SAE 20W-50 Racing Engine Break-in Oil

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 6/18/2025 Revision date: 5/21/2026 Supersedes: 2/13/2026 Version: 5.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : SAE 20W-50 Racing Engine Break-in Oil
Part Number : 10636

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Lubricating oil

1.4. Supplier's details

Lucas Oil Products, Inc.
3199 Harrison Way NW
Corydon, IN 47112
USA
T 800-342-2512
sds@lucasoil.com - www.LucasOil.com

1.5. Emergency phone number

Emergency number : For Chemical Emergency Call ChemTel 24hr/day 7days/week. Within USA, Canada, Puerto Rico & US Virgin Islands: 1-800-255-3924. International: 1-813-248-0585 (collect calls accepted). Australia: 1-300-954-583. Brazil: 0-800-591-6042. China: 400-120-0751. India: 000-800-100-4086. Mexico: 800-099-0731.

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412	Harmful to aquatic life with long lasting effects.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H412 - Harmful to aquatic life with long lasting effects
Precautionary statements (GHS US) : P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing

protection.
P302+P352 - If on skin: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a poison center or doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Distillates (petroleum), hydrotreated heavy paraffinic	CAS-No.: 64742-54-7	80 - 100*	Asp. Tox. 1, H304 Aquatic Chronic 4, H413
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	CAS-No.: 68649-42-3	1 - 5*	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	CAS-No.: 68457-79-4	1 - 5*	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	CAS-No.: 70024-69-0	0.035 - 0.174	Skin Sens. 1, H317

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact : Take off contaminated clothing. Get medical attention if symptoms occur. Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Contact ophthalmologist immediately. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth out with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Call a poison center/doctor/physician if you feel unwell.

Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.

Symptoms/effects after skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage. Pain. redness, itching, tears. Can cause blindness. Serious damage to eyes.

Symptoms/effects after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

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

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard. In case of fire and/or explosion do not breathe fumes.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Evacuate area. Eliminate all ignition sources if safe to do so. Fight fire from safe distance and protected location. Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Evacuate unnecessary personnel. Stop leak if safe to do so.
Environmental precautions	:	Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment	:	Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	:	Take up liquid spill into absorbent material.
Other information	:	Dispose of materials or solid residues at an authorized site.

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Avoid breathing vapors. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	:	Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	:	Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	:	Keep only in the original container in a cool, well-ventilated place away from: Direct sunlight, Heat sources. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage.
Storage conditions	:	Keep cool. Protect from sunlight.
Packaging materials	:	Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Handle in accordance with good industrial hygiene and safety procedures. Ensure exposure is below occupational exposure limits (where available). Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	No data available
Odor	:	No data available
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 200 °C
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	0.875
Density	:	7.31 lb/gal
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	152.37 mm²/s @ 40 ° C
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LD50 dermal rabbit	> 5000 mg/kg Source: IUCLID

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
LD50 oral rat	3195 mg/kg Source: ECHA
LD50 dermal rabbit	> 3160 mg/kg Source: ECHA
LC50 Inhalation - Rat	> 5 mg/l air Animal: rat, Guideline: other:
ATE US (oral)	3195 mg/kg body weight

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
LD50 oral rat	> 16000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: other:
LD50 dermal rabbit	> 4000 mg/kg body weight Animal: rabbit, Guideline: other:
LC50 Inhalation - Rat	> 1.9 mg/l air Animal: rat, Guideline: EPA OPP 81-3 (Acute inhalation toxicity)
LC50 Inhalation - Rat (Dust/Mist)	> 1.9 mg/l Source: ECHA

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
LD50 oral rat	3600 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 20000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal)
ATE US (oral)	3600 mg/kg body weight

Skin corrosion/irritation : Not classified

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
pH	5.5 – 7.5 Concentration: 1 vol%

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
pH	8.1 Source: ECHA Chem

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
pH	No data available in the literature

Serious eye damage/irritation : Causes serious eye damage.

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
pH	5.5 – 7.5 Concentration: 1 vol%

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
pH	8.1 Source: ECHA Chem

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
pH	No data available in the literature

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
NOAEL (animal/female, F0/P)	300 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:
NOAEL (animal/female, F1)	1000 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LOAEL (oral,rat,90 days)	125 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation,rat,dust/mist/fume,90 days)	> 0.98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
NOAEL (oral,rat,90 days)	500 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	> 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Aspiration hazard : Not classified

SAE 20W-50 Racing Engine Break-in Oil	
Viscosity, kinematic	152.37 mm²/s @ 40 ° C

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Viscosity, kinematic	18 mm²/s
Hydrocarbon	Yes
Aliphatic, alicyclic or aromatic hydrocarbon	Yes
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
Viscosity, kinematic	9 – 15 mm²/s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm²/s)'
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Viscosity, kinematic	264.8 mm²/s (40 °C, ASTM D445: Capillary viscometer)

Symptoms/effects after inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.

Symptoms/effects after skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage. Pain. redness, itching, tears. Can cause blindness. Serious damage to eyes.

Symptoms/effects after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Harmful to aquatic life with long lasting effects.

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LC50 - Fish [1]	> 5000 mg/l
EC50 - Crustacea [1]	> 1000 mg/l Source: IUCLID
EC50 96h - Algae [1]	> 1000 mg/l Source: IUCLID

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
LC50 - Fish [1]	> 10000 mg/l Source: ECHA
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
LC50 - Fish [1]	46 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinodon variegatus, Semi-static system, Marine water, Experimental value, GLP)

12.2. Persistence and degradability

SAE 20W-50 Racing Engine Break-in Oil	
Persistence and degradability	Biodegradability in water: no data available.

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Persistence and degradability	Not rapidly degradable

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
Persistence and degradability	Not rapidly degradable

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Persistence and degradability	Not rapidly degradable

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

SAE 20W-50 Racing Engine Break-in Oil	
Bioaccumulative potential	No data available concerning bioaccumulation.

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6 Source: IUCLID

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
Partition coefficient n-octanol/water (Log Pow)	14.876 Source: ECHA

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Partition coefficient n-octanol/water (Log Pow)	> 5.47 Source: ECHA

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Partition coefficient n-octanol/water (Log Pow)	0.69 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 21.8 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

SAE 20W-50 Racing Engine Break-in Oil	
Ecology - soil	No additional information available.

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Surface tension	61.1 mN/m (21 °C, 1.25 g/l, EU Method A.5: Surface tension)
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.
Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			

DOT	TDG	IMDG	IATA
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Listed on the Canadian DSL (Domestic Substances List)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on the Canadian DSL (Domestic Substances List)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)

Listed on the Canadian DSL (Domestic Substances List)

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Revision date : 5/21/2026
Issue date : 6/18/2025
Data sources : Supplier's safety documents.
Training advice : Training staff on good practice.

Full text of hazard classes and H-statements	
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.