waste water bacteria >100 mg/L
This material was not degradable in Sturm-test

Avoid releasing to the environment.

Additional Information

No information available

SECTION XIII - DISPOSAL CONSIDERATIONS

Disposal Considerations: Dispose of waste at an approved chemical disposal facility in compliance with all current Local, State/Province, Federal/Canadian laws and regulations.

Additional Information

No information available

SECTION XIV - TRANSPORT INFORMATION

U.S. DOT

Proper Shipping Name:	Not regulated	ID Number:	N/A
Hazard Class:	N/A	Labels:	N/A
Packing Group:	N/A	Packaging Exceptions:	N/A
Special Provisions:	N/A	Bulk Packaging:	N/A
Non-Bulk Packaging:	N/A	Air Cargo Limit:	N/A
Passenger Air/Rail Limit:	N/A	Other Stowage:	N/A
Vessel Stowage:	N/A		
Reportable <input type="checkbox"/> quantity:	N/A		

AIR - ICAO OR IATA

Proper Shipping Name:	Not regulated	ID Number:	N/A
Hazard Class:	N/A	Packing Group:	N/A
Subsidiary Risk:	N/A	Packing Instructions:	N/A
Hazard Labels:	N/A	Packing Instruction -	
Air Passenger Limit Per Package:	N/A	Cargo:	N/A

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SECTION XIV - TRANSPORT INFORMATION

Air Cargo Limit Per Package: N/A Special Provisions Code: N/A

N/A

WATER - IMDG

Proper Shipping Name: Not regulated

Hazard Class: N/A

ID Number: N/A

Packing Group: N/A

Subsidiary Risk: N/A

Medical First Aid Guide Code:

N/A

Additional Information

No information available

SECTION XV - REGULATORY INFORMATION

U.S. Federal Regulations:

The components of this product are either on the TSCA Inventory or exempt (i.e. impurities, a polymer complying with the exemption rule at 40 CFR 723.250) from the Inventory.

State Regulations:

Hydrazine (Present as impurity <20 ppm):

Massachusetts Substance List - Carcinogen

Massachusetts Extraordinarily Hazardous Substance (1 ppm reporting limit)

Pennsylvania Special Hazardous Substance List (0.01% reporting limit)

Pennsylvania Environmental Hazard List

New Jersey Special Health Hazard Substance List (0.1% reporting limit)

California Proposition 65 - No-significant-risk level is 0.04 ug/day

WARNING: This product contains a chemical known to the State of California to cause cancer.

International Regulations:

This material (or each component) is listed on the following inventories:

Canada - DSL

EU - EINECS

Australia - AICS

Japan - ENCS

Korea - ECL

Philippines - PICCS

China - List I

Canadian WHMIS Hazard Class and Division = D.2.b

SARA Hazards:

Acute:	No	Chronic:	Yes
Reactive:	No	Fire:	No
Pressure:	No		

Additional Information

The above regulatory information represents only selected regulations and is not meant to be a complete list.

SECTION XVI - OTHER INFORMATION

NFPA Codes:

Health:	NR	Flammability:	NR
Reactivity:	NR	Other:	NR

HMIS Codes:

Health:	NR	Flammability:	NR
Reactivity:	NR	Protection:	NR

Label Statements: Not available

* indicates chronic health hazard.

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SECTION XVI - OTHER INFORMATION

Other Information:

Abbreviations:

(L) = Loose bulk density in g/ml

LOEC = Lowest observed effect concentration

MATC = Maximum acceptable toxicant concentration

NA = Not available

N/A = Not applicable

NL = Not limited

NOAEL = No observable adverse effect level

NOEC = No observed effect concentration

NOEL = No observable effect level

NR = Not rated

(P) = Packed bulk density in g/ml

PNOC = Particulates Not Otherwise Classified

PNOR = Particulates Not Otherwise Regulated

REL = Recommended exposure limit

TS = Trade secret

Additional Information

Information on this form is furnished solely for the purpose of compliance with OSHA's Hazard Communication Standard, 29CFR 1910.1200 and The Canadian Environmental Protection Act, Canada Gazette Part II, Vol. 122, No. 2 and shall not be used for any other purpose.

Revision Information:

General review and update