4-Chloro-3-methylphenol

sc-238806

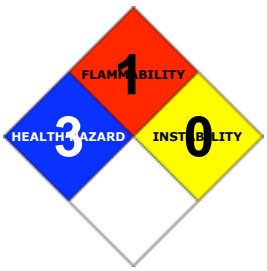
Material Safety Data Sheet

Hazard Alert Code Key:	EXTREME	HIGH	MODERATE	LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
4-Chloro-3-methylphenol

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
C7-H7-Cl-O, Aptal, Ottafact, Baktol, Parmetol, Baktolan, Parol, Candaseptic, PCMC, p-chlor-m-cresol, Peritonan, chlorocresol, "Preventol CMK", p-chlorocresol, Raschit, p-chloro-m-cresol, "Raschit K", Rasen-Anicon, 6-chloro-m-cresol, 2-chloro-hydroxytoluene, 6-chloro-3-hydroxytoluene, 2-chloro-5-methylphenol, 4-chloro-3-methylphenol, 3-methyl-4-chlorophenol, "para-chloro meta-cresol"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	1		
Toxicity:	3		
Body Contact:	3		
Reactivity:	1		
Chronic:	2		

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

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

Irritating to skin.
Risk of serious damage to eyes.
May cause SENSITISATION by skin contact.
Harmful in contact with skin and if swallowed.
Very toxic to aquatic organisms.
May cause long-term adverse effects in the environment.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
■ Monochlorophenols are slightly less toxic than phenol (but more toxic than chlorobenzene). As substitution by chlorine, increases the substance appears to become increasingly toxic. Dichlorophenols may be somewhat more potent than phenol in eliciting convulsions.
■ Some phenol derivatives can cause damage to the digestive system. If absorbed, profuse sweating, thirst, nausea, vomiting diarrhea, cyanosis, restlessness, stupor, low blood pressure, gasping, abdominal pain, anemia, convulsions, coma and lung swelling can happen followed by pneumonia.
<\p>.
■ At sufficiently high doses the material may be hepatotoxic(i.e. poisonous to the liver).

EYE

■ If applied to the eyes, this material causes severe eye damage.
■ Some phenol derivatives may produce mild to severe eye irritation with redness, pain and blurred vision. Permanent eye injury may occur; recovery may also be complete or partial.

SKIN

■ Skin contact with the material may be harmful; systemic effects may resultfollowing absorption.
■ This material can cause inflammation of the skin oncontact in some persons.
■ The material may accentuate any pre-existing dermatitis condition.
■ Phenol and its derivatives can cause severe skin irritation if contact is maintained, and can be absorbed to the skin affecting the cardiovascular and central nervous system. Effects include sweating, intense thirst, nausea and vomiting, diarrhea, cyanosis, restlessness, stupor, low blood pressure, hyperventilation, abdominal pain, anemia, convulsions, coma, lung swelling followed by pneumonia.
<\p>.
■ Open cuts, abraded or irritated skin should not be exposed to this material.
■ 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.
■ Chlorinated diphenyl ethers may produced skin irritation; systemic toxicitymay occur following absorption.

INHALED

■ Inhalation of vapors, aerosols (mists, fumes) or dusts, generated by the material during the course of normal handling, may produce serious damage to the health of the individual.
■ There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
■ If phenols are absorbed via the lungs, systemic effects may occur affecting the cardiovascular and nervous systems. Inhalation can result in profuse perspiration, intense thirst, nausea, vomiting, diarrhea, cyanosis, restlessness, stupor, falling blood pressure, hyperventilation, abdominal pain, anemia, convulsions, coma, swelling and inflammation of the lung.
<\p>.

CHRONIC HEALTH EFFECTS

■ Skin contact with the material is more likely to cause a sensitization reaction in some persons compared to the general population.
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.
Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.
<\p>.
Chlorphenols have been associated with cancers of the throat, noseand connective tissue.
Prolonged contact with chlorinated diphenyl ethers may cause skin irritation, weight loss and liver injury. Repeated absorption has produced liver damage in animals.
Long-term exposure to phenol derivatives can cause skin inflammation, loss of appetite and weight, weakness, muscle aches and pain, liver damage, dark urine, loss of nails, skin eruptions, diarrhea, nervous disorders with headache, salivation, fainting, discoloration of the skin and eyes, vertigo and mental disorders, and damage to the liver and kidneys.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
4-chloro-m-cresol	59-50-7	>99
contaminants may include chlorinated diphenyl ether e.g.		
chlorinated diphenyl oxide	31242-93-0	

Section 4 - FIRST AID MEASURES

SWALLOWED
· IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. · Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

EYE
■ If this product comes in contact with the eyes: · Immediately hold eyelids apart and flush the eye continuously with running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

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. · Lay patient down. Keep warm and rested.

NOTES TO PHYSICIAN
■ For acute or short term repeated exposures to phenols/ cresols:
· Phenol is absorbed rapidly through lungs and skin. [Massive skin contact may result in collapse and death]*
· [Ingestion may result in ulceration of upper respiratory tract; perforation of esophagus and/or stomach, with attendant complications, may occur. Esophageal stricture may occur.]*.

Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Negligible
Upper Explosive Limit (%):	Not available.
Specific Gravity (water=1):	1.215
Lower Explosive Limit (%):	Not available.

EXTINGUISHING MEDIA
· Water spray or fog.
· Foam.

FIRE FIGHTING
· Alert Emergency Responders and tell them location and nature of hazard.
· Wear full body protective clothing with breathing apparatus.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS
· Combustible solid which burns but propagates flame with difficulty.
· Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
Combustion products include: carbon monoxide (CO), carbon dioxide (CO_2), hydrogen chloride, phosgene, other pyrolysis products typical of burning organic material.
May emit poisonous fumes.

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

PERSONAL PROTECTION
Glasses:
Chemical goggles.
Gloves:
Respirator:
Type A-P Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
■ Environmental hazard - contain spillage.
· Remove all ignition sources.
· Clean up all spills immediately.

· Avoid contact with skin and eyes.
· Control personal contact by using protective equipment.
· Use dry clean up procedures and avoid generating dust.
· Place in a suitable, labelled container for waste disposal.
MAJOR SPILLS
■ Environmental hazard - contain spillage.
· 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

· Avoid all personal contact, including inhalation.
· Wear protective clothing when risk of exposure occurs.
Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.
· Do NOT cut, drill, grind or weld such containers.
· In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

RECOMMENDED STORAGE METHODS

· Lined metal can, Lined metal pail/drum
· Plastic pail.
For low viscosity materials
· Drums and jerricans must be of the non-removable head type.
· Where a can is to be used as an inner package, the can must have a screwed enclosure.
All inner and sole packagings for substances that have been assigned to Packaging Groups I or II on the basis of inhalation toxicity criteria, must be hermetically sealed.

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	Notes
US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants	4-chloro-m-cresol (Cresol, all isomers)	5	22			
US - Washington Permissible exposure limits of air contaminants	4-chloro-m-cresol (Cresol (all isomers))	5		10		
US OSHA Permissible Exposure Levels (PELs) - Table Z1	4-chloro-m-cresol (Cresol, all isomers)	5	22			
US - Idaho - Limits for Air Contaminants	4-chloro-m-cresol (Cresol, all isomers)	5	22			
US - Oregon Permissible Exposure Limits (Z-3)	4-chloro-m-cresol (Inert or Nuisance Dust: Total dust)		10			(d)
US OSHA Permissible Exposure Levels (PELs) - Table Z3	4-chloro-m-cresol (Inert or Nuisance Dust: (d) Respirable fraction)		5			
US OSHA Permissible Exposure Levels (PELs) - Table Z3	4-chloro-m-cresol (Inert or Nuisance Dust: (d) Total dust)		15			
US - Hawaii Air Contaminant Limits	4-chloro-m-cresol (Particulates not other wise regulated - Total dust)		10			

US - Hawaii Air Contaminant Limits	4-chloro-m-cresol (Particulates not other wise regulated - Respirable fraction)		5			
US - Oregon Permissible Exposure Limits (Z-3)	4-chloro-m-cresol (Inert or Nuisance Dust: Respirable fraction)		5			(d)
US ACGIH Threshold Limit Values (TLV)	4-chloro-m-cresol (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)		10			See Appendix B current TLV/BEI Book
US - California Permissible Exposure Limits for Chemical Contaminants	4-chloro-m-cresol (Particulates not otherwise regulated Respirable fraction)		5			(n)
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	4-chloro-m-cresol (Particulates not otherwise regulated Respirable fraction)		5			
US - Michigan Exposure Limits for Air Contaminants	4-chloro-m-cresol (Particulates not otherwise regulated, Respirable dust)		5			
Canada - Prince Edward Island Occupational Exposure Limits	4-chloro-m-cresol (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)		10			See Appendix B current TLV/BEI Book
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	4-chloro-m-cresol (Particulates not otherwise regulated (PNOR)(f)- Respirable fraction)		5			
Canada - Prince Edward Island Occupational Exposure Limits	chlorinated diphenyl oxide (o-Chlorinated diphenyl oxide)		0.5			TLV Basis: chloracne; liver damage
US ACGIH Threshold Limit Values (TLV)	chlorinated diphenyl oxide (o-Chlorinated diphenyl oxide)		0.5			TLV Basis: chloracne; liver damage
Canada - British Columbia Occupational Exposure Limits	chlorinated diphenyl oxide (o-Chlorinated diphenyl oxide)		0.5			
Canada - Nova Scotia Occupational Exposure Limits	chlorinated diphenyl oxide (o-Chlorinated diphenyl oxide)		0.5			TLV Basis: chloracne; liver damage
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	-	0.5	-	2	
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	chlorinated diphenyl oxide (o-Chlorinated diphenyl oxide)		0.5		1.5	
Canada - Northwest Territories Occupational Exposure Limits (English)	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)		0.5		2	
US - Idaho - Limits for Air Contaminants	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)		0.5			
US - Minnesota Permissible Exposure Limits (PELs)	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)		0.5			
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)		0.5			

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	
US OSHA Permissible Exposure Levels (PELs) - Table Z1	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	
US - Hawaii Air Contaminant Limits	chlorinated diphenyl oxide (Chlorinated diphenyl Oxide)	0.5	2
US - Washington Permissible exposure limits of air contaminants	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	1.5
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	
US - Alaska Limits for Air Contaminants	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	
Canada - Alberta Occupational Exposure Limits	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	
US - California Permissible Exposure Limits for Chemical Contaminants	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	
US - Oregon Permissible Exposure Limits (Z-1)	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	
US NIOSH Recommended Exposure Limits (RELs)	chlorinated diphenyl oxide (Chlorinated diphenyl oxide)	0.5	

ENDOELTABLE

PERSONAL PROTECTION




RESPIRATOR

Type A-P Filter of sufficient capacity
Consult your EHS staff for recommendations

EYE

· Safety glasses with side shields.
· Chemical goggles.

HANDS/FEET

■ Wear chemical protective gloves, eg. PVC.
NOTE: The material may produce skin sensitization in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
· frequency and duration of contact,
· chemical resistance of glove material,
· glove thickness and
· dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).
· When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
· When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
· Contaminated gloves should be replaced.
Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

OTHER
· Overalls.
· Eyewash unit.

ENGINEERING CONTROLS
· Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
· Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES
Solid.
Mixes with water.

State	Divided solid	Molecular Weight	142.59
Melting Range (°F)	113	Viscosity	Not Applicable
Boiling Range (°F)	384.8	Solubility in water (g/L)	Miscible
Flash Point (°F)	177.8	pH (1% solution)	Not available.
Decomposition Temp (°F)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available.	Vapour Pressure (mmHG)	Negligible
Upper Explosive Limit (%)	Not available.	Specific Gravity (water=1)	1.215
Lower Explosive Limit (%)	Not available.	Relative Vapor Density (air=1)	Not applicable
Volatile Component (%vol)	Negligible	Evaporation Rate	Not applicable
Gas group	IIA		

APPEARANCE
Water soluble crystals with a phenolic odour. Hygroscopic.

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY
· Presence of incompatible materials.
· Product is considered stable.

STORAGE INCOMPATIBILITY
· Phenols are incompatible with strong reducing substances such as hydrides, nitrides, alkali metals, and sulfides.
· Avoid use of aluminium, copper and brass alloys in storage and process equipment.
· Heat is generated by the acid-base reaction between phenols and bases.
· Phenols are sulfonated very readily (for example, by concentrated sulfuric acid at room temperature), these reactions generate heat.
· Phenols are nitrated very rapidly, even by dilute nitric acid.
· Nitrated phenols often explode when heated. Many of them form metal salts that tend toward detonation by rather mild shock.
Avoid reaction with oxidizing agents.

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

Section 11 - TOXICOLOGICAL INFORMATION

4-CHLORO-M-CRESOL

TOXICITY AND IRRITATION
■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (rat) LD50: 1830 mg/kg	Nil Reported

■ Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's edema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.
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Side-reactions during manufacture of the parent compound may result in the production of trace amounts of polyhalogenated aromatic hydrocarbon(s). Halogenated phenols, and especially their alkali salts, can condense above 300 deg.
<\p>.
Polyhalogenated aromatic hydrocarbons (PHAHs) can cause effects on hormones and mimic thyroid hormone. Acne, discharge in the eye, eyelid swellings and visual disturbances may occur.
<\p>.

SKIN

4-chloro-m-cresol	US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants - Skin	Skin Designation	X
4-chloro-m-cresol	US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants - Skin	Skin Designation	X
4-chloro-m-cresol	US - Washington Permissible exposure limits of air contaminants - Skin	Skin	X
4-chloro-m-cresol	US - Minnesota Permissible Exposure Limits (PELs) - Skin	Skin Designation	X
4-chloro-m-cresol	US - Hawaii Air Contaminant Limits - Skin Designation	Skin Designation	X
4-chloro-m-cresol	US OSHA Permissible Exposure Levels (PELs) - Skin	Skin Designation	X

Section 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms.
May cause long-term adverse effects in the environment.
This material and its container must be disposed of as hazardous waste.
Avoid release to the environment.
Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
4-chloro-m-cresol	HIGH		LOW	MED

GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles

Name / EHS TRN A1a A1b A1 A2 B1 B2 C1 C2 C3 D1 D2 D3 E1 E2 E3 Cas No / RTECS No _____ Alcoholic 293 85 0 0 0 R 0 0 0 0 0 0 1 D 1 beverages / CAS:59- 50- 7 /

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 4-chloro-m-cresol 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 U039 (waste code T).

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.
¦ Puncture containers to prevent re-use and bury at an authorized landfill.
Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:
· Reduction
· Reuse
· Recycling
· Disposal (if all else fails)
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or

reuse may not always be appropriate.
DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.
· Recycle wherever possible.
· Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

Section 14 - TRANSPORTATION INFORMATION

DOT:
Symbols: None Hazard class or Division: 6.1
Identification Numbers: UN3437 PG: II
Label Codes: 6.1 Special provisions: IB8, IP2,
IP4, T3,
TP33
Packaging: Exceptions: 153 Packaging: Non- bulk: 212
Packaging: Exceptions: 153 Quantity limitations: 25 kg
Passenger aircraft/rail:
Quantity Limitations: Cargo 100 kg Vessel stowage: Location: A
aircraft only:
Vessel stowage: Other: 12
Hazardous materials descriptions and proper shipping names:
Chlorocresols, solid

Air Transport IATA:

ICAO/IATA Class: 6.1 ICAO/IATA Subrisk: None
UN/ID Number: 3437 Packing Group: II
Special provisions: None
Cargo Only
Packing Instructions: 615 Maximum Qty/Pack: 100 kg
Passenger and Cargo Passenger and Cargo
Packing Instructions: 613 Maximum Qty/Pack: 25 kg
Passenger and Cargo Limited Quantity Passenger and Cargo Limited Quantity
Packing Instructions: Y613 Maximum Qty/Pack: 1 kg
Shipping Name: CHLOROCRESOLS, SOLID(CONTAINS 4-CHLORO-M-CRESOL)

Maritime Transport IMDG:

IMDG Class: 6.1 IMDG Subrisk: None
UN Number: 3437 Packing Group: II
EMS Number: F-A , S-A Special provisions: None
Limited Quantities: 500 g Marine Pollutant: Yes
Shipping Name: CHLOROCRESOLS, SOLID(contains 4-chloro-m-cresol)

Section 15 - REGULATORY INFORMATION

REGULATIONS

4-chloro-m-cresol (CAS: 59-50-7) is found on the following regulatory lists;
"Canada - Saskatchewan Industrial Hazardous Substances","Canada Domestic Substances List (DSL)","OECD Representative List of High Production Volume (HPV) Chemicals","US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List","US - Massachusetts Oil & Hazardous Material List","US - Pennsylvania - Hazardous Substance List","US - Vermont Hazardous Constituents","US - Vermont Hazardous wastes which are Discarded Commercial Chemical Products or Off-Specification Batches of Commercial Chemical Products or Spill Residues of Either","US - Washington Dangerous waste constituents list","US - Washington Discarded Chemical Products List - ""U"" Chemical Products","US Cosmetic Ingredient Review (CIR) Cosmetic ingredients found safe, with qualifications","US CWA (Clean Water Act) - Priority Pollutants","US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides","US DOE Temporary Emergency Exposure Limits (TEELs)","US FDA Indirect Food Additives: Adhesives and Components of Coatings - Substances for Use Only as Components of Adhesives - Adhesives","US Inventory of Effective Food Contact Substance Notifications","US List of Lists - Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112(r) of the Clean Air Act","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 Toxic Substances Control Act (TSCA) - Inventory"
Regulations for ingredients

chlorinated diphenyl oxide (CAS: 31242-93-0,55720-99-5) is found on the following regulatory lists;
"Canada - British Columbia Occupational Exposure Limits","Canada - Northwest Territories Occupational Exposure Limits (English)","Canada - Nova Scotia Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits","Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","US - Minnesota Hazardous Substance List","US - New Jersey Right to Know Hazardous Substances","US ACGIH Threshold Limit Values (TLV)"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE

■ Inhalation may produce serious health damage*.
■ Cumulative effects may result following exposure*.
■ May produce discomfort of the respiratory system*.
■ Limited evidence of a carcinogenic effect*.
* (limited evidence).

Ingredients with multiple CAS Nos

Ingredient Name CAS chlorinated diphenyl oxide 31242-93-0, 55720-99-5

Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.

■ 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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