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		Print Date: 3/20/2023
		SDS Number: R0091437
Valvoline™ SAE 80W-90 Gear Oil VX83112		Version: 1.9

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ SAE 80W-90 Gear Oil

<p>Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)</p> <p>SDS@valvoline.com</p>	<p>Emergency telephone number 1-800-VALVOLINE (1-800-825-8654)</p> <p>Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825)</p> <p>Product Information 1-800-TEAMVAL (1-800-832-6825)</p>
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

GHS label elements

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
Response:
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.
Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=60.00 - < 70.00
OLEFINSULFIDE	68937-96-2	Skin Sens. 1B; H317	>=1.50 - < 5.00
React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)		Flam. Liq. 4; H227 Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Sens. 1; H317	>=0.50 - < 1.00

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 breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
Wash contaminated clothing before re-use.
- In case of eye contact : Flush eyes with water as a precaution.

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Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

If swallowed : 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.
May cause an allergic skin reaction.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
Sulphur oxides

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and : Use personal protective equipment.
Persons not wearing protective equipment should be excluded

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- emergency procedures : from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.
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.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
Do not smoke.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3	ACGIH

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			Inhalable fraction	
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : Respiratory protection is not required under normal conditions of use.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid
 Colour : amber
 Odour : No data available
 Odour Threshold : No data available
 pH : No data available

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Melting point/freezing point	: No data available
Boiling point/boiling range	: > 424.9 °F / 218.3 °C (1013.333 hPa)
Flash point	: 394 - 480 °F / 201 - 249 °C Method: Cleveland open cup
Evaporation rate	: > 1 Ethyl Ether
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: < 0.1000000 mmHg
Relative vapour density	: > 1AIR=1
Relative density	: 0.89 (60.00 °F)
Density	: 0.8916 g/cm ³ (15.56 °C)
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: 146 mm ² /s (40 °C)
Oxidizing properties	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.

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Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
Sodium oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

- Inhalation
- Skin contact
- Eye Contact
- Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

OLEFINSULFIDE:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: Not classified as acutely toxic by ingestion under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal absorption under GHS.
Remarks: No mortality observed at this dose.

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Acute oral toxicity : LD50 (Rat): ca. 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The component/mixture is classified as acute

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oral toxicity, category 4.

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation
Result : Slight, transient irritation

OLEFINSULFIDE:

Result : Mild skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Vapours may cause irritation to the eyes, respiratory system and the skin.

Remarks : Unlikely to cause eye irritation or injury.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation
Assessment : No eye irritation

OLEFINSULFIDE:

Result : Slight, transient irritation

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Result : Corrosive

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks : May cause allergic skin reaction.

Components:

OLEFINSULFIDE:

Test Type : Maximisation Test
Species : Guinea pig
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD Test Guideline 406

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React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Test Type : Local lymph node assay
Species : Mouse
Method : OECD Test Guideline 429
Result : May cause sensitisation by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Components:

OLEFINSULFIDE:

Genotoxicity in vitro : Test Type: in vitro assay
Result: Positive results were obtained in some in vitro tests.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

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

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

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Further information**Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Long-term (chronic) aquatic hazard : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 hToxicity to algae : 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

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

OLEFINSULFIDE:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Harmful to aquatic life.

Long-term (chronic) aquatic hazard : Harmful to aquatic life with long lasting effects.

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React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): ca. 24 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 : EL50 (Daphnia magna (Water flea)): ca. 91.4 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 15 mg/l
 End point: Growth inhibition
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 3.3 mg/l
 End point: Growth inhibition
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.12 mg/l
 Exposure time: 21 d
 End point: Reproduction Test
 Test Type: semi-static test
 Test substance: WAF
 Method: OECD Test Guideline 211

Ecotoxicology Assessment Short-term (acute) aquatic hazard : Toxic to aquatic life.

Long-term (chronic) aquatic hazard : Toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

OLEFINSULFIDE:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 13 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

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React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 7.4 %
 Exposure time: 28 d
 Method: Modified Sturm Test

No data available

Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Partition coefficient: n-octanol/water : Remarks: No data available

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.
 Do not contaminate ponds, waterways or ditches with chemical or used container.
 Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Empty containers should be taken to an approved waste handling site for recycling or disposal.
 Do not re-use empty containers.



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SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

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Marine pollutant	no
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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

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Respiratory or skin sensitisation

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

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

- DSL : All components of this product are on the Canadian DSL
- AICS : On the inventory, or in compliance with the inventory
- 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
- TSCA : On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

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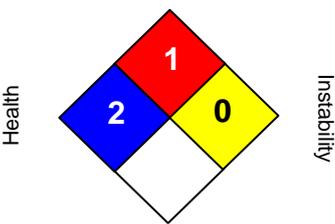
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Further information

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NFPA:	HMIS III:						
<p style="text-align: center;">Flammability</p>  <p style="text-align: center;">Special hazard.</p>	<table border="1" style="width: 100%;"> <tr> <td style="background-color: blue; color: white;">HEALTH</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: red; color: white;">FLAMMABILITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: yellow; color: black;">PHYSICAL HAZARD</td> <td style="text-align: center;">0</td> </tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	2						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

- H227 Combustible liquid.
- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

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FG : Food grade
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
 H-statement : Hazard Statement
 IATA : International Air Transport Association.
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
 IMDG : International Maritime Code for Dangerous Goods
 ISO : International Organization for Standardization
 logPow : octanol-water partition coefficient
 LCxx : Lethal Concentration, for xx percent of test population
 LDxx : Lethal Dose, for xx percent of test population.
 ICxx : Inhibitory Concentration for xx of a substance
 Ecxx : Effective Concentration of xx
 N.O.S.: Not Otherwise Specified
 OECD : Organization for Economic Co-operation and Development
 OEL : Occupational Exposure Limit
 P-Statement : Precautionary Statement
 PBT : Persistent , Bioaccumulative and Toxic
 PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System