

Version 1.19 Revision Date 2025-10-09

MSDS number: AA00974-0000000152

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

Product Name : Synfluid® PAO 4 cSt

Material : 1133533, 1126174, 1111739, 1111738, 1111733, 1079673,

1079928, 1079872, 1079835, 1079702

Recommended use of the

product

Restrictions on use

: Synthetic Lubricants

None known.

Address : Chevron Phillips Chemical Company LP

9500 Lakeside Blvd. The Woodlands, TX 77381

Address : CHEVRON PHILLIPS CHEMICALS ASIA PTE. LTD.

C/O DONG WOO CORPORATION

#B-2601, JEONG JAIL-RO,

BUNDANG-GU, SEONGNAMI-SI,

GYEONGGI-DO,13557

SOUTH KOREA

Telephone no.: +612-9186-1132

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)

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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 (Giftlinjen): +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: POISON CENTER MILAN – Azienda Ospedaliera Niguarda Ca` Grande Tel. +39 02 66101029; POISON CENTER ROME – Policlinico "Agostino Gemelli", Servizio di tossicologia clinica Tel. +39 06 3054343; POISON CENTER ROME – Ospedale Pediatrico Bambino Gesù Tel. +39 06 68593726; POISON CENTER ROME – Policlinico "Umberto I" Tel. +39 06 4997 8000; POISON CENTER FOGGIA – Azienda Ospedaliera Universitaria Riuniti Tel. +39 081 732326; POISON CENTER NAPLES – Azienda Ospedaliera "Antonio Cardarelli" Tel. +39 081 7472870; POISON CENTER FLORENCE – Azienda Ospedaliera universitaria Careggi Tel. +39 055 7947819; POISON CENTER PAVIA – IRCCS Fondazione Salvatore Maugeri Tel. +39 0382 24444; POISON CENTER BERGAMO – Azienda Ospedaliera "Papa Giovanni XXIII" Tel. 800 883 300; POISON CENTER VERONA – Azienda Ospedaliera Universitaria integrata Tel. 800 011 858;

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)

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

Organization that prepared : Product Safety and Toxicology Group

the SDS

E-mail address : SDS@CPChem.com Website : www.CPChem.com

Appointees : 회사명: 리이치24시코리아㈜.

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전화: +82-02-6245-1610

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SECTION 2: Hazards identification

Hazard classification

Standards for classification and labeling of chemical substances and material safety data sheet (ministry of employment and labor public notice No. 2020-130)

Classification

: Aspiration hazard, Category 1

Warning label elements including precautionary statements

Symbol(s) :

Signal Word : Danger

Hazard Statements : H304: May be fatal if swallowed and enters airways.

Precautionary Statements : Response:

P301 + P310: IF SWALLOWED: Immediately call a POISON

CENTER or doctor/ physician. P331: Do NOT induce vomiting.

Storage:

P405: Store locked up.

Disposal:

P501: Dispose of contents and container according to wastes

control act.

Other hazards which do not result in classification

: None

SECTION 3: Composition/information on ingredients

Synonyms : Polyalphaolefin

PAO

Molecular formula : UVCB

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Common name	Synonyms	CAS-No.	Concentration	KECI Number
1-Decene, homopolymer, hydrogenated	Dec-1-ene, oligomers, hydrogenated	68037-01-4	100%	KE-09505

SECTION 4: First aid measures

General advice : Move out of dangerous area. Show this material safety data

sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

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 inhaled : If unconscious, place in recovery position and seek medical

advice. If symptoms persist, call a physician.

If swallowed : Keep respiratory tract clear. Never give anything by mouth to

an unconscious person. If symptoms persist, call a physician.

Take victim immediately to hospital.

Other cautions for Doctors

Symptoms : No information available.

Risks : No information available.

Treatment : No information available.

SECTION 5: Firefighting measures

Flash point : 219°C (426°F)

Method: Cleveland Open Cup

Autoignition temperature : 343°C (649°F)

Unsuitable extinguishing

media

: High volume water jet.

Specific hazards during fire

fighting

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

surrounding environment.

Special protective : Wear self-contained breathing apparatus for firefighting if

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equipment for fire-fighters 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.

Hazardous decomposition

products

: Carbon oxides.

SECTION 6: Accidental release measures

Personal precautions : Use personal protective equipment. Ensure adequate

ventilation.

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 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.

Secure storage

Requirements for storage

areas and containers

: Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Uses advised against

None known.

Specific Use : Synthetic Lubricants

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SECTION 8: Exposure controls/personal protection

Chemical exposure standards, biological exposure standards, etc.

Adequate ventilation to control airborned 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 : If ventilation or other engineering controls are not adequate to

maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as:. Air-Purifying Respirator for Dusts and Mists / P100. A positive pressure, air-supplying respirator may be appropriate 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.

Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.

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.

: 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 : When using do not eat or drink. When using do not smoke.

Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

Skin and body protection

Information on basic physical and chemical properties

Appearance

Physical state : liquid

Color : Clear, colorless
Odor : Odorless

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Odor Threshold : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : 414°C (777°F)

Flash point : 219°C (426°F)

Method: Cleveland Open Cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Lower explosion limit : No data available

Upper explosion limit : No data available

Vapor pressure : 1.70 MMHG

at 177°C (351°F)

Relative density : 0.82

at 15.6 °C (60.1 °F)

Autoignition temperature : 343°C (649°F)

Viscosity, kinematic : 16 cSt

at 37.8°C (100.0°F)

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.

Materials to avoid

Hazardous decomposition

products

: No data available.: Carbon oxides

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Other data : No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

Information on exposure routes

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Acute oral toxicity : LD50: > 5,000 mg/kg

Species: Rat

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Acute inhalation toxicity : LC50: > 5.2 mg/l

Exposure time: 4 h Species: Rat

Sex: male and female Test atmosphere: dust/mist

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Acute dermal toxicity : LD50: > 2,000 mg/kg

Species: Rat

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Skin corrosion or irritation : No skin irritation

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Eye corrosion or irritation : No eye irritation

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Respiratory Sensitization: No data available

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Skin sensitization Did not cause sensitization on laboratory animals.

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Repeated dose toxicity : No adverse effects expected

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Germ cell mutagenicity (in

vitro)

: Metabolic activation: with and without metabolic activation Method: Mutagenicity (Salmonella typhimurium - reverse

mutation assay) Result: negative

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Germ cell mutagenicity (in : Remarks: Not classified due to data which are conclusive

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vivo) although insufficient for classification., Based on data from

similar materials

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Developmental Toxicity : Animal testing did not show any effects on fetal development.

Information given is based on data obtained from similar

substances.

Specific Target Organ Toxicity (Single Exposure)

Not classified due to data which are conclusive although

insufficient for classification.

Not classified due to data which are conclusive although

insufficient for classification.

Specific Target Organ Toxicity (Repeated Exposure)

Not classified due to data which are conclusive although insufficient for classification. Not classified due to data which are conclusive although insufficient for classification.

Synfluid® PAO 4 cSt Aspiration toxicity

: May be fatal if swallowed and enters airways.

CMR effects

1-Decene, homopolymer,

hydrogenated

: Carcinogenicity: Not classifiable as a human carcinogen. Mutagenicity: Animal testing did not show any mutagenic

effects.

Teratogenicity: Did not show teratogenic effects in animal

experiments.

Reproductive toxicity: No toxicity to reproduction

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Reproductive toxicity : Animal testing did not show any effects on fertility.

Based on data from similar materials

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Further information : Solvents may degrease the skin.

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SECTION 12: Ecological information

Ecological Toxicity

Toxicity to fish : LC50: > 1,000 mg/l

Exposure time: 96 h

Species: Salmo gairdneri (Rainbow trout)

LC50: > 750 mg/l Exposure time: 96 h

Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates

: EC50: 190 mg/l Exposure time: 48 h

Species: Daphnia magna (Water flea)

Toxicity to algae

1-Decene, homopolymer,

hydrogenated

: NOELR: 1,000 mg/l Exposure time: 72 h

Species: Scenedesmus capricornutum (fresh water algae)

static test Method: OECD Test Guideline 201

Persistence and degradabilityPersistence

and degradability

: Expected to be inherently biodegradable.

Bioaccumulative : This material is not expected to bioaccumulate.

Mobility : No data available

Results of PBT assessment

1-Decene, homopolymer,

hydrogenated

: Non-classified PBT substance, Non-classified vPvB substance

Other adverse effects : No data available

Ecotoxicology Assessment

Short-term (acute) aquatic

hazard

: This material is not expected to be harmful to aquatic

organisms.

Long-term (chronic) aquatic

hazard

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.

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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.

Disposal method : 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.

Disposal precaution : 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.

UN Number	:	not regulated
UN Product Shipping Name	:	Not regulated as a dangerous good
Hazard Class	:	
Packing Group		Not applicable
Marine Pollutant	:	Not applicable
Special Safety Measures on Mode of Transport	:	No data available

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

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

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)

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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.

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.

Other information :	Not applicable

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

National legislation

Regulation under the Occupational Safety and Health Act

A Material Safety Datasheet (MSDS) for this product is not required according to article 41 of the ISHA.

101171.			
Regulation		Chemical name	Threshold limits
Harmful Substances Prohibited from Manufacturing	:	Not applicable	
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Harmful Substances Required	:	Not applicable
Permission for Manufacture		

Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

Regulation		Chemical name	Threshold limits
Toxic Chemicals	:	Not applicable	
Prohibited Chemicals	:	Not applicable	
Restricted Chemicals	:	Not applicable	
Toxic Release Inventory	:	Not applicable	

Dangerous Substances Safety Management Act

Dangerous Substances : Flammable liquids, Type 4 petroleums

Safety Management Act

Regulations by the Waste : Not applicable

Management Act

Regulations by other domestic and foreign laws

Europe REACH On the inventory, or in compliance with the inventory Switzerland CH INV On the inventory, or in compliance with the inventory United States of America (USA) On or in compliance with the active portion of the

TSCA TSCA inventory

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

Other AICS On the inventory, or in compliance with the inventory This substance may be used as a component in a New Zealand NZIoC

product covered by a group standard but it is not approved for use as a chemical in its own right

On the inventory, or in compliance with the inventory Japan ENCS Korea KECI

All substances in this product were registered, notified to be registered, or exempted from registration by CPChem through an Only Representative according to K-REACH regulations. Importation of this product is permitted if the Korean Importer of Record was

included on CPChem's notifications or if the Importer of

Record themselves notified the substances.

Philippines PICCS On the inventory, or in compliance with the inventory China IECSC On the inventory, or in compliance with the inventory Taiwan TCSI On the inventory, or in compliance with the inventory

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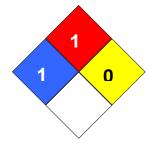
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SECTION 16: Other information

Source of data	:	Korea. GHS based classification
Date of initial writing	:	2019-10-15
Revision number	:	1
Last revision date	:	2025-10-09

NFPA Classification

: Health Hazard: 1 Fire Hazard: 1 Reactivity Hazard: 0



Other information

None.

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	LD50	Lethal Dose 50%		
	Government Industrial Hygienists				
AIIC	Australian Inventory of Industrial	LOAEL	Lowest Observed Adverse Effect		
	Chemicals		Level		
DSL	Canada, Domestic Substances	NFPA	National Fire Protection Agency		
	List				
NDSL	Canada, Non-Domestic	NIOSH	National Institute for Occupational		
	Substances List		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		

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EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure	OSHA	Occupational Safety & Health
	Scenario Tool		Administration
EOSCA	European Oilfield Specialty	PEL	Permissible Exposure Limit
	Chemicals Association		
EINECS	European Inventory of Existing	PICCS	Philippines Inventory of
	Chemical Substances		Commercial Chemical Substances
MAK	Germany Maximum Concentration	PRNT	Presumed Not Toxic
	Values		
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	TLV	Threshold Limit Value
	on Cancer		
IECSC	Inventory of Existing Chemical	TWA	Time Weighted Average
	Substances in China		
ENCS	Japan, Inventory of Existing and	TSCA	Toxic Substance Control Act
	New Chemical Substances		
KECI	Korea, Existing Chemical	UVCB	Unknown or Variable Composition,
	Inventory		Complex Reaction Products, and
			Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials
			Information System
LC50	Lethal Concentration 50%	ATE	Acute toxicity estimate