Chloroparaffin

sc-234341

Material Safety Data Sheet

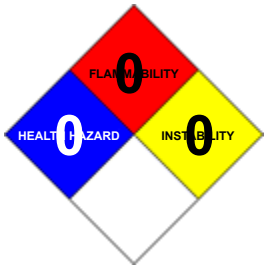
Hazard Alert Code Key:	EXTREME	HIGH	MODERATE	LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Chloroparaffin

STATEMENT OF HAZARDOUS NATURE
CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA



SUPPLIER
Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY
ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS
"Cereclor 54 42 30", "paraffin waxes and hydrocarbon waxes, chlorinated", "Cereclor 48", "Cereclor A42", "chloralkane chlor chloro alkane", "Cereclor 52", 51l, 65l, "misspelling as Cerechlor", "Cereclor 70", S42, S52, "ICI cereclor chlorinated paraffins, all grades", chlorowax, 24/R0328, "Paroil 150 A", 85422-92-0

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability	0	
Toxicity	0	
Body Contact	2	
Reactivity	1	
Chronic	2	

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW
RISK

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ The material has NOT been classified as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
■ Longer chained chlorinated paraffins are of very low acute toxicity following a single exposure. Various different grades have been tested and does of 4-10 g/kg show no signs of toxicity to laboratory animals. An equivalent dose in humans would be drinking 250-600 ml of liquid by an average person.
In longer term studies on laboratory animals, chlorinated paraffins produce toxic effects on the kidney and liver. The highest doses that can be given without showing adverse effects is 10 mg/kg/day for rats. This is thought to be ten times higher than exposure encountered in industrial environments or to which the public is exposed on a daily basis.
EYE
■ Although the material is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctival redness (as with windburn).
SKIN
■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
■ Skin contact is not thought to have harmful health effects, however the material may still produce health damage following entry through wounds, lesions or abrasions.
■ There is some evidence to suggest that the material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterized by redness, swelling and blistering.
■ Chlorinated paraffins of more than 10 carbon atoms and a chlorine content ranging between 40 and 70% may be absorbed by the skin and produce areas of localized reddening.
■ Exposure to the material may result in a skin inflammation called chloracne. This is characterized by white- and blackheads, keratin cysts, spots, excessive discoloration.
INHALED
■ Not normally a hazard due to non-volatile nature of product.
■ Inhalation hazard is increased at higher temperatures.
■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS
■ Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.
Prolonged or repeated exposure to chlorinated paraffins may produce liver and kidney disorders. Chronic administration of high doses can cause hair standing on end, muscle inco-ordination and incontinence.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%

chlorinated paraffin, long chain grades	63449-39-8	>99
hydrocarbons; vary from		
mobile liquids with 42 to 52% combined chlorine		
melting point-20 deg C and S.G.1.16-1.55.; or		
viscous semisolids 54 to 70% combined chlorine;		
powdered solid 70% combined chlorine,		
melting point 95 deg C and S.G. 1.63.		
The solid cereclor 70 contains		
a residual proportion of, [I.C.I]		
carbon tetrachloride	56-23-5	<1%
No other ingredient information supplied.		

Section 4 - FIRST AID MEASURES

SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Center or a doctor.

EYE

If this product comes in contact with eyes

- Wash out immediately with water.
- If irritation continues, seek medical attention.

SKIN

If skin contact occurs

- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

■ Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG)	Negligible.
Upper Explosive Limit (%)	Not applicable
Specific Gravity (water=1)	1.16-1.55 -1.63
Lower Explosive Limit (%)	Not applicable

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.

FIRE FIGHTING

- Alert Emergency Responders and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Non combustible
- Not considered a significant fire risk

Decomposes on heating and produces acrid and toxic fumes of carbon monoxide (CO), carbon dioxide (CO2), hydrogen chloride, phosgene, other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY
Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids,chlorine bleaches, pool chlorine etc. as ignition may result.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
- Clean up all spills immediately.
- Avoid breathing vapors and contact with skin and eyes.

MAJOR SPILLS
- Clear area of personnel and move upwind.
- Alert Emergency Responders and tell them location and nature of hazard.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
- DO NOT use unlined steel containers
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

RECOMMENDED STORAGE METHODS
DO NOT use aluminum or galvanized containers.
- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer

STORAGE REQUIREMENTS
- Store in original containers.
- Keep containers securely sealed.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)	carbon tetrachloride ()	0.03							
US - Minnesota Permissible Exposure Limits (PELs)	carbon tetrachloride (Carbon tetrachloride)	2	12.6						
Canada - Alberta Occupational Exposure Limits	carbon tetrachloride (Carbon tetrachloride (Tetrachloromethane))	5	31	10	63				
US NIOSH Recommended Exposure Limits (RELs)	carbon tetrachloride (Carbon tetrachloride)			2	12.6				See Appendix A; Ca; (STEL ([60-minute]))

Canada - Ontario Occupational Exposure Limits	carbon tetrachloride (Carbon tetrachloride / Carbone, tétrachlorure de)	2		3			Skin / Peau
Canada - British Columbia Occupational Exposure Limits	carbon tetrachloride (Carbon tetrachloride)	2					Skin; A2, 2B
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	carbon tetrachloride (Carbon tetrachloride)	2	12.6				
US - Idaho - Acceptable Maximum Peak Concentrations	carbon tetrachloride (Carbon tetrachloride (Z37.17-1967))	10				25	
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	carbon tetrachloride (Carbon tetrachloride*)	2	12.6			25	
US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants	carbon tetrachloride (Carbon tetrachloride)		See Table Z-2				
US - Idaho - Limits for Air Contaminants	carbon tetrachloride (Carbon tetrachloride)		[2]				
US - California Permissible Exposure Limits for Chemical Contaminants	carbon tetrachloride (Carbon tetrachloride)	2	12.6	10	63	200	
US - Michigan Exposure Limits for Air Contaminants	carbon tetrachloride (Carbon tetrachloride (Tetrachloromethane))	2	12.6				

US - Alaska Limits for Air Contaminants	carbon tetrachloride (Carbon tetrachloride)	2	12.6			
Canada - Northwest Territories Occupational Exposure Limits (English)	carbon tetrachloride (Carbon tetrachloride - Skin)	5	32	20	126	
US - Hawaii Air Contaminant Limits	carbon tetrachloride (Carbon tetrachloride)	2	12.6			
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	carbon tetrachloride (Tetrachloromethane, see Carbon Tetrachloride - Skin)	10	65	20	130	
US - Washington Permissible exposure limits of air contaminants	carbon tetrachloride (Carbon tetrachloride-(Tetrachloromethane))	2		4		
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	carbon tetrachloride (Carbon tetrachloride)	5	31	10	63	
US - Wyoming Toxic and Hazardous Substances Table Z-2 Acceptable ceiling concentration, Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	carbon tetrachloride (Carbon tetrachloride (Z37.17-1967))	10				25
US OSHA Permissible Exposure Levels (PELs) - Table Z2	carbon tetrachloride (Carbon tetrachloride (Z37.17–1967))					25

US - Oregon Permissible Exposure Limits (Z-2)	carbon tetrachloride (Carbon tetrachloride (Z37.17-1967))	10			25	
Canada - Prince Edward Island Occupational Exposure Limits	carbon tetrachloride (Carbon tetrachloride)	5	10			TLV Basis liver damage
Canada - Nova Scotia Occupational Exposure Limits	carbon tetrachloride (Carbon tetrachloride)	5	10			TLV Basis liver damage
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	carbon tetrachloride (Diesel fuel as total hydrocarbons, (vapour))	100	150			Skin
US TSCA New Chemical Exposure Limits (NCEL)	carbon tetrachloride (Halogenated alkanes (P84-106/107))	1.0				

The following materials had no OELs on our records

• chlorinated paraffin, long chain grades CAS63449-39-8 CAS61788-76-9

PERSONAL PROTECTION




RESPIRATOR

•Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 1432000 & 1492001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields.
- Chemical goggles.

HANDS/FEET

Wear chemical protective gloves, eg. PVC.

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear an approved

respirator.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Does not mix with water.

State	Varies	Molecular Weight	Not available.
Melting Range (°F)	-4 to 95 [S70]	Viscosity	Not Applicable
Boiling Range (°F)	Decomposes	Solubility in water (g/L)	Immiscible
Flash Point (°F)	>392	pH (1% solution)	Not applicable.
Decomposition Temp (°F)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not applicable	Vapour Pressure (mmHG)	Negligible.
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	1.16-1.55 -1.63
Lower Explosive Limit (%)	Not applicable	Relative Vapor Density (air=1)	Not available.
Volatile Component (%vol)	Not available.	Evaporation Rate	Not available
VOC(regulatory)	lb/gall	VOC(actual)	lb/gall

APPEARANCE

Dense liquids or powder; does not mix with water. Soluble in organic solvents. Viscosity and specific gravity increase with increasing chlorine content of material. Products are available made from C18-30 paraffin waxes or from C10-C13 paraffin oils. Cereclor 70 solid contains 1% residual carbon tetrachloride (manufacturing impurity) which increases the hazard of the material if it is heated or melted. Materials are not readily biodegradable and are toxic to some aquatic life. Faint but not unpleasant characteristic smell.

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

STORAGE INCOMPATIBILITY

¦ In general chlorinated paraffins are thermally unstable, tending to eliminate hydrogen chloride. In the absence of an inhibitor (usually a material which readily reacts with traces of hydrogen chloride) they soon turn black or brown at ambient temperatures.
Avoid reaction with oxidizing agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

chlorinated paraffin, long chain grades

TOXICITY AND IRRITATION

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.
CHLORINATED PARAFFIN, LONG CHAIN GRADES

TOXICITY	IRRITATION
Oral (rat) LD50 >4000 mg/kg [I.C.I.]	

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
High molecular weight liquid chloroparaffins are considered to be practically non-harmful. Special consideration should be given to solid grades of the material (eg Cereclor 70) because of relatively high levels of carbon tetrachloride remaining as a residual reactant. Vapours are readily absorbed through intact skin, requiring additional precautions in handling.

Lifetime studies have been carried out with two grades of chlorinated paraffins. A short-chain grade with 58% chlorine caused tumours in rats and mice. Male mice exposed to long-chain grades with 40% chlorine showed an excess of tumours at one site. It has been shown that the mechanisms by which short-term paraffins cause tumours are specific to rodents and may not have relevance to human health. Furthermore, chlorinated paraffins have been shown to non-genotoxic.
The Regulatory regime in various countries differs with respected to chlorinated paraffins.
In the USA, the short-chain (C12), 58% chlorine product has been classified and labelled as a carcinogen.
In Germany the MAK Commission has classified most chlorinated paraffins as Category IIIB (suspect carcinogens). They are not however included in the list of substances (TRGS 905) required to be labelled.
All EU Member States are required to classify short chain chlorinated paraffins as Category 3 carcinogens.

Cereclor range

Chlorinated paraffin waxes represents a family of substances which vary in molecular weight.
Studies using the C12, 59% chlorinated variant (in combination with corn oil) caused tumors when force fed at very high doses over long periods of time. The C24, 43% chlorinated paraffin under the same conditions caused an increase in tumors only in the male mouse. A 13 week dietary, range finding study was conducted on rats with a C24, 70% chlorinated paraffin. This study established a no effect level of 900 mg/kg/day.
Pregnant rats fed C16, 52% chlorinated paraffin had offspring which died during weaning.

TOXICITY	IRRITATION
CARBON TETRACHLORIDE	
Oral (human) LDLo 43 mg/kg	Skin (rabbit) 500 mg/24 h - Mild
Oral (rat) LDLo 2350 mg/kg	Eye (rabbit) 500 mg/24 h - Mild
Inhalation (human) TCLo 20 ppm	Eye (rabbit) 2200ug/30s - Mild
Dermal (rat) LD50 5070 mg/kg	
Oral (rat) LD50 900 mg/kg	
Inhalation (human) TCLo 10 mg/m³/1 y	

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

WARNING This substance has been classified by the IARC as Group 2B Possibly Carcinogenic to Humans.

CARCINOGEN

chlorinated paraffin, long chain grades	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	2B
CHLORINATED PARAFINS (AVERAGE CHAIN LENGTH, C12; APPROXIMATELY 60 PERCENT CHLORINE BY WEIGHT)	US Environmental Defense Scorecard Recognized Carcinogens	Reference(s)	P65
CHLORINATED PARAFINS (AVERAGE CHAIN LENGTH, C12; APPROXIMATELY 60 PERCENT CHLORINE BY WEIGHT)	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	P65
ALKANES, CHLORO	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	P65-MC

POLYCHLORINATED ALKANES (C10-C13)	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	EPA-TRI, P65-MC
VPVB_(VERY~	US - Maine Chemicals of High Concern List	Carcinogen	
VPVB_(VERY~	US - Maine Chemicals of High Concern List	Carcinogen	CA Prop 65; NTP 11th ROC
carbon tetrachloride	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	2B
Carbon tetrachloride	US EPA Carcinogens Listing	Carcinogenicity	B2
Carbon tetrachloride	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	B2
Carbon tetrachloride	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	A2
carbon tetrachloride	US - Rhode Island Hazardous Substance List	IARC	C
CARBON TETRACHLORIDE	US Environmental Defense Scorecard Recognized Carcinogens	Reference(s)	P65
CARBON TETRACHLORIDE	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	P65
ORGANOCHLORINE PESTICIDES	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	P65-MC
Carbon tetrachloride	US Air Toxics Hot Spots TSD for Describing Available Cancer Potency Factors	IARC Class	2B
Carbon tetrachloride	US NIOSH Recommended Exposure Limits (RELs) - Carcinogens	Carcinogen	Ca
carbon tetrachloride	US - Maine Chemicals of High Concern List	Carcinogen	B2
TWAPPM~	US - Maine Chemicals of High Concern List	Carcinogen	A2
VPVB_(VERY~	US - Maine Chemicals of High Concern List	Carcinogen	CA Prop 65; IRIS; NTP 11th ROC
TWAPPM~	Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens	Notes	TLV Basis liver damage

REPROTOXIN

carbon tetrachloride	ILO Chemicals in the electronics industry that have toxic effects on reproduction	Reduced fertility or sterility	A

SKIN

carbon tetrachloride	US - Washington Permissible exposure limits of air contaminants - Skin	Skin	X

carbon tetrachloride	US ACGIH Threshold Limit Values (TLV) - Skin	Skin Designation	Yes
carbon tetrachloride	US AIHA Workplace Environmental Exposure Levels (WEELs) - Skin	Notes	TLV Basis liver damage
carbon tetrachloride	US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs) - Skin	Skin	X
carbon tetrachloride	US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs) - Skin	Skin	X
carbon tetrachloride	Canada - British Columbia Occupational Exposure Limits - Skin	Notation	Skin; A2, 2B
carbon tetrachloride	Canada - British Columbia Occupational Exposure Limits - Skin	Notation	Skin
carbon tetrachloride	US - Hawaii Air Contaminant Limits - Skin Designation	Skin Designation	X
carbon tetrachloride	US - Oregon Permissible Exposure Limits (Z2) - Skin	Skin	X
carbon tetrachloride	US - California Permissible Exposure Limits for Chemical Contaminants - Skin	Skin	X
carbon tetrachloride	US - California Permissible Exposure Limits for Chemical Contaminants - Skin	Skin	S
carbon tetrachloride	Canada - Alberta Occupational Exposure Limits - Skin	Substance Interaction	1

Section 12 - ECOLOGICAL INFORMATION

No data

GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles

Name / Cas No / RTECS No	EHS	TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Chlorinated paraffins (C14-C17) with less than 1% shorter chain length / CAS:63449- 39-8 /	2112	182	5		4	NR	6	3	0	0	(2)	2	2	C		S	3

Legend: EHS=EHS Number (EHS=GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships) NRT=Net Register Tonnage, A1a=Bioaccumulation log Pow, A1b=Bioaccumulation

BCF, A1=Bioaccumulation, A2=Biodegradation, B1=Acuteaquatic toxicity LC/ECIC50 (mg/l), B2=Chronic aquatic toxicity NOEC (mg/l), C1=Acute mammalian oral toxicity LD50 (mg/kg), C2=Acutemammalian dermal toxicity LD50 (mg/kg), C3=Acute mammalian inhalation toxicity LC50 (mg/kg), D1=Skin irritation & corrosion, D2=Eye irritation& corrosion, D3=Long-term health effects, E1=Tainting, E2=Physical effects on wildlife & benthic habitats, E3=Interference with coastal amenities, For column A2: R=Readily biodegradable, NR=Not readily biodegradable. For column D3: C=Carcinogen, M=Mutagenic, R=Reprotoxic, S=Sensitising, A=Aspiration hazard, T=Target organ systemic toxicity, L=Lunginjury, N=Neurotoxic, I=Immunotoxic. For column E1: NT=Not tainting (tested), T=Tainting test positive. For column E2: Fp=Persistent floater, F=Floater, S=Sinking substances. The numerical scales start from 0 (no hazard), while higher numbers reflect increasing hazard. (GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships)

Section 13 - DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions

B. Component Waste Numbers

When carbon tetrachloride is present as a solid waste as a discarded commercial chemical product, off-specification species, as a container residue, or a spill residue, use EPA waste number U211 (waste code T).

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult Waste Management Authority for disposal.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

Section 15 - REGULATORY INFORMATION

chlorinated paraffin, long chain grades (CAS: 63449-39-8,61788-76-9) is found on the following regulatory lists;

"Canada Domestic Substances List (DSL)","Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)","International Council of Chemical Associations (ICCA) - High Production Volume List","OSPAR List of Substances of Possible Concern","US EPA High Production Volume Program Chemical List","US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

Regulations for ingredients

carbon tetrachloride (CAS: 56-23-5) is found on the following regulatory lists;

"Canada - Alberta Occupational Exposure Limits","Canada - British Columbia Occupational Exposure Limits","Canada - Northwest Territories Occupational Exposure Limits (English)","Canada - Nova Scotia Occupational Exposure Limits","Canada - Ontario Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens","Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)","Canada - Saskatchewan Industrial Hazardous Substances","Canada - Saskatchewan Occupational Health and Safety Regulations - Designated Chemical Substances","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","Canada ARET (Accelerated Reduction / Elimination of Toxics) Substance List","Canada Domestic Substances List (DSL)","Canada Environmental Protection Act (CEPA) 1999 - Schedule 1 Toxic Substances List","Canada Environmental Protection Act (CEPA) 1999 - Schedule 3 Export Control List - Part 3 Restricted Substances","Canada Environmental Quality Guidelines (EQGs) Water: Aquatic life","Canada Environmental Quality Guidelines (EQGs) Water: Community","Canada Ingredient Disclosure List (SOR/88-64)","Canada National Pollutant Release Inventory (NPRI)","Canada Prohibited Toxic Substances, Schedule 2, Concentration Limits (English)","Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)","GESAMP/EHS Composite List - GESAMP Hazard Profiles","IMO IBC Code Chapter 17: Summary of minimum requirements","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs","International Council of Chemical Associations (ICCA) - High Production Volume List","US - Alaska Limits for Air Contaminants","US - California Air Toxics ""Hot Spots"" List (Assembly Bill 2588) Substances for which emissions must be quantified","US - California Code of Regulation; Identification and

Listing of Hazardous Waste, Table 1 - Maximum Concentrations for the Toxicity Characteristics","US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List","US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)","US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)","US - California Permissible Exposure Limits for Chemical Contaminants","US - California Proposition 65 - Carcinogens","US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens","US - California Toxic Air Contaminant List Category II","US - Hawaii Air Contaminant Limits","US - Idaho - Acceptable Maximum Peak Concentrations","US - Idaho - Limits for Air Contaminants","US - Maine Chemicals of High Concern List","US - Massachusetts Oil & Hazardous Material List","US - Michigan Exposure Limits for Air Contaminants","US - Minnesota Hazardous Substance List","US - Minnesota Permissible Exposure Limits (PELs)","US - New Jersey Right to Know Hazardous Substances","US - Oregon Permissible Exposure Limits (Z-1)","US - Oregon Permissible Exposure Limits (Z-2)","US - Pennsylvania - Hazardous Substance List","US - Rhode Island Hazardous Substance List","US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants","US - Vermont Hazardous Constituents","US - Vermont Hazardous Waste - Maximum Contaminant Concentration for Toxicity","US - Vermont Hazardous wastes which are Discarded Commercial Chemical Products or Off-Specification Batches of Commercial Chemical Products or Spill Residues of Either","US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants","US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants","US - Washington Class A toxic air pollutants: Known and Probable Carcinogens","US - Washington Dangerous waste constituents list","US - Washington Discarded Chemical Products List - ""U"" Chemical Products","US - Washington Permissible exposure limits of air contaminants","US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants","US - Wyoming Toxic and Hazardous Substances Table Z-2 Acceptable ceiling concentration, Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift","US ACGIH Threshold Limit Values (TLV)","US ACGIH Threshold Limit Values (TLV) - Carcinogens","US American Apparel & Footwear Association (AAFA) Restricted Substance List (RSL)","US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)","US CAA (Clean Air Act) - HON Rule - Organic HAPs (Hazardous Air Pollutants)","US CERCLA Priority List of Hazardous Substances","US Clean Air Act - Hazardous Air Pollutants","US CWA (Clean Water Act) - Priority Pollutants","US CWA (Clean Water Act) - Reportable Quantities of Designated Hazardous Substances","US CWA (Clean Water Act) - Toxic Pollutants","US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides","US Department of Transportation (DOT) Marine Pollutants - Appendix B","US DOE Temporary Emergency Exposure Limits (TEELs)","US EPA Acute Exposure Guideline Levels (AEGLs) - Interim","US EPA Carcinogens Listing","US EPA High Production Volume Program Chemical List","US EPA National Priorities List - Superfund Chemical Data Matrix (SCDM) - Hazard Ranking System - Hazardous Substance Benchmarks","US EPCRA Section 313 Chemical List","US FDA Indirect Food Additives: Adhesives and Components of Coatings - Substances for Use Only as Components of Adhesives - Adhesives","US List of Lists - Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112(r) of the Clean Air Act","US National Toxicology Program (NTP) 11th Report Part B. Reasonably Anticipated to be a Human Carcinogen","US NIOSH Recommended Exposure Limits (RELs)","US OSHA Permissible Exposure Levels (PELs) - Table Z1","US OSHA Permissible Exposure Levels (PELs) - Table Z2","US RCRA (Resource Conservation & Recovery Act) - Appendix IX to Part 264 Ground-Water Monitoring List 1","US RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261","US RCRA (Resource Conservation & Recovery Act) - List of Hazardous Inorganic and Organic Constituents 1","US RCRA (Resource Conservation & Recovery Act) - List of Hazardous Wastes","US RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards","US -Texas Air Monitoring Comparison Values for Evaluating Carbonyls","US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory","WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE

- Cumulative effects may result following exposure*.
- May produce skin discomfort*.
- Limited evidence of a carcinogenic effect*.

* (limited evidence).

Ingredients with multiple CAS Nos

Ingredient Name	CAS
chlorinated paraffin, long chain grades	63449-39-8, 61788-76-9

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■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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