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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : GLASS CLEANER

Recommended use of the chemical and restrictions on use

<p>Details of the supplier of the safety data sheet</p> <p>Valvoline LLC 3499 Blazer Parkway Lexington, KY 40509 United States of America</p> <p>SDS@valvoline.com</p>	<p>Emergency telephone number 1-800-VALVOLINE</p> <p>Regulatory Information Number 1-800-TEAMVAL</p> <p>Product Information 1-800-TEAMVAL</p>
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable aerosols : Category 2

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Flammable aerosol.
Causes serious eye irritation.


Precautionary Statements : If medical advice is needed, have product container or label at hand.

Keep out of reach of children.
Read label before use.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Do not spray on an open flame or other ignition source.

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Pressurized container: Do not pierce or burn, even after use.
Wash skin thoroughly after handling.
Wear eye protection/ face protection.

Response:

IF IN EYES: 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.

Storage:

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Other hazards

None known.


SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter


Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
ISOPROPANOL	67-63-0	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	13.00
BUTANE NORMAL	106-97-8	Flam. Gas 1; H220 Press. Gas Liquefied gas; H280	8.00
DIPROPYLENE GLYCOL MONOMETHYL ETHER	34590-94-8	Flam. Liq. 4; H227	2.00
PROPANE	74-98-6	Flam. Gas 1; H220 Press. Gas Liquefied gas; H280	2.00

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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 : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
- 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 : Administration of high doses of isopropanol in combination with known hepatotoxic chemicals resulted in enhanced liver toxicity in experimental animals.
Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
Shortness of breath
confusion
irregular heartbeat
lung edema (fluid buildup in the lung tissue)
Causes serious eye irritation.
- Notes to physician : No hazards which require special first aid measures.


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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
- 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.
Use a water spray to cool fully closed containers.
- 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 : Evacuate personnel to safe areas.
Remove all sources of ignition.
Use personal protective equipment.
Ensure adequate ventilation.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Persons not wearing protective equipment should be excluded 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.

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Other information : Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7. HANDLING AND STORAGE


Advice on safe handling : Open drum carefully as content may be under pressure. Provide sufficient air exchange and/or exhaust in work rooms. 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. Take precautionary measures against static discharges. 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 : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. 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. Observe label precautions. No smoking. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DIPROPYLENE GLYCOL MONOMETHYL ETHER	34590-94-8	REL	100 ppm 600 mg/m ³	NIOSH/GUID E
		STEL	150 ppm	NIOSH/GUID

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			900 mg/m3	E
		PEL	100 ppm 600 mg/m3	OSHA_TRANS
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
ISOPROPANOL	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		REL	400 ppm 980 mg/m3	NIOSH/GUIDE
		STEL	500 ppm 1,225 mg/m3	NIOSH/GUIDE
		PEL	400 ppm 980 mg/m3	OSHA_TRANS
		TWA	400 ppm 980 mg/m3	TN OEL
		STEL	500 ppm 1,225 mg/m3	TN OEL
BUTANE NORMAL	106-97-8	REL	800 ppm 1,900 mg/m3	NIOSH/GUIDE
		STEL	1,000 ppm	ACGIH
PROPANE	74-98-6	REL	1,000 ppm 1,800 mg/m3	NIOSH/GUIDE
		PEL	1,000 ppm 1,800 mg/m3	OSHA_TRANS
		TWA	1,000 ppm 1,800 mg/m3	Z1A

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
ISOPROPANOL	67-63-0	acetone	Urine	Sampling time: End of shift at end of work week.	40 mg/l	
Remarks:	Nonspecific, Background					

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


Hand protection

Remarks

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

Eye protection

: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

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Skin and body protection : Wear as appropriate:
 impervious clothing
 Safety shoes
 Flame-resistant clothing
 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.
 When using do not eat or drink.
 When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : aerosol

Odour : characteristic

Odour Threshold : No data available

pH : ca. 7

:
 No data available

Boiling point/boiling range : 32 °F / 0 °C
 No data available

Flash point : -76 °F / -60 °C

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : 12.0 %(V)


Lower explosion limit : 2.0 %(V)

Vapour pressure : 43 hPa (20 °C)

Relative vapour density : No data available

Relative density : No data available

Density : 0.926 g/cm³ (20 °C)

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Solubility(ies)
Water solubility : partly soluble

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 : No data available

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 : Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.
Do not allow evaporation to dryness.
Exposure to air.

Incompatible materials : Acids
Aldehydes
alkalis
Amines
Ethylene oxide
halogenated hydrocarbons
halogens
isocyanates
salts of strong bases
strong bases
Strong oxidizing agents
Do not use with aluminum equipment at temperatures above 49C or 120 degrees F.

Hazardous decomposition products : Aldehydes
carbon dioxide and carbon monoxide
Hydrocarbons
ketones

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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:

ISOPROPANOL:

Acute oral toxicity : LD 50 (Rat): 5.84 g/kg

Acute inhalation toxicity : LC 50 (Rat): 16000 ppm
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD 50 (Rabbit): 12,800 mg/kg

BUTANE NORMAL:

Acute oral toxicity : LD 50 (Rat): > 5 g/kg

Acute inhalation toxicity : LC 50 (Rat): 658 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD 50 (Rabbit): > 3.16 g/kg

DIPROPYLENE GLYCOL MONOMETHYL ETHER:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC 50 (Rat): > 275 ppm
Exposure time: 7 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD 50 (Rat): > 5,000 mg/kg


PROPANE:

Acute inhalation toxicity : LC50 (Rat): 1,237 mg/l
Exposure time: 2 h
Test atmosphere: gas
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: Information given is based on data obtained from similar substances.

Skin corrosion/irritation

Not classified based on available information.

Product:

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Result: Repeated exposure may cause skin dryness or cracking.

Remarks: May cause skin irritation in susceptible persons.

Components:

ISOPROPANOL:

Result: Slightly irritating to skin

BUTANE NORMAL:

Result: Possibly irritating to skin

DIPROPYLENE GLYCOL MONOMETHYL ETHER:

Result: Not irritating to skin

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

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

Components:

ISOPROPANOL:

Result: Irritating to eyes

BUTANE NORMAL:

Result: Mildly irritating to eyes

DIPROPYLENE GLYCOL MONOMETHYL ETHER:

Result: Mildly irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Components:

PROPANE:

Genotoxicity in vitro

: Test Type: Ames test

Test species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity


Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

ISOPROPANOL:

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Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

Components:

ISOPROPANOL:

Remarks: Central nervous system

DIPROPYLENE GLYCOL MONOMETHYL ETHER:

Remarks: Central nervous system

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

Components:


ISOPROPANOL:

Toxicity to fish : LC 50 (Fathead minnow (Pimephales promelas)): 5,770 - 7,450 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Water flea (Daphnia magna)): > 10,000 mg/l
 Exposure time: 24 h
 Test Type: static test

DIPROPYLENE GLYCOL MONOMETHYL ETHER:

Toxicity to fish : LC 50 (Pimephales promelas (fathead minnow)): > 10,000 mg/l
 Exposure time: 96 h
 Test Type: static test

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Toxicity to daphnia and other aquatic invertebrates : LC 50 (Water flea (Daphnia magna)): 1,919 mg/l
Exposure time: 48 h

Toxicity to algae : EC 50 (Pseudokirchneriella subcapitata (green algae)): > 969 mg/l
Exposure time: 72 h
Test Type: Growth inhibition

Persistence and degradability

Components:

DIPROPYLENE GLYCOL MONOMETHYL ETHER:

Biodegradability : Biodegradation: 75 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Chemical Oxygen Demand (COD) : 2.02 mg/g

ThOD : 2.06 mg/g

Bioaccumulative potential

Components:

ISOPROPANOL:

Partition coefficient: n-octanol/water : log Pow: 0.05

BUTANE NORMAL:

Partition coefficient: n-octanol/water : log Pow: 2.89

PROPANE:

Partition coefficient: n-octanol/water : log Pow: 2.36

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.

Components:

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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.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

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

UN	1950	Aerosols	2.1		
----	------	----------	-----	--	--

CFR_RAIL_C

UN	1950	Aerosols	2.1		
----	------	----------	-----	--	--

U.S. DOT - INLAND WATERWAYS

UN	1950	Aerosols	2.1		
----	------	----------	-----	--	--

TDG_ROAD_C


UN	1950	AEROSOLS	2.1		
----	------	----------	-----	--	--

TDG_RAIL_C

UN	1950	AEROSOLS	2.1		
----	------	----------	-----	--	--

TDG_INWT_C

UN	1950	AEROSOLS	2.1		
----	------	----------	-----	--	--

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INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1950	AEROSOLS	2.1	MARINE POLLUTANT:(D-LIMONENE, AMMONIUM HYDROXIDE)
----	------	----------	-----	---

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1950	Aerosols, flammable	2.1
----	------	---------------------	-----

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1950	Aerosols, flammable	2.1
----	------	---------------------	-----

MX_DG

UN	1950	AEROSOLS	2
----	------	----------	---

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant	yes
------------------	-----

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

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
AMMONIUM HYDROXIDE ((NH4)(OH))	1336-21-6	1000	200000

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard

SARA 313 Component(s)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.

Pennsylvania Right To Know
WATER 7732-18-5 70.00 - 90.00 %

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ISOPROPANOL	67-63-0	10.00 - 20.00 %
BUTANE NORMAL	106-97-8	5.00 - 10.00 %
DIPROPYLENE GLYCOL MONOMETHYL ETHER	34590-94-8	1.00 - 5.00 %
PROPANE	74-98-6	1.00 - 5.00 %

New Jersey Right To Know

WATER	7732-18-5	70.00 - 90.00 %
ISOPROPANOL	67-63-0	10.00 - 20.00 %
BUTANE NORMAL	106-97-8	5.00 - 10.00 %
DIPROPYLENE GLYCOL MONOMETHYL ETHER	34590-94-8	1.00 - 5.00 %
PROPANE	74-98-6	1.00 - 5.00 %

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:

- TSCA : On TSCA Inventory
- DSL : All components of this product are on the Canadian DSL.
- AUSTR : On the inventory, or in compliance with the inventory
- ENCS : Not in compliance with the inventory
- KECL : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory

Inventories

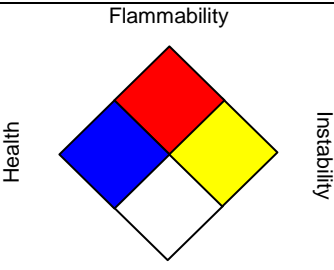
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

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SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
	<table border="1"> <tr> <td>HEALTH</td> <td></td> </tr> <tr> <td>FLAMMABILITY</td> <td></td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td></td> </tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH		FLAMMABILITY		PHYSICAL HAZARD	
HEALTH							
FLAMMABILITY							
PHYSICAL HAZARD							

NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IA

Full text of H-Statements referred to under sections 2 and 3.


- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapor.
- H226 Flammable liquid and vapor.
- H227 Combustible liquid.
- H280 Contains gas under pressure; may explode if heated.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.

Further information

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 (1-800-825-8654).

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

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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.
 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