

MATERIAL SAFETY DATA SHEET

Product name: RACESTYPTINE
MSDS n° US RAC-001

Date: 16/08/1994 (Still Current May 31, 2004)
Page: 1 / 6

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **RACESTYPTINE SOLUTION**

DISTRIBUTOR

Name: SEPTODONT OF CANADA, INC.
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HAZARDOUS INGREDIENTS/INFORMATION

Hazardous Components:	OSHA PEL:	ACGIH TLV:	Other Recommended Limits:
Aluminum Chloride AlCl ₃	None	None	Al PEL: 15 mg/m ³
			Hydrogen Chloride – PEL: 5 ppm TLV: 5 ppm
Ethyl Alcohol C ₂ H ₅ OH – (63%)	1000 ppm	1000 ppm	
8-Hydroxyquinoline(less than 5% of Sulfate product mixture)			

PHYSICAL CHARACTERISTICS

Boiling Point: * *Solubility in Water:* *
Vapor Pressure: *Specific Gravity:*
Vapor Density: *Melting Point:*

Evaporation Rate:

Appearance and Odor: Clear liquid; mild odor.

*See attached component data sheet for characteristics.

REACTIVITY DATA

Stability: Stable *Incompatibility:* With some oxidizers and chlorides

Hazardous Polymerization: Will not occur

Hazardous Decomposition: Aluminum chloride catalyzes many organic reactions and some like alkenes or aniline resulted in violent reactions. This is not like with the mixture in 0.44 oz. container.

FIRE & EXPLOSION INFORMATION

Flash Point: 55°F* *Flammable Limits:* % by volume *LEL:* 3.3* *UEL:* 9*

Extinguishing Media: Use dry chemical, CO₂ or foam. Use of water may cause reaction with aluminum chloride in mixture. Water may be used to cool containers not yet involved in fire and to dilute spills.

Special Fire Fighting Procedures: Wear protective gear and self-contained breathing apparatus. Use water spray to disperse any vapors.

Special Fire and Explosion Hazards: Hydrogen chloride may be given off during fire. Ethyl alcohol (pure grade) is a flammable.

*For undiluted ethyl alcohol., Flash point should be significantly high temperature for mixture in 0.44 ox. container.

HEALTH HAZARD DATA

Routes of Entry - Inhalation: yes

Skin: yes

Ingestion: yes

Health Hazards (acute & chronic): *

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs & Symptoms of Exposure: Irritation and skin rash, burning and tearing of eyes, irritation of upper respiratory passage, diarrhea.

Medical Conditions Generally Aggravated by Exposure: *

Emergency and First Aid Procedures: If large amount inhaled, move to fresh air; if not breathing, give artificial respiration; if difficulty breathing, give oxygen. If skin contact, immediately flush skin with large amount of water. If eye contact, flush eyes with large amounts of water for at least 15 minutes. If swallowed, immediately call a physician and/or a poison control center.

* See attached component data sheets.

CONTROL/PROTECTION INFORMATION

Respiratory Protection: Single dental patient use in properly ventilated room should not necessitate use of respirators. If unsure of exposure and for other exposures, refer to attached component data sheet for Aluminum Chloride.

Ventilation – Local: normally not needed if existing area/room ventilation is adequate for single patient usage.

Mechanical: As needed.

Protective Gloves: Butyl type, if needed.

Eye Protection: Safety glasses; chemical splash goggles as needed.

Other Protective Clothing/Equipment: Lab coat and/or impervious apron, as needed.

Work/Hygienic Practices: Avoid breathing vapors or mist. Avoid eye and skin contact. Wash thoroughly after handling. Use in properly ventilated area.

SAFE HANDLING & DISPOSAL INFORMATION

Steps to Take in Case of Spill: Review safety and fire precautions before cleanup. Wear protective equipment and respiratory protections as necessitate by nature of spill and conditions. Use absorbent material to pick up liquid and place in container for proper disposal.

Waste Disposal Method: Follow federal, state and local regulations. Small quantities as used with single patient may be diluted and flushed in sewer as laboratory material. Obtain proper authorization from correct agency before placing in sewer system.

Precautions when Handling and Storing: Keep containers tightly closed. Use in properly ventilated areas. Store away from heat in dry area. Open containers in ventilated area.

DISCLAIMER

Information and statements contained in this document have been obtained from manufacturers, suppliers, and recognized reference sources as provided to or obtained by Septodont, Inc.

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This MSDS is only complete when the following data sheets are attached: Aluminum Chloride and Ethyl Alcohol.

Material: Aluminum Chloride - AlCl_3
Synonyms: Aluminum Chloride, Hexahydrate

HAZARDOUS INGREDIENTS/INFORMATION

Hazardous Components:	OSHA PEL:	ACGIH TLV:	Other Recommended Limits:
Aluminum Chloride CAS # 7446-70-0	None	None	Aluminum – metal dust PEL: 15 mg/m ³ TLV: 10 mg/m ³ Hydrogen Chloride PEL: 5 ppm TLV: 5 ppm 7 ppm mg/m ³ ceiling

PHYSICAL CHARACTERISTICS

Boiling Point: 262°C
Vapor Pressure: 1 mm He 100°C
Vapor Density: 9.19
Evaporation Rate: N/A
Appearance and Odor: White to yellowish crystal or powder; chloride odor.

Solubility in Water: soluble
Specific Gravity: 2.44
Melting Point: 190°C

REACTIVITY DATA

Stability: Reacts violently with water liberating much heat and can explode.
Incompatibility: with water, moist air violent reactions, with alkyl chloride, ethylene oxide and nitromethane.
Hazardous Polymerization: Will not occur
Hazardous Decomposition: Catalyzes many organic reactions; contact with many organics like alkenes, nitrobenzene, aniline, etc. have resulted in violent reactions.

FIRE & EXPLOSION INFORMATION

Flash Point: None
Flammable Limits: N/A
LEL: *UEL:*
Extinguishing Media: **Do not** use water in vicinity of aluminum chloride. Use dry chemical or foam.
Special Fire Fighting Procedures: Evacuate personnel. Wear personal protective equipment and self-contained breathing apparatus. **DO NOT USE WATER.**
Special Fire and Explosion Hazards: Hazardous gases/vapors produced including hydrogen chloride. Violent reaction if water stream used.

HEALTH HAZARD DATA

Routes of Entry - Inhalation: yes *Skin:* yes *Ingestion:* yes
Health Hazards (acute & chronic): At 10% concentration, the compound is a skin and eye irritant. The compound is a DOT corrosive material. Skin contact may initially cause irritation or rash. Eye contact may initially cause irritation, tearing or blurring of vision. Inhalation may initially irritate the upper respiratory passages. Ingestion may initially include burning pain in the mouth and throat, vomiting, water or bloody diarrhea, retching, hemolysis (red blood cell destruction), blood in urine, lack of urine, liver damage with jaundice, hypotension, collapse, and convulsions. Prolonged exposures

may lead to encephalopathy (brain disease), weakness, osteomalacia (bone softening and bending) and elevated serum calcium levels. Contact with concentrated solutions or the crystalline material may cause skin burns, ulceration, eye corrosion with corneal or conjunctival ulceration. The compound has been infrequently associated with skin sensitization in humans.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs & Symptoms of Exposure: Irritation, reddening of skin; tearing of eyes, burning pain in mouth and throat, diarrhea.

Medical Conditions Generally Aggravated by Exposure: Existing upper respiratory conditions.

Emergency and First Aid Procedures: If large amounts are inhaled, move to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Exothermic reaction with water will cause burns if large quantities are washed off the skin. **WIPE OFF EXCESS BEFORE WASHING** In case of contact, remove contaminated clothing and wipe off excess aluminum chloride immediately. Then, flush skin with plenty of water for at least 20 minutes. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. If swallowed, do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. In all situations, immediately call a physician.

CONTROL/PROTECTION INFORMATION

Respiratory Protection: a NIOSH approved air purifying respirator with a high efficiency particulate prefilter and an acid gas cartridge or canister may be acceptable where airborne concentrations are expected to exceed exposure limits at a low level. Protection provided by air purifying respirators is limited. Air purifying respirators should protect against particulates and hydrogen chloride fumes. Wear a positive pressure air supplied respirator if any potential for an uncontrolled release, higher exposure levels, or unknown exposure.

Ventilation – Local: To control dust exposure to acceptable level per usage.

Mechanical: As needed

Protective Gloves: Neoprene to prevent skin contact.

Eye Protection: Safety glasses. Chemical splash goggles if potential for eye/face contact for airborne material.

Other Protective Clothing/Equipment: Wear impervious clothing (apron, boots, etc.) to prevent skin contact.

Work/Hygienic Practices: Do not breathe vapor, mist or dust. Avoid eye and skin contact. Keep off clothing. Wash thoroughly after handling.

SAFE HANDLING & DISPOSAL INFORMATION

Steps to Take in Case of Spill: Review safety and fire precautions before clean up. Use appropriate personal protection equipment. Ventilate area thoroughly and use self-contained breathing apparatus. Dike spill and shovel or sweep up. Avoid water and moisture during clean up. Sodium bicarbonate may be used to help neutralize spill. Place in appropriate container and label.

Waste Disposal Method: Follow federal, state and local environmental regulations. Do not flush or place in waterways of were systems. Contact appropriate agency of disposal guidance.

Precautions when Handling and Storing: Use only in well-ventilated area. Wear appropriate protective equipment. Keep container tightly closed and store in dry area. Do not mix with water. Avoid generating dust when handling. Keep out of direct sunlight. Note: Prolonged storage of anhydrous aluminum chloride has resulted in spontaneous decomposition and possible explosion upon opening container.

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Material: Ethyl Alcohol - C₂H₅OH
Synonyms: Denatured Ethyl Alcohol

HAZARDOUS INGREDIENTS/INFORMATION

Hazardous Components:	OSHA PEL:	ACGIH TLV:	Other Recommended Limits:
Ethyl Alcohol CAS # 64-17-5	1000 ppm	1000 ppm	N/A

PHYSICAL CHARACTERISTICS

Boiling Point: 78°C
Vapor Pressure: 43 mm Hg
Vapor Density: 1.6
Evaporation Rate: N/A
Appearance and Odor: Clear, colorless liquid; fragrant odor.

Solubility in Water: soluble
Specific Gravity: .79
Melting Point: 114°C

REACTIVITY DATA

Stability: Stable
Incompatibility: with acetyl chloride and some oxidizers
Hazardous Polymerization: Will not occur
Hazardous Decomposition: Will not occur

FIRE & EXPLOSION INFORMATION

Flash Point: 55°F
LEL: 3.3 *UEL:* 19
Flammable Limits: % by volume

Extinguishing Media: Foam, dry chemical, CO₂. Water may be ineffective but can be used to cool exposed containers and water spray used to dilute spills to non-flammable mixtures.

Special Fire Fighting Procedures: Wear protective gear and self-contained breathing apparatus. Use water spray to disperse vapors and cool tanks and containers.

Special Fire and Explosion Hazards: Flammable liquid. Carbon Monoxide and carbon dioxide produced during fire.

HEALTH HAZARD DATA

Routes of Entry - Inhalation: yes *Skin:* yes *Ingestion:* possible

Health Hazards (acute & chronic): Initial irritation, rash and discomfort; tearing and burning of eyes; discomfort/irritation of upper respiratory passages; dizziness, headaches and weakness. Continued exposure can result in reproductive effects with risk to unborn children. Temporarily reduced fertility in females and males. Temporary nervous system effects including muscular weakness and incoordination, confusion and loss of consciousness. Abnormal liver function with nausea of vomiting and abdominal pain. Eye corrosion with corneal ulceration. No reports of human skin sensitization.

Note: Extremely dangerous if intake is accompanied with barbituates or similar drugs.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs & Symptoms of Exposure: See health hazards above.

Medical Conditions Generally Aggravated by Exposure: Diseases of liver, gastrointestinal tract, central nervous system and reproductive organs.

Emergency and First Aid Procedures: If inhaled, move to fresh air; if unconscious, give artificial respiration; if difficulty in breathing, give oxygen. If eye contact, flush eyes with plenty of water for at least 15 minutes. If skin contact, flush with water for at least 15 minutes while removing contaminated clothing. If swallowed, do not induce vomiting. Give large amounts of water. Never give anything by mouth to a person who is unconscious. In all cases, immediately call a physician.

CONTROL/PROTECTION INFORMATION

Respiratory Protection: Positive pressure respirators, as required.

Ventilation – Local: To maintain exposure below acceptable limits.

Mechanical: As required

Protective Gloves: As needed

Eye Protection: Safety glasses; chemical splash goggles recommended for all handling

Other Protective Clothing/Equipment: Impervious apron and/or clothing as required by handling exposure.

Work/Hygienic Practices: Avoid eye and skin contact. Avoid breathing vapors or mist. Wash thoroughly after handling.

SAFE HANDLING & DISPOSAL INFORMATION

Steps to Take in Case of Spill: Review all safety and fire procedures before clean up. Wear appropriate personal protective equipment and self-contained breathing apparatus. Ventilate area. Remove sources of heat, sparks, flame and electricity. Control vapors with water spray. Soak up with absorbent material, place in container and label.

Waste Disposal Method: Follow Federal, state and local environmental regulations for handling and disposal.

Precautions when Handling and Storing: Store as flammable liquid following local fire regulations and National Fire Protection Association requirements. Keep containers tightly closed. Store in cool, dry, well ventilated area. Follow appropriate safety precautions when handling, opening and dispensing/transferring product.

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