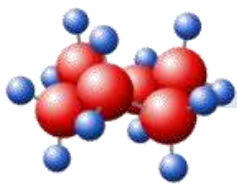
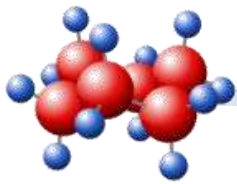


MSDS- Material Safety Data Sheet for: Radicicol

Section 1. Product and Company Information	
Name:	Radicicol
CAS Number:	12772-57-5
Catalog Code:	RD
Synonyms	Monorden, RHI-12648, NSC 294404
Company Identification	Fermentek Ltd, See page footer for contact details
Section 2. Composition/Information on Ingredient	
Chemical Formula:	C ₁₈ H ₁₇ ClO ₆
RTECS	RR1105000
Section 3. Hazards Identification	
EMERGENCY OVERVIEW	Toxic (USA) Harmful (EU). May cause cancer. Toxic if swallowed. Irritating to eyes, respiratory system and skin. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.
Target organ(s)	Nerves. Liver. Probable Carcinogen (US)
HMIS RATING	HEALTH: 2; FLAMMABILITY: 2; REACTIVITY: 2
NFPA RATING	HEALTH: 2; FLAMMABILITY: 2; REACTIVITY: 2
Section 4. First Aid Measures	
Eye Contact	Check for and remove contact lenses. Flush eyes with running water for at least 15 minutes separating eyelids. Seek medical attention immediately.
Skin Contact	Wash with soap and water for 15 minutes. Remove contaminated clothing and shoes. Seek medical attention immediately
Inhalation	Remove from exposure. If breathing is difficult, administer oxygen. If breathing stops, administer artificial respiration. Seek medical attention immediately. Provide chemical label and MSDS if possible.
Ingestion	Remove dentures and clear mouth. If person is conscious, rinse mouth with water Call physician or poison control immediately. Provide chemical label and MSDS information if possible.
Section 5. Fire and Explosion Data	
Flammability	Not Available
Flash Point	Not Available
Combustion products	CO, CO ₂ , NO,NO ₂ ,
Extinguishing Media	Carbon Dioxide, Dry chemical powder, polymer foam, water spray
Special Firefighting Procedures	Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Unusual Fire/Explosion Hazards	None known
Section 6 - Accidental Release Measures	
Cleanup Procedures	Wearing appropriate protective gear as outlined under "Protective equipment" wipe up spill and place in sealed container and hold for disposal. Avoid raising dust. Ventilate the area and wash spill site after material has been removed
Waste Disposal Method	Observe all Federal, State and Local regulations concerning the disposal of this product. Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete
Section 7 - Handling and Storage	
Protective Equipment	For spill clean up, wear suitable protective clothing, chemical resistant rubber gloves, rubber boots, and chemical safety goggles. Self-contained breathing apparatus or NIOSH/MSHA approved respirator is recommended.
Storage and Handling	This product should be kept in a tightly closed container. This product should be handled only by qualified



	experienced professionals. Wash thoroughly after handling this material Store at -18°C
	Section 8 - Exposure Controls / Personal protection
General	Use only in a chemical fume hood. Safety shower and eye bath. Use adequate ventilation to keep airborne concentrations low
Personal protective equipment	Respiratory: Government approved respirator. Hand: Compatible chemical-resistant gloves. Eye: Chemical safety goggles.
	Section 9. Physical Data
Appearance	yellow powder
Molecular Weight	365
Melting	194°C
Solubility	DMSO, Ethanol,
	Section 10. Stability and Reactivity Data
Stability	This material is stable if stored as directed
Conditions to Avoid	Excess heat, incompatible materials, strong oxidizers
Incompatibles	Reactive with oxidizing agents, acids, alkalis.
Hazardous polymerization	Will not occur
	Section 11 - Toxicological Information
RTECS#:	
Route of exposure	Skin Contact: Causes skin irritation. Skin Absorption: May be harmful if absorbed through the skin. Eye Contact: Causes eye irritation. Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract. Ingestion: Harmful if swallowed.
TARGET ORGANS OR SYSTEMS	Kidneys. Liver. G.I. System. Skeletal muscle. Central nervous system.
Signs and symptoms of exposure	Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Contact with eyes can cause redness, tearing, and blurred vision. Prolonged or repeated contact with skin can cause defatting and dermatitis. Drowsiness. Dizziness.
CONDITIONS AGGRAVATED BY EXPOSURE	May cause nervous system disturbances
TOXICITY DATA	Oral, Mouse, LD50=300 mg/kg Intravenous ;Mouse; LD50=175 MG/KG
CHRONIC EXPOSURE - CARCINOGEN	Probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification
	Section 12 - Ecological Data
Ecotoxicological Information:	None Available
	Section 13 - Disposal Considerations
Appropriate method of disposal of substance or preparation	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.



	Section 14 - Transport Information
US DOT	Proper Shipping Name: None Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
IATA	Non-Hazardous for Air Transport: Non-hazardous for air transport
	Section 15-Regulatory Information
US classification and label text	Indication of Danger: Toxic (USA) Harmful (EU). Risk Statements: May cause cancer. Toxic if swallowed. Irritating to eyes, respiratory system and skin. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness. Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid exposure - obtain special instructions before use. US Statements: Target organ(s): Nerves. Liver. Probable Carcinogen (US).
United States regulatory information	SARA LISTED: No
European information	Symbol of Danger: Xn Indication of Danger: Harmful. Risk Statements: R: 22-36/37/38: Harmful if swallowed. Irritating to eyes, respiratory system and skin. Safety Statements: S: 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	Section 16 -Other Information
Warranty	For R&D use only. Not for drug, household or other uses. For use only by trained personnel.
Disclaimer	The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. The burden of safe use of this material rests entirely with the user. Fermentek shall not be held liable or any damage resulting from handling or from contact with the above product.