

SAFETY DATA SHEET

1. Identification

Product identifier RHEOTEMP 500MS

Other means of identification

Product Code RHEOTEMP 500MS

Recommended use Lubricating Grease

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Nye Lubricants, Inc.

Address 12 Howland Road
Fairhaven, MA 02719 US

Telephone 508-996-6721

E-mail Not available.

Emergency phone number CHEMTREC 1-800-424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Warning Danger

Hazard statement Causes skin irritation. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause damage to organs (). Causes damage to organs () through prolonged or repeated exposure. May cause damage to organs () through prolonged or repeated exposure.

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Use personal protective equipment as required.

Response IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. IF exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. Get medical advice/attention if you feel unwell. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Specific treatment is urgent (see directions on this label).

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) Not classified.

Supplemental information

Contains <?ghs_eu_sensitizer_ge0.1>. May produce an allergic reaction.

3. Composition/information on ingredients

Mixtures

Hazardous components			
Chemical name	Common name and synonyms	CAS number	%
3H-INDOL-3-ONE, 2-(1,3-DIHYDRO-3-OXO-2H-		482-89-3	10.8775
MOLYBDENUM DISULFIDE		1317-33-5	5
WHITE MINERAL OIL		8042-47-5	4.56

Hazardous components			
Chemical name	Common name and synonyms	CAS number	%
PHOSPHATE, TRIXYLYL		25155-23-1	2.755
Other components below reportable levels			76.8075
CLP: Regulation No. 1272/2008.			
DSD: Directive 67/548/EEC.			
#: This substance has workplace exposure limit(s).			
PBT: persistent, bioaccumulative and toxic substance.			
vPvB: very persistent and very bioaccumulative substance.			
Composition comments	The full text for all R- and H-phrases is displayed in section 16.		
4. First-aid measures			
Inhalation	If symptoms develop, remove affected person from source of exposure into fresh air. Get immediate medical attention.		
Skin contact	Wash off with soap and water. Remove contaminated clothing. Wash off with soap and plenty of water. For minor skin contact, avoid spreading material on unaffected skin. If skin irritation occurs: Get medical advice/attention. Get medical attention if symptoms occur. Wash clothing separately before reuse.		
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Rinse with water. Get medical attention if irritation develops and persists. Get immediate medical attention.		
Ingestion	If ingestion of a large amount does occur, seek medical attention. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Call a POISON CENTER or doctor/physician if you feel unwell. Never give anything by mouth to a victim who is unconscious or is having convulsions. Rinse mouth.		
Most important symptoms/effects, acute and delayed	Irritant effects. May cause allergic skin reaction.		
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.		
5. Fire-fighting measures			
Suitable extinguishing media	Water Fog. Foam. Carbon dioxide (CO2). Dry chemical. Powder.		
Unsuitable extinguishing media	Water. Do not use a solid water stream as it may scatter and spread fire. Do not use water jet as an extinguisher, as this will spread the fire.		
Specific hazards arising from the chemical	Not applicable.		
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.		
Fire-fighting equipment/instructions	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers.		
6. Accidental release measures			
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid inhalation of vapors or mists. Observe precautions from other sections.		
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Soak up with inert absorbent material. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Clean contaminated surface thoroughly. Following product recovery, flush area with water. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS. Clean up spills immediately, observing precautions in Protective Equipment section. Sweep up and shovel into suitable containers for disposal.		
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water. Prevent entry into waterways, sewers, basements or confined areas.		

7. Handling and storage

Precautions for safe handling

Do NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid prolonged or repeated skin contact with this material. Avoid breathing gas/vapors/mist/fumes. Do not handle or store near an open flame, heat or other sources of ignition. Do not take internally. Do not taste or swallow. Avoid breathing mist or vapor. Avoid contact with skin. Avoid contact with eyes. Use personal protective equipment as required. Avoid prolonged exposure. Wash thoroughly after handling. Avoid release to the environment. Handle and open container with care.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat and sources of ignition. Store in cool place. Store in a closed container away from incompatible materials. Keep out of the reach of children. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
MOLYBDENUM DISULFIDE (CAS 1317-33-5)	PEL	15 mg/m3	Total dust.
WHITE MINERAL OIL (CAS 8042-47-5)	PEL	5 mg/m3	Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
MOLYBDENUM DISULFIDE (CAS 1317-33-5)	TWA	3 mg/m3	Respirable fraction.
WHITE MINERAL OIL (CAS 8042-47-5)	TWA	10 mg/m3 5 mg/m3	Inhalable fraction. Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
WHITE MINERAL OIL (CAS 8042-47-5)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter. This material does not have established exposure limits.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Provide adequate general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection. Wear safety glasses; chemical goggles (if splashing is possible).

Hand protection

Wear protective gloves. Not normally needed.

Other

Wear suitable protective clothing. Wear nitrile, neoprene, PVC or viton gloves.

Respiratory protection

An air purifying respirator with an organic vapor cartridge may be used under certain circumstances where airborne concentrations are expected to exceed exposure limits, or if irritation or symptoms are experienced. Respiratory protection must be provided in accordance with 29 CFR 1910.134. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. No personal respiratory protective equipment normally required.

Thermal hazards

Not available.

General hygiene considerations

When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly after handling. Launder contaminated clothing before reuse.

9. Physical and chemical properties

Appearance

Not available.

Physical state	Liquid.
Form	Semi-solid
Color	Black
Odor	Slight
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.02 g/cm³
Flash point class	Combustible IIIB
Shelf life	4 years

10. Stability and reactivity

Reactivity	None known.
Chemical stability	Material is stable under normal conditions. Stable.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Peroxides. Phenols. Strong acids, alkalies and oxidizing agents.
Hazardous decomposition products	Irritants. Oxides of phosphorus. Carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of sulfur.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Knowledge about health hazard is incomplete.
Inhalation	Knowledge about health hazard is incomplete.
Skin contact	Causes skin irritation. Knowledge about health hazard is incomplete.
Eye contact	Knowledge about health hazard is incomplete.

Symptoms related to the physical, chemical and toxicological characteristics	Discomfort in the chest. Shortness of breath. Narcosis. Decrease in motor functions. Behavioral changes. Coughing. Defatting of the skin. Skin irritation. Irritant effects. Rash.
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Information on toxicological effects

Acute toxicity

Material name: RHEOTEMP 500MS

1355 Version #: 02 Revision date: July-09-2014 Issue date: February-22-2014

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Product	Species	Test Results
RHEOTEMP 500MS (CAS Mixture)		
Acute		
<i>Inhalation</i>		
LC50	Rat	48.7244 mg/l/4h, estimated
<i>Oral</i>		
LD50	Rat	45966.4453 mg/kg, estimated
<i>Other</i>		
LD50	Rabbit	1684.2106 mg/kg, estimated
	Rat	2807.0176 mg/kg, estimated
Components	Species	Test Results
3H-INDOL-3-ONE, 2-(1,3-DIHYDRO-3-OXO-2H- (CAS 482-89-3)		
Acute		
<i>Inhalation</i>		
LC50	Rat	5.3 mg/l/4h
<i>Oral</i>		
LD50	Rat	5000 mg/kg
MOLYBDENUM DISULFIDE (CAS 1317-33-5)		
Acute		
<i>Inhalation</i>		
LC50	Rat	2820.0001 mg/l/4h
WHITE MINERAL OIL (CAS 8042-47-5)		
Acute		
<i>Oral</i>		
LD50	Rat	5000.0001 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation. Knowledge about health hazard is incomplete.
Serious eye damage/eye irritation	None known. Knowledge about health hazard is incomplete.
Respiratory sensitization	Knowledge about sensitization hazard is incomplete.
Skin sensitization	May cause an allergic skin reaction. None known. Knowledge about sensitization hazard is incomplete.
Germ cell mutagenicity	Suspected of causing genetic defects. No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Knowledge about mutagenicity is incomplete.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. This product does not contain any carcinogens or potential carcinogens as listed by ACGIH and IARC. This product does not contain any carcinogens or potential carcinogens as listed by IARC. This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC and NTP. Knowledge about carcinogenicity is incomplete.

IARC Monographs. Overall Evaluation of Carcinogenicity

WHITE MINERAL OIL (CAS 8042-47-5)	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	Not classified. Knowledge about health hazard is incomplete.
Specific target organ toxicity - single exposure	Knowledge about health hazard is incomplete. .
Specific target organ toxicity - repeated exposure	Knowledge about health hazard is incomplete. .
Aspiration hazard	Knowledge about health hazard is incomplete.
Chronic effects	Prolonged inhalation may be harmful. Not expected to be hazardous by WHMIS criteria.
Further information	This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity	Contains a substance which causes risk of hazardous effects to the environment. This material is not expected to be harmful to aquatic life.
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Product	Species	Test Results
RHEOTEMP 500MS (CAS Mixture)		
Algae	IC50	Algae
		48.7244 mg/L, 72 Hours, estimated

Product		Species	Test Results
Crustacea	EC50	Daphnia	4596.6455 mg/L, 48 Hours, estimated
Components		Species	Test Results
3H-INDOL-3-ONE, 2-(1,3-DIHYDRO-3-OXO-2H- (CAS 482-89-3)			
Algae	IC50	Algae	5.3 mg/L, 72 Hours
Crustacea	EC50	Daphnia	500.0001 mg/L, 48 Hours
PHOSPHATE, TRIXYLYL (CAS 25155-23-1)			
Aquatic			
Fish	LC50	Zebra danio (Danio rerio)	20 - 30 mg/l, 96 hours
WHITE MINERAL OIL (CAS 8042-47-5)			
Fish	LC50	Fish	10000.0001, 96 Hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose in accordance with all applicable regulations. Dispose of contents/container (in accordance with related regulations). When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Not applicable.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	Not regulated as a hazardous material by DOT.
IATA	Not regulated as a dangerous good.
IMDG	Not regulated as a dangerous good.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This substance/mixture is not intended to be transported in bulk.
General information	IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. CERCLA/SARA Hazardous Substances - Not applicable.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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SARA 302 Extremely hazardous substance	No
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SARA 311/312 Hazardous chemical	No
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Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
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Food and Drug Administration (FDA)	Not regulated.
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US state regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
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US. Massachusetts RTK - Substance List

MOLYBDENUM DISULFIDE (CAS 1317-33-5)

WHITE MINERAL OIL (CAS 8042-47-5)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

WHITE MINERAL OIL (CAS 8042-47-5)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

Not Listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	February-22-2014
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Revision date	July-09-2014
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Version #	02
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Further information	HMIS® is a registered trade and service mark of the NPCA.
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References

ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203)
Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1)
Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29)
Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30)
Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended)
Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6)
Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended)
Korea. Prohibited Chemical Substances (TCCL Article 11)
Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended)
Korea. Restricted Chemical Substances (TCCL Article 11)
Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI)
Korea. Toxic Chemical Control Law (TCCL), pre-1997 List
Korea. Toxic Chemicals (TCCL Article 10)
Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14)
Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)
Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)
Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)
Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
HSDB® - Hazardous Substances Data Bank
JIS Z 7250: 2005 Safety data sheet for chemical products-Part 1:Content and order of sections
JCIA GHS Guideline, October 2008
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits
GOST 30333-2007 - Chemical production safety passport. General requirements

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. Nye Lubricants, Inc. makes no warranty with respect thereto and disclaims all liability with respect thereon. This safety data sheet was prepared in accordance with the Safety Data Sheet for Chemical Products (JIS Z 7250:2005). Additional information is given in the Material Safety Data Sheet. The information in the sheet was written based on the best knowledge and experience currently available.