SAFETY DATA SHEET

Section 1. Identification of the substance/mixture and of the company/ undertaking

Product name Optigear Synthetic 800/680

SDS # 468596

Code 468596-US03

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

Identified uses Gear lubricant
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

Manufacturer

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

Supplier

Emergency Information (24 hour) Centro de Información Toxicológica (CITUC) Fono +56-2-26353800
+1-800-424-9300 (CHEMTREC USA)

Restrictions on use
Not applicable.

Section 2. Hazard identification

Classification of the substance or mixture Not classified.

GHS label elements

Signal word No signal word.

Hazard statements No known significant effects or critical hazards.

Precautionary statements

Prevention Not applicable.

Response Not applicable.

Storage Not applicable.

Disposal Not applicable.

Supplemental label elements Not applicable.

Other hazards which do not result in classification Defatting to the skin.

Section 3. Composition/information on ingredients

Substance/mixture Mixture

Polyalkylene glycol and additives.

Other means of identification Not available.

Ingredient name	CAS #	%	GHS Classification	Type
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	<3	TOXIC TO REPRODUCTION - Category 2	[1]
Phenol, isobutylenated, phosphate (3:1)	68937-40-6	<2.5	AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2	[1]
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	125643-61-0	≤3	AQUATIC HAZARD (LONG-TERM) - Category 4	[1]

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.

Type

[1] Substance classified with a health or environmental hazard

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.

Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Skin contact Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur. If skin irritation or rash occurs: Get medical advice/attention.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact No known significant effects or critical hazards.

Inhalation Vapor inhalation under ambient conditions is not normally a problem due to low vapor pressure.

Skin contact Defatting to the skin. May cause skin dryness and irritation.

Ingestion No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact No specific data.

Inhalation No specific data.

Skin contact Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion No specific data.

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

Section 4. First aid measures

Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable extinguishing media	Do not use water jet.
Specific hazards arising from the chemical	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	Combustion products may include the following: carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)
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	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. 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	Stop leak if without risk. Move containers from spill area. Absorb with an inert 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. Prevent entry into sewers, water courses, basements or confined areas. 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. Dispose of via a licensed waste disposal contractor.

Note: see section 8 for personal protective equipment 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).

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. Contaminated work clothing should not be allowed out of the workplace. See also Section 8 for additional information on hygiene measures.

Not suitable

Prolonged exposure to elevated temperature

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Not regulated.
Phenol, isobutylenated, phosphate (3:1)	Not regulated.
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Not regulated.

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.
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.

Environmental exposure controls

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.

Section 8. Exposure controls/personal protection

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 Liquid.

Color Amber. [Light]

Odor Not available.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Boiling point, initial boiling point, and boiling range Not available.

Flash point Open cup: 282°C (539.6°F) [Cleveland]

Evaporation rate Not available.

Flammability Not available.

Lower and upper explosion limit/flammability limit Not available.

Vapor pressure

	Vapor Pressure at 20°C			Vapor pressure at 50°C		
Ingredient name	**mm Hg**	**kPa**	**Method**	**mm Hg**	**kPa**	**Method**
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	<0.01	<0.0013	EU A.4			
Phenol, isobutylenated, phosphate (3:1)	0.00000031	0.000000041				

Relative vapor density Not available.

Density >1000 kg/m³ (>1 g/cm³) at 15.6°C

Solubility(ies)

Media	Result
water	Soluble

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water Not applicable.

Auto-ignition temperature

Ingredient name	°C	°F	Method
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	500	932	EU A.15
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	365	689	

Decomposition temperature Not available.

Viscosity Kinematic: 680 mm^2/s (680 cSt) at 40°C

Explosive properties Not available.

Oxidizing properties Not available.

Particle characteristics

Median particle size Not applicable.

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 No specific data.
Avoid all possible sources of ignition (spark or flame).

Incompatible materials No specific data.
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
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	LC50 Dermal	Rat	>2000 mg/kg	-
	LC50 Oral	Rat	>5000 mg/kg	-

Irritation/Corrosion

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

Sensitization

Section 11. Toxicological information

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

Mutagenicity

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

Carcinogenicity

Not available.

Reproductive toxicity

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

Teratogenicity

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

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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

Potential acute health effects

Eye contact No known significant effects or critical hazards.

Inhalation Vapor inhalation under ambient conditions is not normally a problem due to low vapor pressure.

Skin contact Defatting to the skin. May cause skin dryness and irritation.

Ingestion No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact No specific data.

Inhalation No specific data.

Skin contact Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion No specific data.

Section 11. Toxicological information

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

Not available.

General No known significant effects or critical hazards.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Reproductive toxicity No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Acute EC50 51 mg/l	Daphnia	48 hours
	Acute ErC50 >100 mg/l	Algae	72 hours
	Acute LC50 >100 mg/l	Fish	96 hours
	Chronic EC10 1.69 mg/l	Daphnia	21 days
	Chronic NOEC ≥10 mg/l	Algae	72 hours

Persistence and degradability

Not expected to be rapidly degradable.

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

Bioaccumulative potential

Not available.

Mobility in soil

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

Mobility Liquid. Soluble 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. 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

	UN	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

IATA

The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user

Not available.

Transport in bulk according to IMO instruments

Not available.

Section 15. Regulatory information

The recipient should verify the possible existence of local regulations applicable to the chemical product.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia

At least one component is not listed.

Canada

At least one component is not listed in DSL but all such components are listed in NDSL.

China

All components are listed or exempted.

Section 15. Regulatory information

Japan	All components are listed or exempted.
Philippines	At least one component is not listed.
Republic of Korea	At least one component is not listed.
Taiwan	All components are listed or exempted.
United States	All components are active or exempted.
REACH Status	For the REACH status of this product please consult your company contact, as identified in Section 1.

Section 16. Other information

Safety signs according to NCh1411/4

History

Date of printing	6/25/2025
Date of issue/Date of revision	6/25/2025
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Version	8.02
Prepared by	Product Stewardship
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 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations

Procedure used to derive the classification

Not classified.

References Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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Section 16. Other information

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