



Safety Data Sheet
Zinc-free hydraulic oil

Revision
Date: 09/12/2025

Section 1. Identification

Product identifier

Product Identity

Zinc-free hydraulic oil

Other means of identification

BIO-HYDRAULIC 32ZFD

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

ZINC-FREE HYDRAULIC OIL

Details of the supplier of the safety data sheet

Company Name

Chem-Ecol Ltd.
640 Victoria St.
Cobourg, Ontario K9A 5H5

Emergency

24 hour Emergency Telephone No.

1-800-263-3939

Customer Service: Chem-Ecol Ltd.

905-372-2251

Email Address

SDS@e360s.ca

Section 2. Hazard(s) identification
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This SDS is aligned with the Workplace Hazardous Materials Information System (WHMIS) and with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Classification of the substance or mixture

Reproductive toxicity, category
2;H361F

Suspected of damaging fertility.

Label elements



Warning

H361f Suspected of damaging fertility.

[Prevention]

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves, eye protection, and face protection.

[Response]

P308+313 IF exposed or concerned: Get medical advice or attention.

[Storage]

P405 Store locked up.

[Disposal]

P501 Dispose of contents or container in accordance with local and national regulations.

Other hazards

This product contains no PBT/vPvB/vPvM chemicals.

This product contains no endocrine disrupting chemicals.

Does not contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per the Organisation for Economic Co-operation and Development (OECD) list of Per- and Polyfluoroalkyl Substances (PFASs).

Section 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the Hazardous Products Regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Lubricating oils, petroleum, hydrotreated spent CAS Number: 64742-58-1 Synonyms: Petroleum oil, 64742-58-1	80 - 100	Not Classified	----
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS Number: 68411-46-1 Synonyms: No available information	0.1 - 1	Reproductive toxicity, category 2;H361F	----
Calcium petroleum sulfonate CAS Number: 61789-86-4 Synonyms: Sulfonic acids, petroleum, calcium salts	0.1 - 1	Not Classified	----
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts CAS Number: 68584-23-6 Synonyms: No available information	0.1 - 1	Skin sensitizer category 1B;H317 : 10 % ≤ C ≤ 100 %	----
Polysulfides CAS Number: 68425-15-0 Synonyms: Polysulfides, di-tert-dodecyl	0.1 - 1	Skin sensitizer category 1B;H317	----

The actual concentration or concentration range is withheld as a trade secret.

*PBT/vPvB - PBT, vPvM or vPvB-substance.

The full texts of the phrases are shown in Section 16.

Section 4. First aid measures

Description of first aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

Inhalation	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.
Most important symptoms and effects, both acute and delayed	
Overview	No specific symptom data available. Reproductive or genetic defect hazard. Treat symptomatically. See section 2 for further details.

Section 5. Fire-fighting measures

Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.

Unsuitable extinguishing media: Do not use; water jet.

Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.

Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

Environmental precautions

Do not allow spills to enter drains or waterways.

Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapours. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.

Section 7. Handling and storage

Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

See section 2 for further details. - [Prevention]

Conditions for safe storage, including any incompatibilities

Incompatible materials: No available information

See section 2 for further details. - [Storage]

Specific end use(s)

No available information

Section 8. Exposure controls / personal protection

Control parameters

Exposure Limits

CAS No.	Ingredient	Source	Value
61789-86-4	Calcium petroleum sulfonate	ACGIH	No Established Limit
		Alberta	No Established Limit
		British Columbia	No Established Limit
		Manitoba	No Established Limit
		New Brunswick	No Established Limit
		Newfoundland and Labrador	No Established Limit
		Nova Scotia	No Established Limit
		Northwest Territories	No Established Limit
		Nunavut	No Established Limit
		Ontario	No Established Limit
		Prince Edward Island	No Established Limit
		Quebec	No Established Limit
		Saskatchewan	No Established Limit
		Yukon	No Established Limit
64742-58-1	Lubricating oils, petroleum, hydrotreated spent	ACGIH	No Established Limit
		Alberta	No Established Limit
		British Columbia	No Established Limit
		Manitoba	No Established Limit
		New Brunswick	No Established Limit
		Newfoundland and Labrador	No Established Limit
		Nova Scotia	No Established Limit
		Northwest Territories	No Established Limit
		Nunavut	No Established Limit
		Ontario	No Established Limit
		Prince Edward Island	No Established Limit
		Quebec	No Established Limit
		Saskatchewan	No Established Limit
		Yukon	No Established Limit
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	ACGIH	No Established Limit
		Alberta	No Established Limit

		British Columbia	No Established Limit
		Manitoba	No Established Limit
		New Brunswick	No Established Limit
		Newfoundland and Labrador	No Established Limit
		Nova Scotia	No Established Limit
		Northwest Territories	No Established Limit
		Nunavut	No Established Limit
		Ontario	No Established Limit
		Prince Edward Island	No Established Limit
		Quebec	No Established Limit
		Saskatchewan	No Established Limit
		Yukon	No Established Limit
68425-15-0	Polysulfides	ACGIH	No Established Limit
		Alberta	No Established Limit
		British Columbia	No Established Limit
		Manitoba	No Established Limit
		New Brunswick	No Established Limit
		Newfoundland and Labrador	No Established Limit
		Nova Scotia	No Established Limit
		Northwest Territories	No Established Limit
		Nunavut	No Established Limit
		Ontario	No Established Limit
		Prince Edward Island	No Established Limit
		Quebec	No Established Limit
68584-23-6	Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	Saskatchewan	No Established Limit
		Yukon	No Established Limit
		ACGIH	No Established Limit
		Alberta	No Established Limit
		British Columbia	No Established Limit
		Manitoba	No Established Limit
		New Brunswick	No Established Limit
		Newfoundland and Labrador	No Established Limit
		Nova Scotia	No Established Limit
		Northwest Territories	No Established Limit
		Nunavut	No Established Limit
		Ontario	No Established Limit
		Prince Edward Island	No Established Limit
		Quebec	No Established Limit
		Saskatchewan	No Established Limit
		Yukon	No Established Limit

Contains mineral oil. The exposure limits for oil mist are 5 mg/m³ OSHA PEL and 5 mg/m³ ACGIH.

Exposure controls

Respiratory	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
Eyes	Protective safety glasses recommended
Skin	Avoid skin contact. Protective gloves recommended.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapour below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State	Liquid
Color	Golden
Odour	Oily
Odour threshold	No available information
Melting point / freezing point	-33 °C
Initial boiling point and boiling range	No available information
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: No available information Upper Explosive Limit: No available information
Flash Point	> 230 °C, Test method: (Open cup)
Auto-ignition temperature	No available information
Decomposition temperature	No available information
pH	No available information
Viscosity (cSt)	No available information
Solubility in Water	No available information
Partition coefficient n-octanol/water (Log Kow)	No available information
Vapour pressure (Pa)	No available information
Relative Density	0.85
Vapour Density	No available information
Evaporation rate (Ether = 1)	No available information
Oxidising properties	No available information
Explosive properties	No available information
Other information	
DMSO extract by IP346: Less than 3.0 wt % (mineral oil component only)	

Section 10. Stability and reactivity

Reactivity

Hazardous Polymerization will not occur.

Chemical stability

Stable under normal circumstances.

Possibility of hazardous reactions

No available information

Conditions to avoid

Avoid high temperatures and contact with incompatible material

Incompatible materials

No available information

Hazardous decomposition products

No hazardous decomposition data available.

Section 11. Toxicological information
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Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation vapour LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Lubricating oils, petroleum, hydrotreated spent - (64742-58-1)	No data available.	No data available.	No data available.	No data available.	No data available.
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene - (68411-46-1)	> 5,000.00, Rat - Category: NA	>2,000.00, Rabbit - Category: NA	No data available.	No data available.	No data available.
Calcium petroleum sulfonate - (61789-86-4)	No data available.	No data available.	No data available.	No data available.	No data available.
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts - (68584-23-6)	> 5,000.00, Rat - Category: NA	> 5,000.00, Rabbit - Category: NA	No data available.	No data available.	No data available.
Polysulfides - (68425-15-0)	No data available.	No data available.	No data available.	No data available.	No data available.

Carcinogen Data

CAS No.	Ingredient	Source	Value
61789-86-4	Calcium petroleum sulfonate	IARC	No
		ACGIH	No Established Limit
64742-58-1	Lubricating oils, petroleum, hydrotreated spent	IARC	No
		ACGIH	No Established Limit
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	IARC	No
		ACGIH	No Established Limit
68425-15-0	Polysulfides	IARC	No
		ACGIH	No Established Limit
68584-23-6	Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	IARC	No
		ACGIH	No Established Limit
Classification	Category	Hazard Description	

Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	2	Suspected of damaging fertility.
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

Possible routes of entry:

All routes of entry possible.

Symptoms and effects, both acute and delayed:

No specific symptom data available.

Reproductive or genetic defect hazard. Treat symptomatically.

Section 12. Ecological information

Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L
Lubricating oils, petroleum, hydrotreated spent - (64742-58-1)	No data available.	No data available.	No data available.
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene - (68411-46-1)	101.00, Danio rerio	No data available.	101.00, Desmodesmus subspicatus
Calcium petroleum sulfonate - (61789-86-4)	No data available.	No data available.	No data available.
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts - (68584-23-6)	> 10,000, Cyprinodon variegatus	> 1,000, Daphnia magna	101.00, Desmodesmus subspicatus
Polysulfides - (68425-15-0)	No data available.	No data available.	No data available.

Persistence and degradability

There is no data available on the preparation itself.

Bioaccumulative potential

No available information

Mobility in soil

No available information

Results of PBT and vPvB assessment

This product contains no PBT/vPvB/vPvM chemicals.

Other adverse effects

No available information

Section 13. Disposal considerations
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Waste treatment methods

Observe all federal, provincial and local regulations when disposing of this substance.

Section 14. Transport information
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Classification Method: Classified as per Part 2, Sections 2.1-2.8 of the Transportation of Dangerous Goods Regulations.

	TDG (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN number	Not Regulated	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
Transport hazard class(es)	Class: Not Applicable Sub Class: Not Applicable	Class: Not Applicable Sub Class: Not Applicable	Class: Not Applicable Sub Class: Not Applicable
Packing group	Not Applicable	Not Applicable	Not Applicable
Environmental hazards			
	IMDG Marine Pollutant: No;		
Special precautions for user	No available information		

Section 15. Regulatory information

This product has been classified in accordance with the hazard criteria Hazardous Products Regulations (SOR/2015-17 amended 2022-12-15) and the SDS contains all of the information required by those regulations.

Canadian Domestic Substance List (DSL):

1,3,4-thiadiazole, 2,5-bis(octyldithio)-
1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts
Benzenesulfonic acid, mono-C15-24-alkyl derivatives, calcium salts
Calcium carbonate
Calcium petroleum sulfonate
Diphenylamine

Distillates (petroleum), hydrotreated light paraffinic; Baseoil-unspecified
Distillates (petroleum), solvent refined heavy paraffinic
Distillates (petroleum), solvent-dewaxed heavy paraffinic
Glycine, N-methyl-N-(1-oxo-9-octadecenyl)-, (Z)-
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil-unspecified
Lubricating oils, petroleum, hydrotreated spent
Polysulfides
White mineral oil (petroleum)

Canadian Non-Domestic Substance List (NDSL):

Butanedioic acid, 2-[(dipropoxyphosphinothioyl)thio]-, 1,4-dibutyl ester

Section 16. Other information

Revision Date 09/12/2025

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

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