Safety Data Sheet

Safety Data Sheet (in compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010)

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1. PRODUCT IDENTIFICATION

Trade Name (as labeled):	**Camphorated Parachlorophenol**
Chemical Name/Classification:	Mixture
Product Identifier (Part/Item Number):	10302
U.N. Number:	UN2021
U.N. Dangerous Goods Classification:	6.1 PGIII
Recommended Use:	Disinfecting and treating root canals
Restrictions on Use:	For Professional Use Only
Manufacturer/Supplier Name:	Sultan Healthcare
Manufacturer/Supplier Address:	411 Hackensack Avenue, 9th Floor Hackensack, NJ
Manufacturer/Supplier Telephone Number:	1-201-871-1232 or 800-637-8582 (Product Information)
Emergency Contact Telephone Number:	800-535-5053 (INFOTRAC) 1-352-323-3500 (Outside the United States – Call Collect)
Email address:	customer.service@sultanhc.com

2. HAZARD(s) IDENTIFICATION

EU Classification (1999/45/EC as amended): Harmful (Xn), Irritant (Xi), Dangerous for the Environment (N) R20/21/22, R36/37/38, R51/53

EU Labeling:

 Harmful	 Harmful for the Envirnoment	Contains 4-Chlorophenol R20/21/11 Harmful by inhalation, in contact with skin and if swallowed. R36/37/38 Irritating to eyes, respiratory system and skin. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S61Avoid release to the environment. Refer to special instructions / Safety data sheets.

US Hazard Classification: Hazardous

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Components	C.A.S. # EC#	IUPAC Name	Substance Classification 67/548/EEC (EC) No 1272/2008	WT %
Camphor	76-22-2 / 200-945-0	1,7,7-Trimethylbicyclo(2.2.1) heptan-2-one	F, Xi R11, R36/37/38	45-65
4-Chlorophenol	106-48-9 / 203-402-6	4-chlorophenol	Xn, N R20/21/22, R51/53 Acute Tox 4 (H332), Acute Tox 4 (H312), Acute Tox 4 (302), Aquatic Chronic 2 (H411)	15-35

Refer to Section 16 for the full text of the GHS and H phrases and EU Classifications and R Phrases.

4. FIRST-AID MEASURES

Routes of Exposure	First Aid Instructions
Eye	Flush eyes with large quantities of water for 15 minutes, holding the eyelids apart. Get immediate medical attention.
Skin	Immediately flush the skin with water for 15 minutes. Wash with soap and water. Get medical attention if symptoms persist. Wash contaminated clothing before reuse.
Inhalation	Immediately remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.
Ingestion	If swallowed, wash mouth with water. Never give anything my mouth to an unconscious person. Get immediate medical attention.
Most important symptoms of exposure	May cause eye and skin irritation. Prolonged skin contact may cause burns. Inhalation of vapors or mists may cause mucous membrane and respiratory irritation. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if inhaled, absorbed though the skin or swallowed.
Other	None known.
Note to Physicians (Treatment, Testing, and Monitoring): Treatment of overexposure should be directed at the control of symptoms and clinical conditions.	

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Use water fog, carbon dioxide, dry chemical or foam. Do not use straight water stream.

Fire Fighting Procedures:	Cool fire exposed containers with water.
Specific Hazards Arising from the Chemical:	Decomposition may produce carbon oxides, chlorine , phenol and hydrogen chloride.
Precautions for Fire Fighters:	Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for all fires involving chemicals.

Recommended Protective Equipment for Fire Fighters:			
EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, PPE and Emergency Procedures: For large spills, eye protection, gloves and protective clothing. For small spill, wear eye protection and gloves .Eliminate all ignition sources and ventilate the area.
Environmental Precautions: Prevent spill from entering sewers and water courses. Report releases as required by local and national authorities.
Methods and Materials for Containment and Clean-up: Collect using an inert non-combustible absorbent material and place in appropriate containers for disposal. Clean spill area thoroughly.

Recommended Personal Protective Equipment for Containment and Clean-up:			
EYES/FACE	**SKIN**	**RESPIRATORY**	**THERMAL**
			

7. HANDLING AND STORAGE

Precautions for Safe Handing: Do not get in eyes. Avoid prolonged skin contact. Do not breathe vapors or mists. Use with adequate ventilation. Use in accordance with package instructions.
Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible materials. Keep out of direct sunlight. Keep containers tightly closed when not is use. Do not store in plastic or polystyrene containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

Camphor	United States	2 mg/m3 TWA OSHA PEL 2 mg/m3 TWA ACGIH TLV, 3 mg/m3 STEL
	Germany	2 mg/m3 TWA DFG MAK, 4 mg/m3 STEL
	United Kingdom	2 mg/m3 TWA UK OEL, 3 mg/m3 STEL
	France	2 mg/m3 TWA
	Spain	2 mg/m3 TWA, 3 mg/m3 STEL
	Italy	None Established
	European Union	None Established
4-Chlorophenol	United States	None Established
	Germany	None Established
	United Kingdom	None Established
	France	None Established
	Spain	None Established
	Italy	None Established
	European Union	None Established

Biological Exposure Limits: None Established

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Individual Protection Measures (PPE)

Specific Eye/face Protection: Chemical safety glasses or goggles recommended.

Specific Skin Protection: Wear impervious gloved such as nitrile or rubber for prolonged use. Recommended glove: Nitrile or rubber gloves. Consult glove supplier for thickness and breakthrough times.

Specific Respiratory Protection: In operations where vapor concentrations exceed the exposure limits an approved dust/mist respirator should be worn. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

Specific Thermal Hazards: Not applicable

Recommended Personal Protective Equipment:

EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

Environmental Exposure Controls: Use with adequate ventilation.

General Hygiene Considerations and Work Practices: Do not get in eyes, Avoid prolonged skin contact. Avoid breathing vapors or mists. Routine hand washing after use recommended.
Protective Measures During Repair and Maintenance of Contaminated Equipment: Wear protective clothing and equipment as described in Section 8. Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear light brown liquid	**Explosive limits:**	Not determined
Odor:	Camphor-like odor.	**Vapor pressure:**	1.0 mmHg @ 49°C
Odor threshold:	Not available	**Vapor density:**	Not available
pH:	4.2	**Relative density:**	1.054
Melting/freezing point:	Not available	**Solubility:**	Not soluble
Initial boiling point and range:	423°F (217°C)	**Partition coefficient: n-octanol/water:**	Not available
Flash point:		**Auto-ignition temperature:**	Not available
Evaporation rate:	Not available	**Decomposition temperature:**	Not available
Flammability:		**Viscosity:**	Not available
Explosive Properties:	None	**Oxidizing Properties:**	None

10. STABILITY AND REACTIVITY

Reactivity: No hazardous reactions anticipated.
Chemical Stability: Stable under ambient conditions.
Possibility of Hazardous Reactions: None known.
Conditions to Avoid: Avoid heat, flames and all sources of ignition.
Incompatible materials: Avoid oxidizing agents, acid chlorides, anhydrides and strong bases.
Hazardous Decomposition Products: Thermal decomposition may produce carbon monoxide, carbon dioxide, hydrogen chloride, chlorine and phenol.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: Direct contact may cause irritation. Prolonged contact may cause burns with irreversible damage.

Skin: Prolonged or repeated skin contact may cause irritation, dermatitis and possible burns. May be absorbed though the skin in harmful amounts.

Ingestion: Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Doses of 60 mg-4 g of camphor in humans have been shown to cause visual disturbances, noises in ears, cardiac disturbances, and kidney and liver effects.

Inhalation: Inhalation of vapors or mists can cause irritation of mucous membranes and upper respiratory tract with coughing, wheezing and shortness of breath. High vapors concentrations may cause headache, dizziness, fatigue, restlessness, muscle weakness, tremors, seizers, coma and death.

Chronic Health Effects: Prolonged overexposure to 4-Chlorophenol may cause damage to the liver and kidneys. Alcohol consumption can increase liver effects.

Carcinogenicity: None of the components of this product are listed as carcinogens by OSHA, IARC, ACGIH, NTP or EU Directives.

Mutagenicity: 4-Chlorophenol: Negative in Salmonella typhimurium reverse mutation assays, chromosome aberrations assay in SHE cells and CHO single cell gel (comet) assay.

Medical Conditions Aggravated by Exposure: Individuals with skin, respiratory, kidney and liver disorders may be at increase risk from exposure. .

Acute Toxicity Data:

Camphor: Oral mouse LD50 1300 mg/kg

4-Chlorophenol: Oral Rat LD50 >500 mg/kg; Skin rabbit LD50 1500 mg/kg

Reproductive Toxicity Data: In humans, camphor crosses the placenta and has been implicated in fetal and neonatal death. The topical use of camphorated oil in pregnancy was not associated with teratogenic effects.

Specific Target Organ Toxicity (STOT):

Single Exposure: Camphor: Camphor applied to the skin of volunteers as a 20% solution in alcohol produced no significant sensation of irritation or pain at normal skin temperatures. It did appear to have a slight sensitizing effect on the perception of temperature change during heating and cooling, and increased the sensation of burning at high temperatures.

Repeated Exposure: In an OECD 407 28 day oral study, rats were administered 50 mg/kg of 4-Chlorophenol daily. No treatment-related variations in hematologic and blood chemistry were noted. No changes in weights were noted. There was no macroscopic or microscopic finding at necropsy. NOAEL: 50 mg/kg.

12. ECOLOGICAL INFORMATION

Toxicity:

Camphor 96 hr LC50 Pimephales promelas (Fathead minnow) 110 mg/L; 96 hr LC50 Brachydanio rerio (Zebrafish) 35-50 mg/L

4-Chlorophenol: 96 hr LC50 Pimephales promelas (Fathead minnow) 6.11 mg/L; 48 hr EC50 daphnia magna 2500 ug/L

Persistence and Degradability: Camphor: Readily biodegradable.

Bio-accumulative Potential: Camphor is expected to be moderately bioaccumulative in aquatic organisms. 4-Chlorophenol: has a low potential to bioaccumulate in aquatic organisms.

Mobility in Soil: Camphor is expected to be moderately mobile in soil. 4-Chlorophenol is expected to be highly to moderately mobile in soil.
Other Adverse Effects: None known
Results of PBT/vPvB Assessment: Not required.

13. DISPOSAL CONSIDERATIONS

Regulations: Dispose in accordance with local and national environmental regulations
Properties (Physical/Chemical) Affecting Disposal: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Waste Treatment Recommendations: None needed for normal anticipated use.

14. TRANSPORT INFORMATION

UN Number:	ADR/RID: UN2021	IMDG: UN2021	IATA: UN2021	DOT: UN2021
UN proper shipping name:	ADR/RID: Chlorophenols, liquid IMDG: Chlorophenols, liquid IATA: Chlorophenols, liquid DOT: Chlorophenols, liquid			
Transport hazard class(es):	ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1	DOT: 6.1
Packaging group:	ADR/RID: PG III	IMDG: PG III	IATA: PG III	DOT: PG III
Environmental hazards:	ADR/RID: Yes	IMDG Marine pollutant: Yes	IATA: Yes	DOT: No
Special precautions for user: Not applicable				

15. REGULATORY INFORMATION

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): This product is not subject to CERCLA release reporting. Many states have more stringent regulations. Report all spills in accordance with local, state, and federal regulations.

Toxic Substances Control Act (TSCA): All of the components of this product are listed on the TSCA inventory or exempt.

Clean Water Act (CWA): Not Listed

Clean Air Act (CAA): Not Listed

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 (40 CFR 370) Hazard Categories:

Immediate Hazard:	**Yes**	**Pressure Hazard:**	**No**
Delayed Hazard:	**Yes**	**Reactivity Hazard:**	**No**
Fire Hazard:	**No**		

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

Components	C.A.S. #	WT %
None		

State Regulations

California: This product contains the following chemicals(s) known to the State of California to cause cancer, birth defects or reproductive harm:

Components	C.A.S. #	WT %
None		

International Regulations

Canadian Environmental Protection Act: All the components of this product are listed on the Canadian DSL.

Canadian Workplace Hazardous Materials Information System (WHMIS): Class D-2-B (Toxic material causing other chronic effects).

EU REACH: The substances in this product comply with the EU REACH regulation as applicable.

16. OTHER INFORMATION

Full text of Classification abbreviations used in Section 2 and 3:
F Highly Flammable
N Dangerous for the Environment
Xi Irritant
Xn Harmful
R11 Highly Flammable
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38 Irritating to eyes, respiratory system and skin.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Tox 4 (H302) Acute Toxicity Category 4 (H302)
Tox 4 (H312) Acute Toxicity Category 4 (H312)
Tox 4 (H332) Acute Toxicity Category 4 (H332)
Aquatic Chronic 2 Aquatic Chronic Category 2
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.

Date of SDS Preparation/Revision: 21 November 2011

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau, ESIS, Country websites for occupational exposure limits.