

FINDETT MATERIAL SAFETY DATA SHEET

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FINDETT PRODUCT NAME

SANTOTRAC-2000
TRACTION LUBRICANT

FINDETT CORPORATION
8 GOVERNOR DRIVE
ST. CHARLES, MO 63301
636-723-0240

FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT
Call CHEMTREC - Day or Night - 1-800-424-9300 Toll free in the continental U.S., Hawaii, Puerto Rico, Canada, Alaska, or Virgin Islands. For calls originating elsewhere: 1-703-527-3887.

PRODUCT IDENTIFICATION

Santotrac-2000 traction lubricant is a proprietary formulation. The specific chemical identities of some components are being withheld because they are trade secrets of FINDETT CORPORATION. All components of Santotrac-2000 Lubricant appear on the Inventory of Chemical Substances published by the U.S. Environmental Protection Agency under the authority of the Toxic Substances Control Act (TSCA).

Synonym(s): Synthetic hydrocarbon and aromatic ester plus performance additives
DOT Proper Shipping Name: This product is not classified as hazardous by the U. S. Department of Transportation.
DOT Hazard Class/I.D. No./ Packing Group: Not Applicable
DOT Label(s): Not Applicable
U.S. Surface Freight Classification: Lubricating Oil Other Than Petroleum
Reportable Quantity (RQ) Under U.S. EPA CERCLA Regulations: Not Applicable

SARA Hazard Notification

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370): Immediate

Section 313 Toxic Chemical(s): Not Applicable

Hazardous Chemical(s) Under OSHA Hazard Communication Standard:

This product contains, as components, the substances listed below which are identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200):

The specific chemical identities of the following components are being withheld because they are trade secrets of Findett Corporation:

MCS-1912 Synthetic Hydrocarbon
Phosphate Esters

2,6 Di-Tert-Butyl-p-Cresol, CAS # 128-37-0

WARNING!
CAUSES SKIN IRRITATION

PRECAUTIONARY MEASURES

Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

EMERGENCY AND FIRST AID PROCEDURES

FIRST AID: IN CASE OF CONTACT, immediately flush the area with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash clothing before reuse. Get medical attention if irritation persists. Wash clothing before reuse.

IN CASE OF: SPILL or LEAK, Absorb spill with dry sand or earth, then place in a chemical waste container for disposal.

OCCUPATIONAL CONTROL PROCEDURES

Eye Protection: Santotrac-2000 does not cause significant eye irritation or eye toxicity requiring special protection. Use good industrial practice to avoid eye contact.

Skin Protection: Wear appropriate protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing is likely. Wash contaminated skin promptly. Launder contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

Respiratory Protection: Avoid breathing vapor or mist. Use NIOSH/MSHA approved respiratory protection equipment (full facepiece recommended) when airborne exposure is excessive. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR § 1910.134.

Ventilation: Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Airborne Exposure Limits:

Santotrac-2000

OSHA PEL:	None Established
ACGIH TLV:	None Established

COMPONENTS:

MCS-1912 Synthetic Hydrocarbon

OSHA PEL:	None Established
ACGIH TLV:	None Established

OCCUPATIONAL CONTROL PROCEDURES - CONTINUED

Phosphate Esters

OSHA PEL:	None Established
ACGIH TLV:	None Established

di(C7-9-11-alkyl) phthalates

Findett has adopted a general guideline that exposure to phthalate esters should be kept below 5 mg/m³ 8-Hour TWA.

2,6-Di-tert-butyl-p-cresol

OSHA PEL: 10 mg/m³ 8-Hour TWA
ACGIH TLV: 10 mg/m³ 8-Hour TWA

FIRE PROTECTION INFORMATION

Flash Point: 327°F Method: Cleveland Open Cup

Extinguishing Media: Water spray, foam, dry chemical, carbon dioxide or any Class B extinguishing agent.

Special Fire Fighting Procedures: Fire fighters and others who may be exposed to products of combustion should wear full protective clothing including self-contained breathing apparatus. Fire fighting equipment should be thoroughly decontaminated after use.

Unusual Fire and Explosion Hazards: None

REACTIVITY DATA

Stability: Santotrac-2000 Lubricant is stable under ordinary handling and storage conditions.

Materials to Avoid: Exposure to highly oxidizing material should be avoided.

Hazardous Decomposition Products: No uniquely hazardous decomposition products are expected. If the product is burned, carbon monoxide (CO), carbon dioxide (CO₂), oxides of phosphorus, low molecular weight hydrocarbons, soot and smoke can be produced.

Hazardous Polymerization: Will not occur

HEALTH EFFECTS SUMMARY

The following information summarizes human experience and results of scientific investigations reviewed by health professionals for hazard evaluation of Santotrac-2000 Traction Lubricant and development of Precautionary Statements and Occupational Control Procedures recommended in this document.

Effects of Exposure

Skin contact and inhalation are expected to be the primary routes of occupational exposure to Santotrac-2000 Traction Lubricant. Occupational exposure to this material has not been reported to cause significant adverse health effects. However, irritation has been reported for humans following repeated exposures to the MCS-1912 synthetic hydrocarbon component of Santotrac-2000 Traction Lubricant in controlled skin contact studies.

HEALTH EFFECTS SUMMARY - CONTINUED

Toxicological Data

Findett has not conducted toxicity studies with Santotrac-2000 Traction Lubricant. However, the following single exposure data were developed on a similar formulation of MCS-1912 synthetic traction lubricant and are considered representative of Santotrac-2000 Traction Lubricant.

Single exposure (acute) studies indicate:

Oral -	Practically Nontoxic	(Rat LD50 >15,800 mg/kg)
Dermal -	Practically Nontoxic	(Rabbit LD50 >7,940 mg/kg)
Eye Irritation -	Slightly Irritating	(Rabbit, 4.2/110.0)
Skin Irritation -	Nonirritating	(Rabbit, 24-hr exposure, 0.0/8.0)
Inhalation -	Rats were exposed to a stream of air which passed through the formulation of MCS-1912 synthetic lubricant and led directly into the experimental chamber. Due to its low volatility, there was essentially no vaporization of the test material and the animals	

survived both the 6-hr exposure and subsequent 10-day observation periods without observable effects.

Components

Data from laboratory studies and from the available literature on the components of Santotrac-2000 Traction Lubricant:

MCS-1912 Synthetic Hydrocarbon

Repeated exposure of humans to MCS-1912 synthetic hydrocarbon in controlled skin contact studies produced skin irritation and, in one person only, an allergic skin reaction.

In a repeat dosing study (4-week), rats fed MCS-1912 exhibited clinical signs of toxicity with reduced body weight and food consumption at a dosage which produced some deaths. In a repeat dosing study for a longer time period (90-day), reduced mean body weights, reduced feed efficiency, some animal deaths, and changes in clinical parameters and some organ weights were noted in rats. Microscopic changes were reported for a number of tissues, including liver and pancreas, at the higher dose levels. No treatment-related effects were noted in rats following repeated inhalation (4-week) of MCS-1912. Following repeated skin exposure (4-week) to MCS-1912, skin irritation was the primary effect observed in rabbits. No birth defects were noted in rats given MCS-1912 orally during pregnancy. MCS-1912 produced no genetic changes in standard tests using animal cells.

Di(C7-9-11-alkyl) Phthalates

No skin allergy or irritation were observed in humans following repeated exposures in a controlled skin contact study.

Only discolored livers were observed in rats given this material in their diets for four weeks. Rats given this material in their diet for 90 days showed serum chemistry changes, increased liver and kidney weights and liver damage. Increased organ weights (liver, kidney, pituitary, spleen and gonad) were reported in laboratory animals (monkeys, rats, guinea pigs) following repeated exposure to di(C7-9-11-alkyl) phthalates by inhalation for six months. Rats exposed to this component by repeat oral administration for two years showed a non-dose related increased incidence of leukemia. No birth defects were reported in rats given di(C7-9-11-alkyl) phthalates orally during pregnancy even at levels which produced toxic effects (decreased birth weights) in the offspring. No adverse genetic changes were observed in standard tests using bacterial cells. Both positive and negative (mutagenic and non-mutagenic) responses were observed in standard tests using animal cells.

HEALTH EFFECTS SUMMARY - CONTINUEDPhosphate Esters

Changes in liver and adrenal weights were reported following repeated oral dosing (3-month) of the phosphate esters to rats. There was no evidence of acute or delayed effects on the nervous system of hens following repeat oral dosing. Single oral doses of the phosphate esters were reported to inhibit plasma cholinesterase activity in hens; no effects were seen on brain neurotoxic esterase. No birth defects were reported in rats given the phosphate esters orally during pregnancy, even at amounts which produced adverse effects on the mothers and their offspring. The phosphate esters produced no genetic changes in standard tests using bacterial and animal cells.

2,6-Di-Tert-Butyl-p-Cresol (BHT)

BHT is also a minor component of Santotrac-2000 Traction Lubricant. Contact with or inhalation of BHT dust may be irritating to the eyes and upper respiratory tract. Because of its use as a food additive, BHT has been examined in a variety of toxicological studies. Various morphological, functional and biochemical changes, including changes in growth rate and body weight, and lung, kidney, brain, adrenal, thyroid and liver, were reported for experimental animals administered BHT orally. Data on the carcinogenicity of BHT are conflicting. BHT enhanced, reduced, prevented and/or had no effect on tumor formation of known carcinogens. Several studies have failed to demonstrate that BHT is a carcinogen; however, BHT was reported to induce benign and malignant liver changes in the first generation offspring of rats in a 2-generation reproduction study. A specific birth defect in rats reported by one investigator was not reported in other similar experiments, and birth defects were not observed in mice. Both positive and negative (mutagenic and non-mutagenic) responses were reported in various standard tests for genetic changes.

Additional Information

A Threshold Limit Value (TLV) has been established by the American Conference of Governmental Hygienists for 2,6-di-tert-butyl-p-cresol. For further information on this material, please refer to the current edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices.

PHYSICAL DATA

Appearance:	Clear to slightly hazy yellow liquid
Boiling Point @ 760 mm Hg:	590°F (310°C)
Specific Gravity @ 25/25°C:	0.91
Viscosity @ 25°C:	25 centistokes
Solubility in Water:	Very low

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

SPILL, LEAK, & DISPOSAL INFORMATION

Emergency Spill and Leak Information: Spills should be absorbed on a suitable medium such as sawdust, clay or filtercel and disposed of as recommended below.

Disposal Information: Waste product and clean up residue should be incinerated. Consult Federal EPA waste oil regulations and state and local waste oil regulations for proper disposal.

ENVIRONMENTAL EFFECTSEnvironmental Toxicity Information:

Findett has not conducted environmental toxicity studies with Santotrac-2000 Traction Lubricant. However, data from tests performed with the components of Santotrac-2000 are summarized below:

MCS-1912 Synthetic Hydrocarbon

Oral LD50 Mallard duck: >4,640 mg/kg, Practically Nontoxic
Oral LD50 Bobwhite quail: >4,640 mg/kg, Practically Nontoxic
96-hr LC50 Fathead minnow: > Water solubility

MCS-1912 had a primary degradation rate of 12% to 30% in a 24-hour semi-continuous activated sludge (SCAS) test. Biodegradability of MCS-1912 is thus classified as slow to resistant.

Di(C7-9-11-alkyl) Phthalates

48-hr LC50 Midge larvae: > Water solubility
48-hr LC50 Daphnia magna: > Water solubility
96-hr LC50 Rainbow trout: > Water solubility
96-hr EC50 Freshwater algae: > Water solubility
96-hr LC50 Sheepshead minnow: > Water solubility
96-hr EC50 Marine algae: > Water solubility
96-hr LC50 Mysid shrimp: > Water solubility
96-hr LC50 Bluegill sunfish: > Water solubility
14 day LC50 Fathead minnow: > Water solubility

Fathead minnow eggs and fry were exposed to the di(C7-9-11-alkyl) phthalates at concentrations of 0, 22, 44, 78, 154 and 266 micro g/l. No treatment-related effects were observed on viability and hatchability of eggs or survival, weight and length of the fry. The no-significant toxic effect level was 266 micro g/l.

In an ultimate biodegradability test, 86% of the theoretical CO₂ was evolved for the di(C7-9-11-alkyl) phthalates. The primary degradation rate ranged from 48 - 54% in a semi-continuous activated sludge test. The half life of the di(C7-9-11-alkyl) phthalates, as determined by a riverdie away test, was > 35 days.

The bioconcentration potential of the di(C7-9-11-alkyl) phthalates in bluegill was measured over a 22-day period. The bioconcentration potential of this material is considered to be negligible.

DATE: 01/03/00

SUPERSEDES: 02/29/96

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