

	Page: 1
SAFETY DATA SHEET	Revision Date: 06/05/2017
	Print Date: 10/26/2017
	SDS Number: R0091437
Valvoline™ High Performance SAE 80W-90 Gear Oil ™ Trademark, Valvoline or its subsidiaries, registered in various countries 871800	Version: 1.8

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

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

™ Trademark, Valvoline or its subsidiaries, registered in various countries

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	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL Product Information 1-800-TEAMVAL
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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:
Dispose of contents/ container to an approved waste disposal

SAFETY DATA SHEET

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
 ™ Trademark, Valvoline or its subsidiaries, registered in various
 countries
 871800

plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
OLEFINSULFIDE	68937-96-2	Skin Sens. 1B; H317	2.5335
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	0.6428

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

SAFETY DATA SHEET

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
 ™ Trademark, Valvoline or its subsidiaries, registered in various
 countries
 871800

- 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 : May cause an allergic skin reaction.
 No symptoms known or expected.
- 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 emergency procedures : Use personal protective equipment.
 Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

SAFETY DATA SHEET

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
 ™ Trademark, Valvoline or its subsidiaries, registered in various
 countries
 871800

- 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

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
OLEFINSULFIDE	68937-96-2
React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene	

SAFETY DATA SHEET

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
 ™ Trademark, Valvoline or its subsidiaries, registered in various
 countries
 871800

oxide and amines, C12-14-alkyl
 (branched)

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

Melting point/freezing point : No data available

Boiling point/boiling range : > 424.9 °F / 218.3 °C
 (1013.333 hPa)

**SAFETY DATA SHEET**

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
™ Trademark, Valvoline or its subsidiaries, registered in various
countries
871800

Flash point : > 432 °F / > 222 °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/cm3 (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 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 : Stable under recommended storage conditions.

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

SAFETY DATA SHEET

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
 ™ Trademark, Valvoline or its subsidiaries, registered in various
 countries
 871800

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.

Components:

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 oral toxicity, category 4.

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

OLEFINSULFIDE:

Result: Mild skin irritation

	Page: 8
SAFETY DATA SHEET	Revision Date: 06/05/2017
	Print Date: 10/26/2017
	SDS Number: R0091437
Valvoline™ High Performance SAE 80W-90 Gear Oil ™ Trademark, Valvoline or its subsidiaries, registered in various countries 871800	Version: 1.8

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:

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.

Components:

OLEFINSULFIDE:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: The product is a skin sensitiser, sub-category 1B.

Method: OECD Test Guideline 406

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

Test species: Mouse

Cell type: Bone marrow

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

**SAFETY DATA SHEET**

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
™ Trademark, Valvoline or its subsidiaries, registered in various
countries
871800

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

Further information**Product:**

Remarks: No data available

Carcinogenicity:**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 identified as a carcinogen or potential carcinogen by OSHA.

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.

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

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

OLEFINSULFIDE:

Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

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

SAFETY DATA SHEET

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
 ™ Trademark, Valvoline or its subsidiaries, registered in various
 countries
 871800

Test substance: WAF
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Water flea (*Daphnia magna*)): 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 (Water flea (*Daphnia magna*)): 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
 Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : 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

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoric acid + 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

**SAFETY DATA SHEET**

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
™ Trademark, Valvoline or its subsidiaries, registered in various
countries
871800

No data available

Bioaccumulative potential**Components:**

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

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

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological : An environmental hazard cannot be excluded in the event of
information 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.

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

**SAFETY DATA SHEET**

Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
™ Trademark, Valvoline or its subsidiaries, registered in various
countries
871800

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**

Marine pollutant

no

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.

	Page: 13
SAFETY DATA SHEET	Revision Date: 06/05/2017
	Print Date: 10/26/2017
	SDS Number: R0091437
Valvoline™ High Performance SAE 80W-90 Gear Oil ™ Trademark, Valvoline or its subsidiaries, registered in various countries 871800	Version: 1.8

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 : Acute Health Hazard

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

Inventories

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

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 06/05/2017

NFPA:	HMIS III:
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SAFETY DATA SHEET

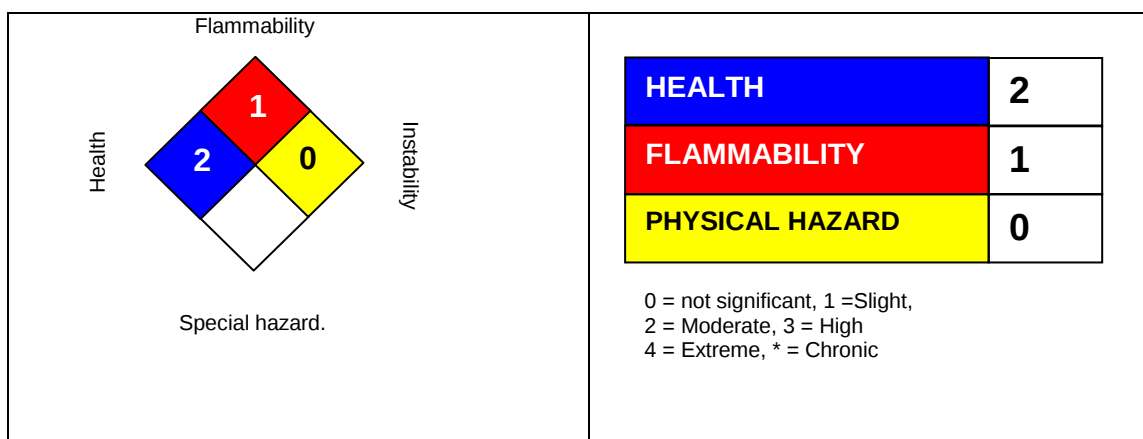
Revision Date: 06/05/2017

Print Date: 10/26/2017

SDS Number: R0091437

Version: 1.8

Valvoline™ High Performance SAE 80W-90 Gear Oil
 ™ Trademark, Valvoline or its subsidiaries, registered in various
 countries
 871800



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

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

	Page: 15
SAFETY DATA SHEET	Revision Date: 06/05/2017
	Print Date: 10/26/2017
	SDS Number: R0091437
Valvoline™ High Performance SAE 80W-90 Gear Oil ™ Trademark, Valvoline or its subsidiaries, registered in various countries 871800	Version: 1.8

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