SAFETY DATA SHEET

LX4 Lubricity Extreme

Version 1.1 | Revision Date 09/16/2019 | Print Date 09/16/2019

1 PRODUCT AND COMPANY IDENTIFICATION

Product name : Lubricity Extreme (AKA: LX4)
Product code :
Chemical Name :

Manufacturer or supplier's details

Company : Lubrication Specialties, Inc.
Address : 3975 Morrow Meadows Drive
Mount Gilead, Ohio 43338, U.S.
Telephone : 1-800-341-6516
Telefax : 415-946-3554

Emergency telephone : USA: 24 Hour Emergency Response Information CHEMTREC toll free: 1-800-424-9300; direct/international: 1-703-527-3887. CANADA: Quantum Murray (spill response)1-877-378-7745. CANADA: CANUTEC(collect) 1-613-996-6666. EUROPE: 00 32 3575 5555. ASIA PACIFIC - excl. China: +65 6542-9595. CHINA: +86 21 2315 9344. AUSTRALIA: +61 2 9616 5890. SOUTH AFRICA: +32 3 575 55 55. LATAM: 0800 720 8000. 1-613-996-6666. INDIA: +91 22 30948467/8. JAPAN: +65 6542 9595 (24時間 日本語対応無料通話, シンガポール)

Recommended use of the chemical and restrictions on use

Recommended use : Add to any diesel or gasoline fuel, including E-85. Do not ingest.

Prepared by : Product Safety Department
419-947-2647

2 HAZARDS IDENTIFICATION

Hazard classification
Classification acc. To GHS criteria and OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Health Hazards

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

GHS Label element

Hazard Symbol

Signal Word Warning

Hazard Statement Causes Skin irritation

Causes serious eye irritation

Precautionary statement	N/A
Prevention	Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Specific treatment (see this label). Take off contaminated clothing and wash before reuse.
Storage	Store in a closed container.
Disposal	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification None.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Name of Substance	Identifier CAS No	Wt%
Tall Oil Fatty Acid	61790-12-3	55-75%*
Trade Secret	Trade Secret	25-45%*

* *The exact percentage (concentration) and identity composition has been withheld as a trade secret

4 FIRST AID MEASURES

If inhaled : If breathed in, move person into fresh air. If breathing is difficult, give oxygen. If not breathing, perform artificial respiration and contact physician immediately.

In case of skin contact : Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists. Wash shoes and clothing separately before reuse.

In case of eye contact : Immediately flush eye(s) with plenty ofwater for at least 15 minutes and see a doctor.

If swallowed : Rinse mouth. Do not induce vomiting unless directed to so so by medical personnel. Never give liquid to an unconscious person. Get medical attention.

5 FIRE FIGHTING MEASURES

Flash point	:	184—189 °C (PMCC)
Explosive limits	:	Not determined
Autoignition point	:	Not determined
Suitable extinguishing media	:	Dry chemical, carbon dioxide and/or foam.
Unsuitable extinguishing media	:	No data available
Specific hazards arising from the chemical	:	Combustible liquid. At elevated temperatures, vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Vapors can flow along surfaces to distant ignition sources and flash back. Static discharges can cause ignition or explosion when container is not bonded. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture or explosion
Specific extinguishing methods	:	No data available
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus pressure-demand MSHA/NIOSH (approved or equivalent) and full protective gear. Avoid breathing smoke and vapor.

6 ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures	:	Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep personnel removed and upwind of spill. Eliminate all ignition sources. Keep unnecessary and unprotected personnel from entering.
Environmental Precautions: Steps to be taken in case material is released or spilled	:	**Initial Containment:** Approach release from upwind. Eliminate all sources of ignition – heat, sparks, flame, electricity, and impact. Contain spilled material with dikes or absorbents. Do not allow material to enter soil, surface water, or sewer system. Stop the source of the leak, if safe to do so. **Large Spill:** Contain spilled material. Vacuum or sweep up material and place in a disposal container. Absorb residue with inert material (e.g., dry sand or earth,) then place in a chemical waste container. Do not flush to sewer. Use explosion-proof equipment during clean-up. **Small Spill:** Contain spilled material. Absorb with inert material and place in disposal container. Spills are extremely slippery. Clean up immediately. **Miscellaneous:** Note that combustible vapors may form an ignitable mixture with air. Vapors may travel considerable distances from spill and flash back, if ignited. Report spills to local authorities and/or the U.S. coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

7 HANDLING AND STORAGE

Advice on safe handling	:	Ground and bond containers when transferring material. Container must be kept tightly closed. Avoid contact with skin and eyes. Avoid breathing vapors or spray mists. Keep away from food and drinking water.
Conditions for safe storage	:	Store in original container. Keep container tightly closed in a dry and well-ventilated place. Eliminate all sources of ignition.
Materials to avoid	:	No special restrictions on storage with other products.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Observe exposure limits for Oil Mist (NOC):

ACGIH: TWA: 5 mg/m^3 Respirable; STEL 10mg/m^3 Respirable

OSHA: TWA: 5 mg/m^3 Respirable.

NIOSH REL: TWA 10mg/m^3 Respirable

Engineering Controls : Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, ACGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is recommended.

Personal Protection

Eye protection	:	Safety glasses. Wear chemical goggles and face shield if splashing.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hand protection	:	For prolonged or repeated contact use protective gloves.
Skin and body protection	:	Wear impervious clothing
Additional Exposure Remarks	:	Eye wash fountains and emergency showers are recommended. Launder contaminated clothing before reuse. Use good industrial hygiene practices in handling this material.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Clear, yellow liquid
Odor	:	Fatty Acid odor
Odor Threshold	:	No data available
pH	:	Not determined
Melting Point/Freezing Point	:	Not determined
Boiling point	:	> 200 °C (> 392 °F)
Flash point	:	184-189 °C (363-372 °F) (PMCC)
Autoignition Point:	:	Not determined
Flammability (Solid/Gas)	:	Not determined

Upper/Lower Flammability or Explosive limits	:	Not determined
Evaporation Rate	:	Not determined
Vapor Pressure	:	Not determined
Vapor Density	:	Not determined
Relative density	:	0.896
Solubility(ies)	:	Not determined
Partition coefficient: n-octanol/water	:	Not determined
Thermal decomposition	:	Not determined
Viscosity @ 40°F	:	20.2

10 STABILITY AND REACTIVITY

Chemical stability	:	Not determined
Possibility of hazardous reactions	:	Not determined
Conditions to avoid	:	Sources of ignition, heat
Incompatible materials	:	Oxidizing material. Avoid prolonged contact with porous materials.
Hazardous decomposition products	:	Products of Combustion: These products are carbon oxides (CO, CO2) nitrogen oxides (NO, NO2)

11 TOXICOLOGICAL INFORMATION

Toxicity to Humans : No data available

Chronic Toxicity Data : No data available

Acute toxicity

Tall Oil Fatty Acid

Acute Dermal LD50 Albino rabbit: >2000 mg/kg 14 days, at this dose no death occurred.
Acute Oral LD50 Albino Sprague-Dawley rat: >10000 mg/kg 14 days, at this dose no death occurred.

Trade Secret

Acute Oral: Not classified for acute toxicity based on available data.
Acute Dermal: ATEmix: 3000 mg/kg

Primary irritant effect	:	No data available
Reproductive toxicity	:	No data available
Germ Cell mutagenicity	:	No data available
Carcinogenicity	:	No data available
Reproductive toxicity	:	No data available

STOT-single exposure : No data available

STOT-repeated exposure : No data available

12 ECOLOGICAL INFORMATION

Ecotoxicity

Tall oil Fatty Acids

EC50 Bacteria (Pseudomonas putida): > 10000 mg/L 16hr

ECL50 Green algae (Selenastrum capricornutum): > 1000 mg/L 72 hr Growth rate; OECD 201

EL50 Water flea (Daphnia magna): > 1000 mg/L 48 hr OECD 202

LL50 Zebra danio (Danio rerio): > 10000 mg/L 96hr

Trade Secret:

LC50 Fathead minnow (Pimephales promelas): > 1000 mg/L Mortality 1hr

LC50 Fathead minnow (Pimephales promelas): > 285 mg/L Mortality 24hr

LC50 Fathead minnow (Pimephales promelas): > 252 mg/L Mortality 48hr

LC50 Fathead minnow (Pimephales promelas): > 205 mg/L Mortality 72hr

LC50 Fathead minnow (Pimephales promelas): > 205 mg/L Mortality 96hr

Chronic hazards to Aquatic Environment : No data available

Persistence and Degradability : No data available

Bioaccumulative Potential : No data available

Mobility in Soil : No data available

PBT/VPvB Assessment : No data available

Other Adverse Effects : No data available

Additional ecological information : Information given is based on data on the ingredients and the ecotoxicology of similar products.

13 DISPOSAL CONSIDERATIONS

Disposal methods

Waste disposal method : Dispose of in accordance with local regulations. Collect and dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14 TRANSPORT INFORMATION

Not regulated for US domestic ground transportation.

15 REGULATORY INFORMATION

US federal regulations

Use as aminmal feed is prohibited. This product is not known to be a “Hazardous Chemical” as defined by the OSHA Hazard Communication Stadard, 29 CFR 1910.1200. All known components are on the U.S. EPA TSCA Inventory List.

CERCLA Hazardous Substances – Not applicable

Reportable Quantity: None

Superfund Amendments and Reautorization Act of 1986 (SARA)

Hazard Categories

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

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3) - None present or none present in regulated quantitites.

California Prop 65 No ingredient regulated by Prop 65 present

Inventory Status:

The ingredients of this product are reported in the following inventories:

TSCA On or in compliance

EU EINECS On the inventory, or in compliance with the inventory

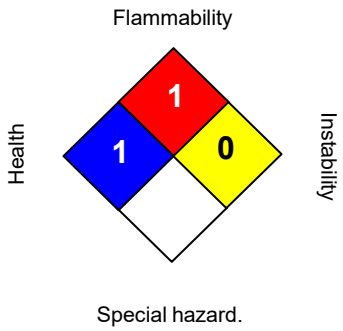
16 OTHER INFORMATION

Further information

Revision Date: 09/16/2019 **Issue Date: 09/16/2019**

Version 1.1

NFPA:



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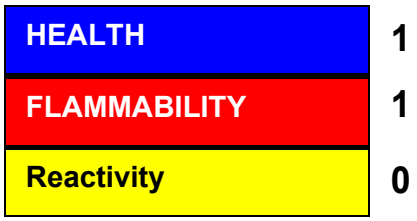

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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