

Safety Data Sheet

SANTOLUBES LLC

SANTOTRAC, SANTOVAC, SANTOLUBES, AND SYNERGY

P. O. Box 6740
Spartanburg, SC 29304

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME: **Santotrac 50**

Identified Uses: Traction lubricant

Company/Undertaking Identification: SantoLubes LLC
PO Box 6740
Spartanburg, SC 29304

E-Mail (competent person): safetydatasheets@santolubes.com

Information Contact: 864-585-3661

Emergency Telephone:

FOR CHEMICAL EMERGENCY, Call CHEMTREC – 1-800-424-9300 or 703-527-3887.



2. HAZARDS IDENTIFICATION

Physical hazards	Not classified.		
Health hazards	Skin irritation – minor -	Category 3	
	Eye irritation – minor -	Category 2B	
	Specific target organ toxicity – single exposure -		Category 3
Environmental hazards	Not classified.		

Label elements

Pictogram

Signal word Warning

Hazard statement(s) Causes minor skin irritation and may cause eye and respiratory irritation.

Precautionary Statement(s) Wear appropriate protective clothing and chemical resistant gloves to prevent skin contact.
Avoid breathing dust/fume/gas/mist/vapors/spray.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical name	EC number	CAS number	%
1,1'-(1,1,3-trimethylpropane-1,3-diyl)bis(cyclohexane)	254-227-7	38970-72-8	>85

4. FIRST AID MEASURES

Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. IF exposed or concerned: Get medical advice/attention.
Skin contact	Wash contact areas with soap and water. Remove contaminated clothing. If skin irritation or an allergic skin reaction develops, get medical attention.
Eye contact	Flush thoroughly with water for at least 15 minutes. If irritation occurs, get medical assistance.
Ingestion	Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Get medical assistance.
Most important symptoms/effects, acute and delayed	See Section 11.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Contact physician if discomfort continues.

5. FIRE FIGHTING MEASURES

Extinguishing media: Dry chemicals, alcohol resistant foam, carbon dioxide (CO₂), water spray or fog. Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: Carbon oxides.

Special protective equipment and precautions for firefighters: Wear self contained breathing apparatus for fire fighting.

General fire hazards: No data available



6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. Use personal protective equipment. Avoid breathing vapors, mists or gas. Ensure adequate ventilation.

Methods and materials for containment and cleaning up:

Large Spills: Stop the flow of material. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth or absorbent material then place into containers.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Do not let product enter drains

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities: Store in cool place. Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully closed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Biological limit values: No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Individual protection measures, such as personal protective equipment

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- Eye/face protection:** Safety glasses with side shields.
- Hand protection:** Chemical resistant gloves. Wash and dry hands if exposed.
- Other:** Chemical/oil resistant clothing is recommended. Launder contaminated clothing before reuse.
- Respiratory protection:** Under normal conditions, respirator is not normally required. If risk assessment shows air-purifying respirators are appropriate, follow NIOSH guidelines for selection and use.
- Thermal hazards:** Not available.
- General hygiene considerations:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Form	Viscous liquid.
Color	Clear, to slightly turbid yellow
Odor	Slight sour odor
Odor threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Boiling point	590°F (310°C) at 760 mm Hg
Flash point	300°F (Cleveland open cup)
Evaporation rate	No data available
Flammability	No data available
Upper/lower flammability or explosive limits	No data available
Vapor Pressure	12mm Hg (@350°F (177°C))
Vapor density	>1
Relative density	0.886g/cm ³ (@25 °C)
Solubility (water)	Very low
Partition coefficient	No data available
Auto-ignition temperature	600 °F 316 °C) ASTM D-2155
Decomposition temperature	No data available
Viscosity	32 cSt (100 °F)



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10. STABILITY AND REACTIVITY

- Reactivity:** The product is stable and non-reactive under normal conditions of use, storage and transport.
- Chemical stability:** Stable.
- Possibility of hazardous reactions:** Hazardous polymerization does not occur.
- Conditions to avoid:** Heat, flames and sparks. Avoid temperatures exceeding the flash point.
- Incompatible materials:** Strong oxidizing agents.
- Hazardous decomposition products:** Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. TOXICOLOGICAL INFORMATION

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

EFFECTS OF EXPOSURE

Dermal contact is expected to be the primary route of occupational exposure to this type of material. Irritation was reported for humans following repeated exposures to the material in controlled skin contact studies.

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TOXICOLOGICAL DATA

Acute toxicity studies with this material have not been conducted. However, the following acute data were developed on a formulation of the material and are considered to be representative.

Single exposure (acute) studies indicate:

Oral (Rat LD50): >15,800 mg/kg - Practically nontoxic

Dermal (Rabbit LD50): >7,940 mg/kg - Practically nontoxic

Eye Irritation (Rabbit, 4.2/110.0): - Slightly Irritating

Skin Irritation (Rabbit, 24-hr exposure, 0.0/8.0): - Nonirritating

Inhalation - Rats were exposed to a stream of air that passed through this type of material 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-hour exposure and subsequent 10-day observation periods without observable effects.

Data from studies conducted on This type of material are summarized below:

Patch testing of 207 human volunteers with this type of material produced faint erythema (redness) in 3 subjects following initial material application; 75 subjects demonstrated a cumulative irritation response during subsequent repeated exposures in the induction phase. On challenge, one subject demonstrated a positive dermal response. This type of material is considered a cumulative irritant, and a very weak sensitizing agent.

In a 4-week aerosol inhalation study, rats were exposed to this type of material at average concentrations of 0, 15, 68, and 263 mg/m³ for 6 hours/day, 5 days/week. No adverse hematologic, biochemical, urinalysis or histopathological effects were observed. The no-effect level, as determined by this study, is 263 mg/m³.

This type of material was applied to the shaved skin of rats at dosage levels of 0, 0.03, 0.15 and 0.75 ml/kg/day, 5 days/week for 4 weeks. Irritation of the skin at the site of application was apparent at all dosage levels and increased in severity in a dose-dependent fashion. No adverse hematologic, ophthalmic, biochemical or urinalysis effects were observed. No gross or pathologic lesions attributable to systemic toxicity were noted. The no-effect level for systemic toxicity was considered to be at least 0.75 ml/kg/day. The no-effect level for dermal irritation was considered to be below 0.03 ml/kg/day.

Rats were administered this type of material in the diet to achieve dosages of 0, 100, 600, 3,000, 10,000 mg/kg/day for 4 weeks. Mortality, clinical signs of toxicity and decreases in body weight and food consumption were noted in the high-dosage group. Gross necropsy findings were reported for one high-dose male. The no-effect level was considered to be 3,000 mg/kg/day.

This type of material was fed to rats in their diet to achieve dosages of 0, 500, 1,500 and 3,000 or 5,000 mg/kg/day for 90 days. Due to excessive mortality during weeks 3 and 4 in animals receiving the highest dosage (5,000 mg/kg/day), this dosage was reduced to 3,000 mg/kg/day effective week four. Changes in hematological and blood chemistry parameters, reduced mean body weights and dose-related increases in mean liver weights were noted in animals at all dose levels tested. Reductions in feed efficiency and increases in mean absolute and relative thyroid weights were noted at the mid-dose and high-dose levels. Changes were reported for a number of tissues, including liver and pancreas, from mid-dose and high-dose males following histopathologic examination.

No teratogenic or fetotoxic effects were observed in the offspring of rats administered this type of material, by gavage, at dosages of 0, 290, and 905, and 2,277 mg/kg/day on days 6 through 15 of gestation. No maternal toxic effects were observed at any treatment level.

This type of material was evaluated for mutagenic or genotoxic potential in an in vitro chromosome aberration assay in Chinese hamster ovary (CHO) cells, with and without a mammalian metabolic activating system, and an in vitro rat hepatocyte primary culture/DNA repair assay. No evidence of genotoxicity was observed in these assays. A formulation of this type of material was evaluated for mutagenic potential in microbial assays using five Salmonella stains and one stain of Saccharomyces yeast and in an L5178Y TK mouse lymphoma cell point mutation assay, with and without mammalian microsomal activation. No mutagenic response was observed.

Slight bioaccumulation of this type of material occurred in rat tissues during a 30-day feeding study in which rats were administered this type of material at dietary concentrations of 50 or 500 ppm. Residues were slowly metabolized and/or excreted after the rats were returned to untreated diet.



12. ECOLOGICAL INFORMATION

Environmental Toxicity Information:

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: >1,000 mg/l, practically nontoxic

The bioaccumulation potential of this type of material in bluegill sunfish was measured over a 32-day period. It was determined that this material has a moderate potential to bioaccumulate in this aquatic species.

This type of material had a primary degradation rate of 12% to 30% in a 24-hour semi-continuous activated sludge (SCAS) test. Biodegradability of this material was classified as slow to resistant.

The following data were developed on a formulation of this material and are considered to be representative of HLD.

96-hr LC50 Rainbow Trout: > 1,000 mg/l, Practically Nontoxic

96-hr LC50 Blue-gill Sunfish: > 1,000 mg/l, Practically Nontoxic

13. DISPOSAL CONSIDERATIONS

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: This material when discarded is not a hazardous waste as defined in by the Resource, Conservation and Recovery Act (40 CFR 261). Dispose of by all federal, state and local environmental regulations. Recommended method of disposal is by high temperature incineration in a RCRA approved TSDF.



14. TRANSPORT INFORMATION

DOT Not regulated as dangerous goods.

IATA Not regulated as dangerous goods.

IMDG Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. REGULATORY INFORMATION

US federal regulations: This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. CERCLA/SARA Hazardous Substances - Not applicable.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4) Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard –	Yes
	Delayed Hazard –	No
	Fire Hazard –	No
	Pressure Hazard –	No
	Reactivity Hazard -	No

SARA 302 Extremely hazardous substance Not listed.

SARA 311/312 Hazardous chemical Yes

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SARA 313 (TRI reporting) No SARA 313 chemicals are present above the reporting threshold

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US. Massachusetts RTK - Substance List Not regulated.

US. New Jersey Worker and Community Right-to-Know Act Not regulated.

US. Pennsylvania RTK - Hazardous Substances Not regulated.

US. Rhode Island RTK Not regulated.

US. California Proposition 65 Not Listed.

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory – All components listed or exempted

16. OTHER INFORMATION



NOTICE: Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, SantoLubes LLC makes no representations as to the completeness or accuracy thereof. Information is supplied upon the conditions that the persons receiving same will make their own determinations as to its suitability for their purposes prior to use. In no event will SantoLubes LLC be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

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