



Thurmalox 2452

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Thurmalox 2452**

Product Code(s) : None reported.

Recommended use of the chemical and restrictions on use

: Pigment
Use pattern: Professional Use Only
Recommended restrictions: None known.

Chemical family : Elemental zinc

Name, address, and telephone number of the supplier:

Dampney Company, Inc.

85 Paris Street
Everett, Massachusetts, U.S.A.
02149

Email: sales@dampney.com

Supplier's Telephone # : 617-389-2805

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.).

Name, address, and telephone number of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Blue / grey powder. Odorless.

This material is not classified as hazardous under OSHA regulations (29 CFR Part 1910.1200).

This product is not regulated by the Hazardous Products Act (WHMIS).

Label elements

Signal Word

Not required

Hazard statement(s)

Not applicable.

Precautionary statement(s)

Not applicable.

Other hazards

Other hazards which do not result in classification:

Ingestion may cause irritation of the mouth, throat and stomach. Contact with eyes may cause irritation. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Direct eye contact may cause slight or mild, transient irritation. Direct eye contact may cause slight or mild, transient irritation. Water causes accelerate degradation of this product into Zinc Oxide, also releasing Hydrogen and heat which may ignite the evolved Hydrogen gas if trapped in a confined area.

Environmental precautions:

Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration</u>
Zinc dust	Elemental zinc	7440-66-6	

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do not induce vomiting. Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. Get medical attention if symptoms persist.
- Inhalation* : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Call a POISON CENTER or doctor/physician if you feel unwell.
- Skin contact* : Wash affected areas with soap and water. Take off contaminated clothing and wash before re-use. Get medical attention if irritation develops and persists.
- Eye contact* : Flush with large amounts of water for 15 minutes. Remove contact lenses, if present and easy to do. If irritation or symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed

- : Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Direct skin contact may cause temporary redness. Direct eye contact may cause temporary redness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable extinguishing media* : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical. Do not use water if possible.

Unsuitable extinguishing media

- : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Water will react with Zinc to release flammable, Hydrogen gas, which in turn may explode and spread a fire.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Hazardous combustion products

- : Zinc oxide

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn.

Special fire-fighting procedures

- : Evacuate personnel to safe areas. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Dike for water control. Avoid release to the environment.



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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions

- : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

Methods and material for containment and cleaning up

- : Ventilate the area. Prevent further leakage or spillage if safe to do so. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Contact the proper local authorities.

Special spill response procedures

- : In case of a transportation accident, contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887.
 US CERCLA Reportable quantity (RQ):
 Zinc (1000 lbs / 454 kg)

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use only outdoors or in a well-ventilated area. Wear suitable protective equipment. Avoid breathing dust and fume. Avoid contact with skin, eyes and clothing. Keep away from heat and flame. Keep away from incompatibles. Label containers appropriately. Wash thoroughly after handling. Keep containers closed when not in use.

Conditions for safe storage

- : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

Incompatible materials

- : Strong oxidizers (e.g. Chlorine, Peroxides, etc.); Acids ;Halogenated compounds ;Water, moisture.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Zinc dust	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

- : Provide exhaust ventilation or other engineering controls to keep the airborne concentration of vapours below their respective threshold limit value.

Respiratory protection

- : Respiratory protection is required if the concentrations exceed the TLV. Use a NIOSH approved dust respirator if dust levels exceed exposure limits. Seek advice from respiratory protection specialists.

Skin protection

- : Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye / face protection

- : Chemical goggles must be worn to prevent dusts from entering the eyes.



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Other protective equipment : Wear appropriate protective clothing to prevent skin contact, such as coveralls or long sleeved shirt, long pants, and shoes and socks. Wear protective gloves. An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.

General hygiene considerations : Avoid breathing dust and fume. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Solid.
Odour : No information available.
Odour threshold : No information available.
pH : No information available.
Melting/Freezing point : 419.5 °C (787.1°F)

Initial boiling point and boiling range : 908°C (1666.4°F)

Flash point : Not applicable.
Flashpoint (Method) : Not applicable.
Evaporation rate (BuAe = 1) : No information available.
Flammability (solid, gas) : Not applicable.
Lower flammable limit (% by vol.) : N/Ap

Upper flammable limit (% by vol.) : N/Ap
Oxidizing properties : None known.
Explosive properties : Not explosive
Vapour pressure : zero
Vapour density : >1

Relative density / Specific gravity : 7.101

Solubility in water : Insoluble.
Other solubility(ies) : No information available.

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution : Not applicable.

Auto-ignition temperature : No information available.
Decomposition temperature : No information available.
Viscosity : Not applicable.
Volatiles (% by weight) : none

Volatile organic Compounds (VOC's) : No information available.

Absolute pressure of container : N/Ap

Flame projection length : N/Ap

Other physical/chemical comments :
None known or reported by the manufacturer.



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SECTION 10. STABILITY AND REACTIVITY

- Reactivity** : Not normally reactive. Water causes accelerate degradation of this product into Zinc Oxide, also releasing Hydrogen and heat which may ignite the evolved Hydrogen gas if trapped in a confined area
- Chemical stability** : Stable under normal conditions.
- Possibility of hazardous reactions** : Hazardous polymerization does not occur.
- Conditions to avoid** : Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials. Avoid dust formation.
- Incompatible materials** : Strong oxidizers (e.g. Chlorine, Peroxides, etc.); Acids ;Halogenated compounds ;Water, moisture.
- Hazardous decomposition products** : See Section 5 (Fire Fighting Measures).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

- Routes of entry inhalation** : YES
- Routes of entry skin & eye** : YES
- Routes of entry Ingestion** : YES
- Routes of exposure skin absorption** : NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : May cause respiratory tract irritation.Symptoms may include coughing, choking and wheezing.

Sign and symptoms ingestion

- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin

- : May cause mild skin irritation on prolonged contact.

Sign and symptoms eyes

- : Direct eye contact may cause slight redness.

Potential Chronic Health Effects

- : Prolonged exposure can cause redness, swelling, itching, cracking of the skin, dermatitis and sensitization.

Mutagenicity

- : Not expected to be mutagenic in humans.

Carcinogenicity

- : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

- : Not expected to have other reproductive effects.

Sensitization to material

- : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects

- : The substance or mixture is not classified as specific target organ toxicant, single exposure.

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Medical conditions aggravated by overexposure

- : Pre-existing skin, eye and respiratory disorders.

Synergistic materials

- : No information available.

Toxicological data

- : See below for toxicological data on the substance.



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<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Zinc dust	> 5.4 mg/L (dust) (No mortality)	> 2000 mg/kg (No mortality)	n/av

Other important toxicological hazards

: See Section 3 for additional information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC50 / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Zinc dust	7440-66-6	N/Av	N/Av	None.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Daphnia</u>		
		<u>EC50 / 48h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Zinc dust	7440-66-6	0.07 mg/L (Daphnia magna)	0.12 mg/L/29-day	10

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Algae</u>		
		<u>EC50 / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
Zinc dust	7440-66-6	0.15 mg/L/72hr (Green algae)	0.05 mg/L/72hr	1

Persistence and degradability

: Biodegradation is not applicable to inorganic substances.

Bioaccumulation potential

: No data is available on the product itself.

<u>Components</u>	<u>Partition coefficient n-octanol/ater (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
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Mobility in soil : Insoluble.

Other Adverse Environmental effects

: No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Handle waste according to recommendations in Section 7. Empty containers may contain hazardous residues.

Methods of Disposal

: Dispose in accordance with all applicable federal, state, provincial and local regulations.



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RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	None.	Not regulated.	not regulated	none	
TDG Additional information	None.				
49CFR/DOT	None.	Not regulated.	not regulated	none	
49CFR/DOT Additional information	This product is regulated for transport when shipped above the RQ.US CERCLA Reportable quantity (RQ): (1000 lbs / 454 kg) Ship as Environmentally Hazardous Substances, N.O.S. (Zinc), UN 3077, PG III				
IMDG	None.	Not regulated.	not regulated	none	
IMDG Additional information	None.				
ICAO/IATA	None.	Not regulated.	not regulated	none	
ICAO/IATA Additional information	None.				

Special precautions for user : Appropriate advice on safety must accompany the package.

Environmental hazards : See Section 12 for more environmental information.

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

: This information is not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Zinc dust	7440-66-6	Yes	1000 lbs / 454 kg	None.	Yes	1%

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: None.



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US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Zinc dust	7440-66-6	No	N/Ap	Yes	Yes	No	Yes	Yes	Yes

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Zinc dust	7440-66-6	231-175-3	Present	Present	Not listed	KE-35518	Present	HSR001478, HSR001477, HSR001301, HSR001475, HSR001476

SECTION 16. OTHER INFORMATION

Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CNS: Central Nervous System
- DOT: Department of Transportation
- EPA: Environmental Protection Agency
- EINECS: European Inventory of Existing Commercial chemical Substances
- IARC: International Agency for Research on Cancer
- IBC: Intermediate Bulk Container
- IMDG: International Maritime Dangerous Goods
- Inh: Inhalation
- LC: Lethal Concentration
- LD: Lethal Dose
- N/Ap: Not Applicable
- N/Av: Not Available
- NIOSH: National Institute of Occupational Safety and Health
- NTP: National Toxicology Program
- OSHA: Occupational Safety and Health Administration
- PEL: Permissible exposure limit
- RCRA: Resource Conservation and Recovery Act
- RTECS: Registry of Toxic Effects of Chemical Substances
- SARA: Superfund Amendments and Reauthorization Act
- STEL: Short Term Exposure Limit



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TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2015.
- 2. International Agency for Research on Cancer Monographs, searched 2015
- 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2015 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists - 2015.
- 6. California Proposition 65 List - 2015

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Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p>Prepared for: Dampney Company, Inc. 85 Paris Street Everett MA 02149 U.S.A Telephone: (617) 389-2805 Please direct all inquiries to Dampney Company.</p>	
<p>Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	

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