SAFETY DATA SHEET

XLD 20W50

Version: 4.0 | Revision Date: 31.07.2025 | Print Date: 11/19/2026

SECTION 1: Identification of the hazardous chemical and of the supplier

Product identifier

Product name	:	XLD 20W50
Product code	:	691979

Recommended use of the chemical and restrictions on use

Recommended use	:	Engine, gear & lubricating oil.

Manufacturer or supplier's details

Company	:	Valvoline Global Operations
Address	:	100 Valvoline Way Lexington, KY 40509 United States of America (USA)
Telephone	:	1-800-TEAMVAL (1-800-832-6825)
Emergency telephone number	:	+1-800-VALVOLINE (+1-800-825-8654)
E-mail address	:	SDS@valvolineglobal.com

SECTION 2: Hazards identification

Classification of the hazardous chemical

Skin corrosion/irritation	:	Category 2
Serious eye damage/eye irritation	:	Category 2
Hazardous to the aquatic environment - chronic hazard	:	Category 3

Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

SECTION 3: Composition and information of the ingredients of the hazardous chemical

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), hydro- treated light; Kerosine — unspecified	64742-47-8	>= 5 -< 10
Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified	64742-54-7	>= 1 -< 3
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts	84605-29-8	>= 1 -< 2.5
phenol, dodecyl-, branched	121158-58-5	>= 0.0025 -< 0.025

SECTION 4: First aid measures

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled	:	If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	No symptoms known or expected. Causes skin irritation. Causes serious eye irritation.
Notes to physician	:	No hazards which require special first aid measures. Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	High volume water jet

Physicochemical hazards arising from the chemical

Hazardous combustion products	:	carbon dioxide and carbon monoxide

Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Specific extinguishing methods	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

Personal precautions,	:	Use personal protective equipment.

protective equipment and emergency procedures

Environmental precautions : Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Handling

Precautions for safe handling

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

Storage

Conditions for safe storage, including any incompatibilities

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8: Exposure controls and personal protection

Control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydro-	64742-47-8	TWA (Mist)	5 mg/m3	MY PEL

treated light; Kerosine — unspecified				
Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified	64742-54-7	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hand protection
- Material : neoprene, nitrile rubber
- Break through time : >= 240 min
- Glove thickness : >= 0.35 mm
- Guideline : Equipment should conform to EN 374

Remarks : The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove.
The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Respiratory protection : No personal respiratory protective equipment normally required.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

Appearance : liquid

Colour : amber

Odour : oily

Odour Threshold	:	No data available
pH	:	Not applicable
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 199 °C Method: Cleveland open cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	ca. 0.874 g/cm3 (15 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	ca. 18.5 mm2/s (40 °C)
Oxidizing properties	:	No data available

SECTION 10: Stability and reactivity

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	excessive heat
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11: Toxicological information

Information on likely routes of exposure : None known.

Acute toxicity

Not classified due to lack of data.

Components:

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5.28 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts:

Acute inhalation toxicity	:	LC50 (Rat): > 2.3 mg/l Exposure time: 4 h Test atmosphere: vapour Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

phenol, dodecyl-, branched:

Acute oral toxicity	:	LD50 (Rat): 2,100 mg/kg

Acute dermal toxicity	:	LD50 (Rabbit): 15,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks : May cause skin irritation and/or dermatitis.

Components:

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Assessment	:	Irritating to skin.
Result	:	Irritating to skin.

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts:

Species	:	Rabbit
Result	:	Irritating to skin.

phenol, dodecyl-, branched:

Species	:	Rabbit
Result	:	Corrosive after 1 to 4 hours of exposure

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : May cause irreversible eye damage.

Components:

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts:

Species	:	Rabbit
Result	:	Corrosive

phenol, dodecyl-, branched:

Species	:	Rabbit
Result	:	Corrosive

Respiratory or skin sensitisation

Skin sensitisation

Not classified due to lack of data.

Respiratory sensitisation

Not classified due to lack of data.

Components:

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts:

Test Type	:	Buehler Test
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 406

phenol, dodecyl-, branched:

Test Type	:	Buehler Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Genotoxicity in vitro	:	Test Type: Ames test Result: negative

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative

phenol, dodecyl-, branched:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative

Carcinogenicity

Not classified due to lack of data.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified:

Carcinogenicity - Assessment	:	Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)

Reproductive toxicity

Not classified due to lack of data.

Components:

phenol, dodecyl-, branched:

Reproductive toxicity - Assessment	:	Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT - single exposure

Not classified due to lack of data.

STOT - repeated exposure

Not classified due to lack of data.

Aspiration toxicity

Not classified due to lack of data.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

Ecotoxicity

Components:

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified:

Toxicity to fish	:	LL50 (Fish): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Aquatic invertebrates): > 10,000 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EL50 (Algae, algal mat (Algae)): > 100 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Fish): 10 mg/l
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Aquatic invertebrates): 10 mg/l

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.4 mg/l End point: Reproduction Test Exposure time: 28 d Test substance: WAF Method: OECD Test Guideline 211

phenol, dodecyl-, branched:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 3.2 mg/l Exposure time: 96 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.037 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 0.36 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 NOEC (Desmodesmus subspicatus (green algae)): 0.07 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.004 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	10

Persistence and degradability

Components:

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Biodegradability	:	Result: Inherently biodegradable. Biodegradation: 58.6 % Exposure time: 28 d Method: OECD Test Guideline 301F

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 1.5 % Exposure time: 28 d Method: OECD Test Guideline 301B

phenol, dodecyl-, branched:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 6 % Exposure time: 28 d Method: OECD Test Guideline 301B

Bioaccumulative potential

Components:

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts:

Partition coefficient: n-octanol/water	:	log Pow: 0.56

phenol, dodecyl-, branched:

Partition coefficient: n-octanol/water	:	log Pow: 7.1

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	No data available

SECTION 13: Disposal information

Disposal methods

Waste from residues	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

International Regulations

UNRTDG

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable

IATA-DGR

UN/ID No.	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Packing instruction (cargo aircraft)	:	Not applicable
Packing instruction (passenger aircraft)	:	Not applicable

IMDG-Code

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
EmS Code	:	Not applicable
Marine pollutant	:	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

Not applicable

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15: Regulatory information

Safety, health, and environmental regulations specific for the hazardous chemical

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.
Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

The components of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
AIIC	:	Not in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory

Inventories
AIIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TECI (Thailand), TSCA (USA)

SECTION 16: Other information

Revision Date	:	31.07.2025
Date format	:	dd.mm.yyyy

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
MY PEL	:	Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.
ACGIH / TWA	:	8-hour, time-weighted average
MY PEL / TWA	:	Eight-hour time-weighted average airborne concentration

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing

Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

MY / EN

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