



DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Product Name : DIACEL® FL (Winterized) Cement Additive
 Material : 1016940

Use : Cement Additive

Company : Chevron Phillips Chemical Company LP
 Drilling Specialties Company LLC
 10001 Six Pines Drive
 The Woodlands, TX 77380

Emergency telephone:

Health:

866.442.9628 (North America)

1.832.813.4984 (International)

Transport:

CHEMTREC 800.424.9300 or 703.527.3887(int'l)

Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090

Mexico CHEMTREC 01-800-681-9531 (24 hours)

South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Argentina: +(54)-1159839431

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)

Belgium: 070 245 245 (24 hours/day, 7 days/week)

Bulgaria: +359 2 9154 233

Croatia: +3851 2348 342 (24 hours/day, 7 days/week)

Cyprus: 1401

Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402

Denmark: Danish Poison Center (Gifflinjen): +45 8212 1212

Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Finland: 0800 147 111 09 471 977 (24 hours/day)

France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)

Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Greece: (0030) 2107793777 (24 hours/day, 7 days/week)

Hungary: +36-80-201-199 (24 hours/day, 7 days/week)

Iceland: 543 2222 (24 hours/day, 7 days/week)

Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Italy: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic

Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371 67042473. (24 hours.)

Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

Lithuania: +370 (85) 2362052
 Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)
 Malta: +356 2395 2000
 The Netherlands: NVIC: +31 (0)88 755 8000
 Norway: 22 59 13 00 (24 hours/day, 7 days/week)
 Poland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Portugal: CIAV phone number: +351 800 250 250
 Romania: +40213183606
 Slovakia: +421 2 5477 4166
 Slovenia: Phone number: 112
 Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 hours/day, 7 days/week)
 Sweden: 112 – ask for Poisons Information

Responsible Department : Product Safety and Toxicology Group
 E-mail address : SDS@CPChem.com
 Website : www.CPChem.com

SECTION 2: Hazards identification**Classification of the substance or mixture**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Classification

: Specific target organ toxicity - repeated exposure, Category 2, Oral, Kidney

Labeling

Symbol(s) :



Signal Word : Warning

Hazard Statements : H373: May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**
 P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Response:
 P314 Get medical advice/ attention if you feel unwell.
Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:**IARC**

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

NTP

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

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

by NTP.

SECTION 3: Composition/information on ingredients

Synonyms : Cement Fluid-Loss Additive

Molecular formula : Mixture

Component	CAS-No.	Weight %
Ethylene Glycol	107-21-1	5 - 15

SECTION 4: First aid measures

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance.

If inhaled : If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of eye contact : Flush eyes with water as a precaution. 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. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point : >101°C (>214°F)

Autoignition temperature : No data available

Unsuitable extinguishing media : High volume water jet.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Fire and explosion protection : Normal measures for preventive fire protection.

SECTION 6: Accidental release measures

Environmental precautions : Prevent product from entering drains. Prevent further leakage

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for 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**

Advice on safe handling : Do not breathe vapors/dust. 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.

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

Storage

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

Use : Cement Additive

SECTION 8: Exposure controls/personal protection**Ingredients with workplace control parameters****US**

Components	Basis	Value	Control parameters	Note
Ethylene Glycol	OSHA Z-1-A	C	50 ppm, 125 mg/m ³	
	ACGIH	TWA	25 ppm,	A4, Vapor
	ACGIH	STEL	50 ppm,	A4, Vapor
	ACGIH	STEL	10 mg/m ³	A4, Inhalable
	ACGIH	STEL	10 mg/m ³	A4, Only aerosol
	ACGIH	TWA	25 ppm,	A4, Vapor
	ACGIH	STEL	50 ppm,	A4, Vapor
	ACGIH	STEL	10 mg/m ³	A4, Inhalable fraction, Aerosol only
	ACGIH	STEL	10 mg/m ³	A4, Inhalable fraction, Aerosol only

A4 Not classifiable as a human carcinogen

Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors, Dusts and Mists. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

- Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. 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. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Protective suit. Safety shoes.
- Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

- Form : liquid
- Physical state : liquid
- Color : Clear to light amber
- Odor : Slight

Safety data

- Flash point : >101°C (>214°F)
- Lower explosion limit : No data available
- Upper explosion limit : No data available
- Oxidizing properties : no
- Autoignition temperature : No data available
- Molecular formula : Mixture
- Molecular weight : Not applicable
- pH : No data available
- Freezing point : No data available

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

Pour point	No data available
Boiling point/boiling range	: >100°C (>212°F)
Vapor pressure	: No data available
Relative density	: 1.12
Water solubility	: Completely Soluble
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: No data available
Relative vapor density	: No data available
Evaporation rate	: No data available

SECTION 10: Stability and reactivity

Reactivity	: Stable at normal ambient temperature and pressure.
Chemical stability	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions	
Hazardous reactions	: Further information: No decomposition if stored and applied as directed.
Conditions to avoid	: No data available.
Other data	: No decomposition if stored and applied as directed.

SECTION 11: Toxicological information**DIACEL® FL (Winterized) Cement Additive**

Acute oral toxicity : Acute toxicity estimate: 4,286 mg/kg
Method: Calculation method

Skin irritation

Ethylene Glycol : No skin irritation

Eye irritation

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

Ethylene Glycol : No eye irritation.

Sensitization

Ethylene Glycol : Did not cause sensitization on laboratory animals.

Repeated dose toxicity

Ethylene Glycol : Species: Rat, male
Sex: male
Application Route: Oral
Dose: 50, 150, 300, 400 mg/kg/day
Exposure time: 1 yr
Number of exposures: daily
NOEL: 150 mg/kg
Lowest observable effect level: 300 mg/kg
Target Organs: Kidney

Genotoxicity in vitro

Ethylene Glycol : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: Mouse lymphoma assay
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: Chromosome aberration test in vitro
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: Cytogenetic assay
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: E. Coli bacterial reverse mutation assay
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: Forward mutation assay
Result: negative

Genotoxicity in vivo

Ethylene Glycol : Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Result: positive

Test Type: Dominant lethal assay
Species: Rat
Result: negative

Carcinogenicity

Ethylene Glycol : Species: Mouse
Sex: male

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

Dose: 0, 1500, 3000, 6000 mg/kg/d
 Exposure time: 2 yr
 Number of exposures: daily
 Remarks: No evidence of carcinogenicity

Species: Mouse
 Sex: female
 Dose: 0, 3000, 6000, 12000 mg/kg/d
 Exposure time: 2 yr
 Number of exposures: daily
 Remarks: No evidence of carcinogenicity

Reproductive toxicity

Ethylene Glycol : Species: Mouse
 Application Route: Oral diet
 Dose: 0, 410, 840, or 1640 mg/kg/day
 Number of exposures: daily
 NOAEL Parent: > 1640 mg/kg/day
 NOAEL F1: 840 mg/kg/day

Species: Rat
 Sex: male
 Application Route: Oral diet
 Dose: 0, 40, 200, 1000 mg/kg/d
 Number of exposures: daily
 NOAEL Parent: > 1000 mg/kg/day
 NOAEL F1: > 1000 mg/kg/day
 no abnormalities observed

Developmental Toxicity

Ethylene Glycol : Species: Mouse
 Application Route: oral gavage
 Dose: 50, 150, 500, 1500 mg/kg/day
 Exposure time: GD 6-15
 NOAEL Teratogenicity: 150 mg/kg/day
 NOAEL Maternal: > 1500 mg/kg/day

Further information

Ethylene Glycol : May cause irritation of respiratory tract. May cause drowsiness or dizziness.

SECTION 12: Ecological information**Toxicity to fish**

Ethylene Glycol : LC50: >72860 mg/l
 Exposure time: 96 h
 Species: Pimephales promelas (fathead minnow)
 static test

Toxicity to daphnia and other aquatic invertebrates

Ethylene Glycol : LC50: > 100 mg/l

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 static test

Toxicity to algae

Ethylene Glycol : EC50: 6,500 - 130,000 mg/l
 Exposure time: 96 h
 Species: Selenastrum capricornutum (algae)
 Growth inhibition Information given is based on data obtained from similar substances.

EC50: 33130-47750 mg/l
 Exposure time: 96 h
 Species: Lemna minor (common duckweed)

Toxicity to fish (Chronic toxicity)

Ethylene Glycol : NOEC: 15,380 mg/l
 Exposure time: 7 d
 Species: Pimephales promelas (fathead minnow)
 semi-static test
 Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Ethylene Glycol : NOEC: > 15,000 mg/l
 Exposure time: 21 d
 Species: Daphnia magna (Water flea)
 Information given is based on data obtained from similar substances.

Biodegradability

Ethylene Glycol : Result: Readily biodegradable.
 90 - 100 %
 Testing period: 10 d
 This material is expected to be readily biodegradable.

Bioaccumulation

Ethylene Glycol : No bioaccumulation is to be expected (log Pow <= 4).

Mobility

Ethylene Glycol : Substance does not evaporate from water surface into the atmosphere.

Additional ecological information : This material is not expected to be harmful to aquatic organisms.

Ecotoxicology Assessment

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

Short-term (acute) aquatic hazard

Ethylene Glycol : This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard

Ethylene Glycol : This material is not expected to be harmful to aquatic organisms.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : 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

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (ETHYLENE GLYCOL), 9, III, RQ (ETHYLENE GLYCOL)

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information**National legislation**

SARA 311/312 Hazards : Specific target organ toxicity (single or repeated exposure)

CERCLA Reportable Quantity : Calculated RQ exceeds reasonably attainable upper limit.
Ethylene Glycol

SARA 302 Reportable Quantity : Calculated RQ exceeds reasonably attainable upper limit.
Acrylamide

SARA 302 Threshold Planning Quantity : This material does not contain any components with a section 302 EHS TPQ.

SARA 304 Reportable Quantity : Calculated RQ exceeds reasonably attainable upper limit.
Acrylamide 79-06-1 5000 lbs

SARA 313 Components : The following components are subject to reporting levels established by SARA Title III, Section 313:
: Ethylene Glycol - 107-21-1

Clean Air Act

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):
: Ethylene Glycol - 107-21-1

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489):
: Ethylene Glycol - 107-21-1

US State Regulations

Pennsylvania Right To Know
: Ethylene Glycol - 107-21-1

California Prop. 65 Components : WARNING: This product can expose you to chemicals including [listed below], which is [are] known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov/food.

Acrylamide 79-06-1

WARNING: This product can expose you to chemicals including [listed below], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ethylene Glycol 107-21-1
Acrylamide 79-06-1

Notification status

Europe REACH : A substance or substances in this product is not registered or notified to be registered. Importation or manufacture of this product is still permitted provided that it does not exceed the REACH minimum threshold quantity of the non-regulated substances.

Switzerland CH INV : Not in compliance with the inventory
United States of America (USA) TSCA : On or in compliance with the active portion of the TSCA inventory

Canada DSL : All components of this product are on the Canadian

DIACEL® FL (Winterized) Cement Additive

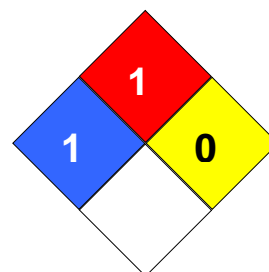
Version 1.7

Revision Date 2022-03-21

	DSL	
Other AIIC	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	Not in compliance with the inventory
Japan ENCS	:	Not in compliance with the inventory
Korea KECI	:	A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance or the exported amount does not exceed the minimum threshold quantity of the non-registered substance(s).
Philippines PICCS	:	Not in compliance with the inventory
Taiwan TCSI	:	Not in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 29150

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

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.

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level

DIACEL® FL (Winterized) Cement Additive

Version 1.7

Revision Date 2022-03-21

EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		