

SAFETY DATA SHEET

Section 1. Identification

GHS product identifier :

Other means of identification : Not available.

Product type : Liquid.

Identified uses

Not available.

Supplier's details :

Emergency telephone number (with hours of operation) : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887 (24/7)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN SENSITIZATION - Category 1
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Avoid release to the environment. Avoid breathing vapor. Contaminated work clothing should not be allowed out of the workplace.

Response : IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage : Not applicable.



Section 2. Hazards identification

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : Not available.

Ingredient name	%	CAS number
Solvent naphtha (petroleum), heavy aromatic	10 - 30	64742-94-5
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	1 - 5	4259-15-8
2,6-di-tert-Butyl-p-cresol	0.1 - 1	128-37-0
Naphthalene	0.1 - 1	91-20-3
Calcium bis(dinonylnaphthalenesulphonate)	0.1 - 1	57855-77-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 20 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately.

Skin contact : Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Section 4. First aid measures

- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Oxides of molybdenum, zinc, calcium, sulfur, phosphorus, nitrogen and carbon.

- Special protective actions for fire-fighters** : No special measures are required.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits



Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
2,6-di-tert-Butyl-p-cresol	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 10 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 10 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 4/2014). TWA: 2 mg/m³ 8 hours. Form: Inhalable fraction and vapor</p>
Naphthalene	<p>ACGIH TLV (United States, 4/2014). Absorbed through skin. TWA: 52 mg/m³ 8 hours. TWA: 10 ppm 8 hours.</p> <p>NIOSH REL (United States, 10/2013). STEL: 75 mg/m³ 15 minutes. STEL: 15 ppm 15 minutes. TWA: 50 mg/m³ 10 hours. TWA: 10 ppm 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 50 mg/m³ 8 hours. TWA: 10 ppm 8 hours.</p>

Appropriate engineering controls

- Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures

- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

- Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

- Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid. [Thickened fluid.]
Color	: Black.
Odor	: Solvent.
Odor threshold	: Not available.
pH	: Not available.
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Open cup: 132.22°C (270°F) [Cleveland.]
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 0.95
Solubility	: Insoluble in the following materials: cold water and hot water. Soluble in aliphatic & aromatic solvents.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Volatility	: Not available.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.



Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Zinc bis[O,O-bis(2-ethylhexyl)] bis (dithiophosphate)	LD50 Dermal	Rabbit	>5 g/kg	-
2,6-di-tert-Butyl-p-cresol	LD50 Oral	Rat	3.1 g/kg	-
Naphthalene	LD50 Oral	Rat	890 mg/kg	-
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	490 mg/kg	-
Calcium bis (dinonylnaphthalenesulphonate)	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Solvent naphtha (petroleum), heavy aromatic	Skin - Mild irritant	Rabbit	-	24 hours 500 µL	-
2,6-di-tert-Butyl-p-cresol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Human	-	48 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	48 hours 500 mg	-
Naphthalene	Skin - Mild irritant	Rabbit	-	495 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 0.05 mL	-
Calcium bis (dinonylnaphthalenesulphonate)	Skin - Moderate irritant	Rabbit	-	0.5 mL	-

Sensitization

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
Petroleum asphalt	-	2B	-	A4	-	+
Bitumens, Oxidized	-	3	-	A4	-	-
2-Methylnaphthalene	-	-	-	A4	-	+
1-Methylnaphthalene	-	-	-	A4	-	+
Naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.	A4	-	None.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

Name	Result
Solvent naphtha (petroleum), heavy aromatic	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Section 11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.

Long term exposure

Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.

Potential chronic health effects

General	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	252613.8 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2,6-di-tert-Butyl-p-cresol Naphthalene	Acute EC50 1440 µg/L Fresh water Acute EC50 1600 µg/L Fresh water Acute LC50 2350 µg/L Marine water Acute LC50 213 µg/L Fresh water Chronic NOEC 0.67 ppm Fresh water	Daphnia - Daphnia pulex - Neonate Daphnia - Daphnia magna - Neonate Crustaceans - Palaemonetes pugio Fish - Melanotaenia fluviatilis - Larvae Fish - Oncorhynchus kisutch	48 hours 48 hours 48 hours 96 hours 40 days

Persistence and degradability

There is no data available.

Bioaccumulative potential



Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Solvent naphtha (petroleum), heavy aromatic	2.8 to 6.5	99 to 5780	high
Zinc bis[O,O-bis(2-ethylhexyl)] bis (dithiophosphate)	3.59	-	low
2,6-di-tert-Butyl-p-cresol	5.1	330 to 1800	high
Naphthalene	3.4	36.5 to 168	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

AERG : Not applicable.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.



Section 14. Transport information

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) PAIR: Naphthalene
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 307: 2-Methylnaphthalene; Naphthalene; 1-Methylnaphthalene; Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)
Clean Water Act (CWA) 311: Naphthalene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Solvent naphtha (petroleum), heavy aromatic	10 - 30	Yes.	No.	No.	No.	No.
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	1 - 5	No.	No.	No.	Yes.	No.
Naphthalene	0.1 - 1	Yes.	No.	No.	Yes.	Yes.
Calcium bis(dinonylnaphthalenesulphonate)	0.1 - 1	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) Naphthalene	4259-15-8 91-20-3	1 - 5 0.1 - 1
Supplier notification	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) Naphthalene	4259-15-8 91-20-3	1 - 5 0.1 - 1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.



Section 15. Regulatory information

State regulations

- Massachusetts** : The following components are listed: Petroleum asphalt; 1-Methylnaphthalene
- New York** : The following components are listed: Naphthalene
- New Jersey** : The following components are listed: Petroleum asphalt; Bitumens, Oxidized; 2-Methylnaphthalene; Naphthalene; 1-Methylnaphthalene; Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)
- Pennsylvania** : The following components are listed: Petroleum asphalt; 2-Methylnaphthalene; Naphthalene; 1-Methylnaphthalene; Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)

California Prop. 65

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

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Naphthalene	Yes.	No.	Yes.	No.

Section 16. Other information

History

- Date of issue mm/dd/yyyy** : 04/30/2015
- Version** : 1
- Revised Section(s)** : Not applicable.
- Prepared by** : KMK Regulatory Services Inc.
- Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.