ISO 68 R&O Hydraulic Oil

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date: 6/24/2025 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : ISO 68 R&O Hydraulic Oil
Part Number : 10413

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 and US Virgin Islands: 1-800-255-3924
International: 1-813-248-0585
(collect calls accepted)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Warning
Hazard statements (GHS US) : H361 - Suspected of damaging fertility or the unborn child
Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P405 - Store locked up.
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
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	CAS-No.: 72623-87-1	65 - 85*	Asp. Tox. 1, H304
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	CAS-No.: 68649-12-7	1 - 5*	Asp. Tox. 1, H304
1-Dodecene, polymer with 1-decene, hydrogenated	CAS-No.: 151006-60-9	1 - 5*	Asp. Tox. 1, H304
Reaction products of 1-decene, 1-dodecene and 1-octene, hydrogenated	CAS-No.: 163149-28-8	1 - 5*	Asp. Tox. 1, H304
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	CAS-No.: 68411-46-1	0.1 - 1*	Repr. 2, H361 Aquatic Acute 3, H402 Aquatic Chronic 3, H412

*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 exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : 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 : None under normal conditions.

Symptoms/effects after skin contact : None under normal conditions.

Symptoms/effects after eye contact : Mild eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

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 : Highly flammable liquid and vapor.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. 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 : No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe 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. Notify authorities if product enters sewers or public waters.

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. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
Hygiene measures	:	Separate working clothes from town clothes. Launder separately. 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	:	Ground/bond container and receiving equipment.
Storage conditions	:	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Packaging materials	:	Store always 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	:	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 inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Mixture contains one or more component(s) which have the following color(s): White to grey Yellow Colourless Colourless to light yellow On exposure to light: grey-brown
Odor	:	There may be no odor warning properties, odor is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odor: Mild odour Characteristic odour Almost odourless Odourless Aromatic odour Pleasant odour Irritating/pungent odour Petroleum-like odour Sweet odour Ammonia odour Floral odour
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	:	0.842
Density	:	7.03 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	:	68 mm²/s @ 40 ° C
Explosion limits	:	No data available
Particle characteristics	:	Particle size : Not Applicable

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

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor.

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

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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) : No data available

Acute toxicity (dermal) : No data available

Acute toxicity (inhalation) : No data available

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 oral	5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg Source: IUCLID
LD50 dermal	5000 mg/kg
ATE US (oral)	5000 mg/kg body weight
ATE US (dermal)	5000 mg/kg body weight

1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated (68649-12-7)	
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
LD50 oral rat	> 5000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 3000 mg/kg Source: ECHA
LC50 Inhalation - Rat (Vapors)	0.9 mg/l Source: ECHA
ATE US (vapors)	0.9 mg/l/4h

Reaction products of 1-decene, 1-dodecene and 1-octene, hydrogenated (163149-28-8)	
LD50 oral rat	> 5000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 3000 mg/kg Source: ECHA
LC50 Inhalation - Rat (Dust/Mist)	> 5.2 mg/l Source: ECHA

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
LD50 oral rat	> 5000 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, Rat, Male / female, Experimental value, Skin)

Skin corrosion/irritation : No data available

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
pH	3.9 Source: ECHA

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
pH	5.1 – 6.2 (1 %, 20 - 25 °C)

Serious eye damage/irritation : No data available

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
pH	3.9 Source: ECHA

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
pH	5.1 – 6.2 (1 %, 20 - 25 °C)

Respiratory or skin sensitization : No data available

Germ cell mutagenicity : No data available

Carcinogenicity : No data available

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
NOAEL (animal/male, F1)	54 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 443 (Extended One-Generation Reproductive Toxicity Study)

STOT-single exposure : No data available

STOT-repeated exposure : No data available

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
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)

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
NOAEL (oral,rat,90 days)	25 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard : No data available

ISO 68 R&O Hydraulic Oil	
Viscosity, kinematic	68 mm²/s @ 40 ° C

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
Viscosity, kinematic	12 mm²/s
Hydrocarbon	Yes
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
Viscosity, kinematic	353 mm²/s (40 °C, OECD 114: Viscosity of Liquids)

Symptoms/effects after inhalation : None under normal conditions.

Symptoms/effects after skin contact : None under normal conditions.

Symptoms/effects after eye contact : Mild eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : No data available

Hazardous to the aquatic environment, long–term (chronic) : No data available

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
LC50 - Fish [1]	> 5000 mg/l Source: IUCLID
EC50 - Crustacea [1]	> 1000 mg/l Source: IUCLID

1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated (68649-12-7)	
LC50 - Fish [1]	> 1000 mg/l Source: e-ChemPortal;HPVIS
EC50 96h - Algae [1]	> 1000 mg/l Source: e-ChemPortal;HPVIS

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	51 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

ISO 68 R&O Hydraulic Oil	
Persistence and degradability	Not rapidly degradable

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
Persistence and degradability	Not rapidly degradable

1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated (68649-12-7)	
Persistence and degradability	Not rapidly degradable

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
Persistence and degradability	Not rapidly degradable

Reaction products of 1-decene, 1-dodecene and 1-octene, hydrogenated (163149-28-8)	
Persistence and degradability	Not rapidly degradable

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6 Source: IUCLID

1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated (68649-12-7)	
Partition coefficient n-octanol/water (Log Pow)	7.64 Source: e-ChemPortal;HPVIS

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
Partition coefficient n-octanol/water (Log Pow)	5

Reaction products of 1-decene, 1-dodecene and 1-octene, hydrogenated (163149-28-8)	
Partition coefficient n-octanol/water (Log Pow)	5

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
BCF - Fish [1]	1730 (42 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)
Partition coefficient n-octanol/water (Log Pow)	6.66 (Experimental value, OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method, 23 °C)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

12.4. Mobility in soil

1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated (68649-12-7)	
Mobility in soil	192200000 Source: EPISUITE

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
Mobility in soil	60460 Source: EPISUITE
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.754 – 8.947 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

Ozone : No data available
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 : Flammable vapors may accumulate in the container. Do not re-use empty containers.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

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

1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	CAS-No. 68649-12-7	1 - 5*%

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

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)

Listed on the Canadian DSL (Domestic Substances List)

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)

Listed on the Canadian DSL (Domestic Substances List)

Reaction products of 1-decene, 1-dodecene and 1-octene, hydrogenated (163149-28-8)

Listed on the Canadian DSL (Domestic Substances List)

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

WARNING: This product can expose you to Cumene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16 Other information

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

Issue date : 6/24/2025

Full text of hazard classes and H-statements	
H304	May be fatal if swallowed and enters airways
H361	Suspected of damaging fertility or the unborn child
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

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.