

Section 1. Identification

Product name Optitemp XBT1LF
SDS # 461001
Code 461001-DE03

Relevant identified uses of the substance or mixture and uses advised against

Product use Lubricant.
 For specific application advice see appropriate Technical Data Sheet or consult our company representative.

Supplier BP Lubricants USA Inc.
 1500 Valley Road
 Wayne, NJ 07470
 Telephone: +1-888-CASTROL

EMERGENCY HEALTH INFORMATION: +1-800-447-8735

EMERGENCY SPILL INFORMATION: +1-800-424-9300 (CHEMTREC USA)
 +1-703-527-3887 (CHEMTREC outside the US)

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 TOXIC TO REPRODUCTION - Category 2

GHS label elements

Hazard pictograms



Signal word Warning
Hazard statements Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection.

Response IF exposed or concerned: Get medical attention.

Storage Store locked up.

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

Hazards not otherwise classified Defatting to the skin.
 Note: High Pressure Applications
 Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency.
 See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.

Section 3. Composition/information on ingredients

Substance/mixture Mixture
Synthetic lubricant and additives. Thickening agent.

Ingredient name	%	CAS number
Distillates (petroleum), solvent-refined heavy paraffinic	≤5	64741-88-4
Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized	≤3	68412-26-0
Residual oils (petroleum), solvent refined	≤3	64742-01-4
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	≤0.3	68411-46-1

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 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	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention.
Inhalation	If inhaled, remove to fresh air. 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. Get medical attention.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention.
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.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

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

Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects. 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. Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discolored and extremely painful with extensive subcutaneous necrosis. Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.
Specific treatments	No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable extinguishing media	Do not use water jet.

Specific hazards arising from the chemical No specific fire or explosion hazard.

Hazardous combustion products Combustion products may include the following:
phosphorus oxides
metal oxide/oxides
carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)
nitrogen oxides (NO, NO₂ etc.)

Special protective actions for fire-fighters No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

Special protective equipment for fire-fighters Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

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).

Methods and materials for containment and cleaning up

Small spill Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. If emergency personnel are unavailable, contain spilled material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. Dispose of via a licensed waste disposal contractor. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container.

Section 7. Handling and storage

Precautions for safe handling

Protective measures Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

Section 7. Handling and storage

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. 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. Store locked up. Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. 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.

Not suitable

Prolonged exposure to elevated temperature

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Distillates (petroleum), solvent-refined heavy paraffinic

OSHA PEL (United States). [Oil mist, mineral]

TWA: 5 mg/m³ 8 hours. Issued/Revised: 6/1993

ACGIH TLV (United States). [Mineral Oil, pure, highly and severely refined]

TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction

Molybdenum, bis(dibutylcarbomodithioato)di-μ-oxodioxodi-, sulfurized

ACGIH TLV (United States). [Molybdenum, Metal and insoluble compounds]

TWA: 10 mg/m³, (as Mo) 8 hours. Issued/Revised: 2/2001 Form: Inhalable fraction

TWA: 3 mg/m³, (as Mo) 8 hours. Issued/Revised: 2/2001 Form: Respirable fraction

OSHA PEL (United States). [Molybdenum Insoluble Compounds]

TWA: 15 mg/m³, (as Mo) 8 hours. Issued/Revised: 6/1993 Form: Total dust

Residual oils (petroleum), solvent refined

OSHA PEL (United States). [Oil mist, mineral]

TWA: 5 mg/m³ 8 hours. Issued/Revised: 6/1993

ACGIH TLV (United States). [Mineral Oil, pure, highly and severely refined]

TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene

None.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

Section 8. Exposure controls/personal protection

Environmental exposure controls

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Body protection

Use of protective clothing is good industrial practice.

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.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

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

In case of insufficient ventilation, wear suitable respiratory equipment.

For protection against metal working fluids, respiratory protection that is classified as "resistant to oil" (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m³), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m³).

Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.

The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	Grease
Color	Yellow. - Green. [Light]
Odor	Not available.
Odor threshold	Not available.
pH	Not applicable.

Section 9. Physical and chemical properties

Melting point/freezing point	Not available.
Boiling point, initial boiling point, and boiling range	Not available.
Flash point	Open cup: 228°C (442.4°F) [Estimated. Based on Lubricants - Base Oils]
Evaporation rate	Not available.
Flammability	Not applicable. Based on - Physical state
Lower and upper explosion limit/flammability limit	Not applicable.
Vapor pressure	Not available.

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method

Relative vapor density	Not applicable.
Density	<1000 kg/m ³ (<1 g/cm ³) at 20°C
Solubility(ies)	

Media	Result
cold water	Not soluble
water	Not soluble

Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Kinematic: 260 mm ² /s (260 cSt) at 40°C
Particle characteristics	
Median particle size	Not available.

Section 10. Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
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	Test	Species	Result	Exposure	Remarks
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Section 11. Toxicological information

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene LC50 Dermal Rat >2000 mg/kg - -

LC50 Oral Rat >5000 mg/kg - -

Conclusion/Summary Not available.

Irritation/Corrosion

Product/ingredient name	Species	Result	Score	Exposure	Observation	Conc.	Remarks
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Rabbit	Eyes - Not irritant	-	-	-	-	-
	Rabbit	Skin - Slightly irritating to the skin.	-	-	-	-	-

Sensitizer

Product/ingredient name	Route of exposure	Species	Result	Remarks
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	skin	Guinea pig	Not sensitizing	-

Mutagenicity

Product/ingredient name	Test	Experiment	Result	Remarks
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	OECD 471	Experiment: In vitro Subject: Bacteria	Negative	-
	OECD 487	Experiment: In vitro Subject: Mammalian-Animal	Negative	-
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Negative	-

Conclusion/Summary Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Result	Exposure
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Negative	Positive	Negative	Rat	Oral	-

Conclusion/Summary Not available.

Teratogenicity

Product/ingredient name	Test	Species	Result	Exposure
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Negative - Oral	Rat	-	-

Conclusion/Summary Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact No known significant effects or critical hazards.
Skin 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.

Section 11. Toxicological information

Ingestion No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact No specific data.

Skin contact Adverse symptoms may include the following:
irritation
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations

Inhalation No specific data.

Ingestion Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

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

Short term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Long term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Potential chronic health effects

General No known significant effects or critical hazards.

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 Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

No testing has been performed by the manufacturer.

Product/ingredient name	Species	Test/Result	Exposure	Effects	Remarks
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Daphnia	Acute EC50 51 mg/l	48 hours	-	-
	Algae	Acute ErC50 >100 mg/l	72 hours	-	-
	Fish	Acute LC50 >100 mg/l	96 hours	-	-
	Daphnia	Chronic EC10	21 days	-	-

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Section 12. Ecological information

1.69 mg/l

Algae Chronic NOEC 72 hours - -
≥10 mg/l

Conclusion/Summary Not available.

Persistence and degradability

Not expected to be rapidly degradable.

Product/ingredient name	Test	Result	Remarks
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	OECD 301B	1 % - 28 days	-

Conclusion/Summary Not available.

Bioaccumulative potential

Not available.

Mobility in soil

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

Mobility Grease. insoluble in water.

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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. 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 emptied 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	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

Section 14. Transport information

Special precautions for user Not available.

Transport in bulk according to IMO instruments Not available.

Section 15. Regulatory information

U.S. Federal regulations

United States inventory (TSCA 8b) All components are active or exempted.

[SARA 302/304](#)

[Composition/information on ingredients](#)

No products were found.

[SARA 311/312](#)

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[SARA 313](#)

	Product name	CAS number	Concentration
Form R - Reporting requirements	dizinc pyrophosphate	7446-26-6	1.8 - 2
Supplier notification	dizinc pyrophosphate	7446-26-6	1.8 - 2

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.

State regulations

Massachusetts

The following components are listed: OIL MIST, MINERAL; OIL MIST, MINERAL

New Jersey

The following components are listed: ZINC compounds

Pennsylvania

The following components are listed: ZINC COMPOUNDS

California Prop. 65

⚠ WARNING: This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Other regulations

Australia inventory (AIC)

At least one component is not listed.

Canada inventory

At least one component is not listed.

China inventory (IECSC)

All components are listed or exempted.

Japan inventory (CSCL)

All components are listed or exempted.

Korea inventory (KECI)

All components are listed or exempted.

Philippines inventory (PICCS)

At least one component is not listed.

Taiwan Chemical Substances Inventory (TCSI)

At least one component is not listed.

REACH Status

The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

Section 16. Other information

[National Fire Protection Association \(U.S.A.\)](#)



[History](#)

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Section 16. Other information

Date of issue/Date of revision	05/12/2023.
Date of previous issue	05/11/2023.
Prepared by	Product Stewardship
Key to abbreviations	ACGIH = American Conference of Industrial Hygienists ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS Number = Chemical Abstracts Service Registry Number 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 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) OEL = Occupational Exposure Limit SDS = Safety Data Sheet STEL = Short term exposure limit TWA = Time weighted average UN = United Nations UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods. Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1

✔ Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.