

## LICOWAX S FL

Page 1

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

## SECTION 1. IDENTIFICATION

<b>Identification of the company:</b>	Clariant Corporation 4000 Monroe Road Charlotte, NC, 28205 Telephone No.: +1 704 331 7000
<b>Information of the substance/preparation:</b>	Product Safety 1-704-331-7710
<b>Emergency tel. number:</b>	+1 800-424-9300 CHEMTREC

**Trade name:** LICOWAX S FL  
**Material number:** 105210  
**CAS number:** 68476-03-9  
**Chemical family:** Montanwax acids, approx. C24-C34

## SECTION 2. HAZARDS IDENTIFICATION

**GHS Classification**

Combustible dust :

**GHS Label element**

Signal word : Warning

Hazard statements : May form combustible dust concentrations in air

Precautionary statements : **Prevention:**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P243 Take precautionary measures against static discharge.  
P233 Keep container tightly closed.

**Other hazards**

Does not require a hazard warning label, but the normal safety precautions for handling chemicals must be observed.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Hazardous components**

Chemical Name	CAS-No.	Concentration (%)
Fatty acids, montan-wax	68476-03-9	100

## SECTION 4. FIRST AID MEASURES

General advice : Get medical advice/ attention if you feel unwell.

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

- If inhaled : Move the victim to fresh air.  
Give oxygen or artificial respiration if needed.  
Get immediate medical advice/ attention.  
Never give anything by mouth to an unconscious person.
- In case of skin contact : Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.
- In case of eye contact : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
- If swallowed : If conscious, give the victim plenty of water to drink.  
Consult a physician.  
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : No symptoms known currently.  
No hazards known at this time.
- Notes to physician : Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Foam  
Water spray jet  
Dry powder
- Unsuitable extinguishing media : High volume water jet  
Carbon dioxide (CO2)
- Specific hazards during firefighting : None known.  
  
Emits toxic fumes under fire conditions. This product presents no unusual fire or explosion hazards while sealed in a shipping container. During usage, if a dust cloud is generated, organic powders have the potential to be explosive with static spark or flame initiation.
- Further information : Exercise caution when fighting any chemical fire. Use NIOSH approved self-contained breathing apparatus and full protective clothing.
- Special protective equipment for firefighters : Wear personal protective equipment.  
In the event of fire, wear self-contained breathing apparatus.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

- |   |   |
|---|---|
| Personal precautions, protective equipment and emergency procedures | : Wear suitable protective equipment.<br>Wearing appropriate personal protective equipment, contain spill and collect into a suitable container.<br>Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. |
| Environmental precautions   | : The product should not be allowed to enter drains, water courses or the soil.   |
| Methods and materials for containment and cleaning up               | : Take up mechanically  |

---

**SECTION 7. HANDLING AND STORAGE**

- |   |  |
|---|--|
| Advice on protection against fire and explosion | : Take precautionary measures against build-up of electrostatic charges, e.g earthing during loading and off-loading operations. Keep away sources of ignition. Dust can form an explosive mixture in air. |
| Advice on safe handling                         | : Avoid dust formation. Keep away from sources of ignition. Lead off electrostatic charges.<br>Avoid inhalation, ingestion and contact with skin and eyes.<br>Wash thoroughly after handling.              |
| Technical measures/Precautions                  | : Store in original container.<br>Keep container tightly closed.<br>Store in a cool, dry, well-ventilated area.  |

---

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

**Personal protective equipment**

- |                          |   |
|--------------------------|---|
| Respiratory protection   | : Use NIOSH/MSHA approved respirators following manufacturer's recommendations where dust or fume may be generated.                                       |
| Hand protection          |   |
| Remarks                  | : Butyl Rubber, PVC Or Neoprene.  |
| Eye protection           | : Safety glasses or chemical splash goggles.  |
| Skin and body protection | : Wear suitable protective equipment.   |
| Protective measures      | : Observe the usual precautions for handling chemicals.   |
| Hygiene measures         | : Wash hands before breaks and at the end of workday.<br>When using do not eat, drink or smoke.<br>Use protective skin cream before handling the product. |

## LICOWAX S FL

Page 4

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: flakes
Colour	: white yellowish
Odour	: not specified
Odour Threshold	: cannot be determined
pH	: approx. 7, (20 °C)saturated aqueous solution
Melting point	: approx. 80 °C Method: DSC
Boiling point	: Decomposes below the boiling point.
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: The product is not flammable. Method: 92/69/EC (L383) A.10 * flammability (solids) GLP: yes
Upper explosion limit	: not tested.
Lower explosion limit	: not tested.
Vapour pressure	: 3.3 mPa (25 °C) Method: 92/69/EEC, A.4. GLP: yes
Relative vapour density	: Not applicable
Relative density	: 1.01 (20 °C) Method: ISO 1183
Density	: 1.01 g/cm <sup>3</sup> (20 °C) Method: ISO 1183
Solubility(ies)	
Water solubility	: 15 mg/l (20 °C) pH: 7 Method: OECD Test Guideline 105
Solubility in other solvents	: not tested.
Partition coefficient: n-	: log Pow: approx. 1.2 (20 °C)

## LICOWAX S FL

Page 5

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

octanol/water	pH: 7 Method: other (calculated)
Auto-ignition temperature	: Not applicable
Decomposition temperature	: > 140 °C Method: DSC
Viscosity	
Viscosity, dynamic	: ca. 20 mPa.s (100 °C) Method: DIN 53019
Viscosity, kinematic	: Not applicable
Explosive properties	: There are no chemical groups associated with explosive properties present in the molecule.
Oxidizing properties	: The substance or mixture is not classified as oxidizing. There are no chemical groups associated with oxidising properties present in the molecule. not oxidizing
Surface tension	: Based on chemical structure, no surface activity is expected or can be predicted.
Sublimation point	: Not applicable

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Potential dust explosion hazard. The substance or mixture does not emit flammable gases in contact with water. Not corrosive to metals
Conditions to avoid	: Keep away from heat. Keep away from flames and sparks.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: When handled and stored appropriately, no dangerous decomposition products are known

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

Acute oral toxicity	: LD50 (Rat, female): > 15,000 mg/kg Method: OECD Test Guideline 401
---------------------	---

## LICOWAX S FL

Page 6

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

GLP: no data available

Acute inhalation toxicity : Remarks: not required

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Remarks: By analogy with a product of similar composition

**Skin corrosion/irritation****Product:**

Species: Rabbit  
Exposure time: 4 h  
Method: OECD Test Guideline 404  
Result: No skin irritation  
GLP: yes  
Remarks: By analogy with a product of similar composition

**Serious eye damage/eye irritation****Product:**

Species: rabbit eye  
Result: No eye irritation  
Exposure time: 24 h  
Method: OECD Test Guideline 405  
GLP: yes  
Remarks: By analogy with a product of similar composition

**Respiratory or skin sensitisation****Product:**

Test Type: Mouse local lymphnode assay  
Exposure routes: Dermal  
Species: Mouse  
Method: OECD Test Guideline 429  
Result: non-sensitizing  
GLP: yes  
Remarks: By analogy with a product of similar composition

**Germ cell mutagenicity****Product:**

Genotoxicity in vitro : Test Type: Ames test  
Species: Salmonella typhimurium  
Concentration: 4 - 10000 µg/plate  
Metabolic activation: with and without  
Method: OECD Test Guideline 471  
Result: negative  
GLP: yes  
Remarks: By analogy with a product of similar composition

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

: Test Type: Ames test  
 Species: Escherichia coli  
 Concentration: 4 - 10000 µg/plate  
 Metabolic activation: with and without  
 Method: OECD Test Guideline 471  
 Result: negative  
 GLP: yes  
 Remarks: By analogy with a product of similar composition

: Test Type: Chromosome Aberration Test  
 Species: V79 cells (embryonic lung fibroblasts) of the Chinese hamster  
 Concentration: 0,3 - 35 µg/ml  
 Metabolic activation: with and without  
 Method: OECD Test Guideline 473  
 Result: negative  
 GLP: yes

: Test Type: HGPRT assay  
 Species: V79 cells (embryonic lung fibroblasts) of the Chinese hamster  
 Concentration: 4,4 - 560 µf/ml  
 Metabolic activation: with and without  
 Method: OECD Test Guideline 476  
 Result: negative  
 GLP: yes

Germ cell mutagenicity - Assessment : It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.

**Carcinogenicity**

**Product:**

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

**IARC** Not listed

**OSHA** Not listed

**NTP** Not listed

**Reproductive toxicity**

**Product:**

Effects on fertility : Test Type: One generation study  
 Species: Rat  
 Sex: male and female  
 Dose: 10 - 100 - 1000 mg/kg  
 Frequency of Treatment: once daily  
 Sprague-Dawley  
 70 d  
 70 d

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

Group: yes  
 NOAEL: 1,000 mg/kg,  
 F1: 1,000 mg/kg,  
 Method: OECD Test Guideline 422  
 GLP: yes

Effects on foetal development

: Species: Rat  
 Application Route: oral (gavage)  
 Exposure time: females day 6-19 post coitum  
 Dose: 50 - 250 - 1000 mg/kg  
 Group: yes  
 1,000 mg/kg  
 1,000 mg/kg  
 Number of exposures: once daily  
 Method: OECD Test Guideline 414  
 GLP: yes  
 Remarks: By analogy with a product of similar composition

Reproductive toxicity - Assessment

: No teratogenic effects to be expected.

No reproductive toxicity to be expected.

**STOT - single exposure**

**Product:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT - repeated exposure**

**Product:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Repeated dose toxicity**

**Product:**

Species: Rat, male and female  
 NOAEL: 1,000 mg/kg  
 Application Route: oral (gavage)  
 Exposure time: >70 d  
 Number of exposures: once daily  
 Dose: 10 - 100 -1 000 mg/kg  
 Group: yes  
 Method: OECD Test Guideline 422  
 GLP: yes

Application Route: Inhalation

Method: Repeated dose toxicity

Remarks: The study is not necessary from a scientific perspective.

Application Route: Dermal



## LICOWAX S FL

Page 9

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

Method: Repeated dose toxicity

Remarks: The study is not necessary from a scientific perspective.

**Aspiration toxicity****Product:**

No aspiration toxicity classification

**Experience with human exposure****Product:**

General Information : The possible symptoms known are those derived from the labelling (see section 2).

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Product:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 10 g/l  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: no  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: By analogy with a product of similar composition  
The details of the toxic effect relate to the nominal concentration.

LC0 (Danio rerio (zebra fish)): 10 g/l  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: no  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: By analogy with a product of similar composition  
The details of the toxic effect relate to the nominal concentration.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10 g/l  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: no  
Method: OECD Test Guideline 202  
GLP: yes  
Remarks: By analogy with a product of similar composition  
The details of the toxic effect relate to the nominal concentration.

NOEC (Daphnia magna (Water flea)): 10 g/l  
Exposure time: 48 h  
Test Type: static test

---

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

---

Analytical monitoring: no  
Method: OECD Test Guideline 202  
GLP: yes  
Remarks: By analogy with a product of similar composition  
The details of the toxic effect relate to the nominal  
concentration.

## Toxicity to algae

: EC10 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 100 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: The details of the toxic effect relate to the nominal  
concentration.

EC20 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 100 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: The details of the toxic effect relate to the nominal  
concentration.

EC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 100 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: The details of the toxic effect relate to the nominal  
concentration.

EC10 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 100 mg/l  
End point: Biomass  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: The details of the toxic effect relate to the nominal  
concentration.

EC20 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 100 mg/l

---

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

---

End point: Biomass  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: The details of the toxic effect relate to the nominal concentration.

EC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 100 mg/l  
End point: Biomass  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to fish (Chronic toxicity) : Remarks: not required

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): approx. 100 mg/l  
Exposure time: 21 d  
End point: Reproduction rate  
Test Type: semi-static test  
Analytical monitoring: no  
Method: OECD Test Guideline 211  
GLP: yes  
Remarks: By analogy with a product of similar composition  
The details of the toxic effect relate to the nominal concentration.

LOEC (Daphnia magna (Water flea)): approx. > 100 mg/l  
Exposure time: 21 d  
End point: Reproduction rate  
Test Type: semi-static test  
Analytical monitoring: no  
Method: OECD Test Guideline 211  
GLP: yes  
Remarks: By analogy with a product of similar composition  
The details of the toxic effect relate to the nominal concentration.

Toxicity to bacteria : EC10 (activated sludge, domestic): > 10 g/l  
End point: Bacteria toxicity (respiration inhibition)  
Exposure time: 3 h  
Test Type: aquatic  
Analytical monitoring: no  
Method: OECD Test Guideline 209  
GLP: yes  
Remarks: The details of the toxic effect relate to the nominal

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

concentration.

: EC50 (activated sludge, domestic): > 10 g/l  
 End point: Bacteria toxicity (respiration inhibition)  
 Exposure time: 3 h  
 Test Type: aquatic  
 Analytical monitoring: no  
 Method: OECD Test Guideline 209  
 GLP: yes  
 Remarks: The details of the toxic effect relate to the nominal concentration.

: NOEC (activated sludge, domestic): 10 g/l  
 End point: Bacteria toxicity (respiration inhibition)  
 Exposure time: 3 h  
 Test Type: aquatic  
 Analytical monitoring: no  
 Method: OECD Test Guideline 209  
 GLP: yes  
 Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to soil dwelling organisms

: Test Type: artificial soil  
 NOEC (Eisenia fetida (earthworms)): 1,000 mg/kg  
 Exposure time: 14 d  
 End point: mortality  
 Method: OECD Test Guideline 207  
 GLP: yes  
 Remarks: By analogy with a product of similar composition

Test Type: artificial soil  
 LOEC (Eisenia fetida (earthworms)): > 1,000 mg/kg  
 Exposure time: 14 d  
 End point: mortality  
 Method: OECD Test Guideline 207  
 GLP: yes  
 Remarks: By analogy with a product of similar composition

Remarks: The study is not necessary from a scientific perspective.

Plant toxicity

: Remarks: The study is not necessary from a scientific perspective.

Sediment toxicity

: Remarks: not tested.

Toxicity to terrestrial organisms

:

**Persistence and degradability**

**Product:**

Biodegradability

: Test Type: aerobic

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

Inoculum: activated sludge, domestic, non-adapted  
 Concentration: 15 mg/l  
 CO2 formation in % of theoretical value  
 Result: Not readily biodegradable.  
 Biodegradation: 8 % (CO2 formation in % of theoretical value)  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301B  
 GLP: yes

Physico-chemical removability : Remarks: The product is not readily biodegradable according to OECD criteria but is inherently biodegradable.

Stability in water : Remarks: Not applicable

**Bioaccumulative potential**

**Product:**

Bioaccumulation : Remarks: Low potential for bioaccumulation (log Pow < 3).

**Mobility in soil**

**Product:**

Distribution among environmental compartments : Remarks: Not expected to adsorb on soil.

**Other adverse effects**

**Product:**

Environmental fate and pathways : Remarks: not available

Results of PBT and vPvB assessment : The substance is not identified as a PBT or as a vPvB substance.

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

RCRA - Resource Conservation and Recovery Act  
 Waste from residues : No -- Not as sold.

Waste from residues : Dispose of spilled or waste product, contaminated soil and other contaminated materials in licensed landfill or treatment facility in accordance with all local, state, and federal regulations.

Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste

LICOWAX S FL

Page 14

Substance key: SXR021445

Revision Date: 04/15/2015

Version : 3 - 0 / USA

Date of printing :05/19/2015

---

**SECTION 14. TRANSPORT INFORMATION**

<b>DOT</b>	not restricted
<b>IATA</b>	not restricted
<b>IMDG</b>	not restricted

---

**SECTION 15. REGULATORY INFORMATION****EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : This product does not contain any toxic chemical listed under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986.

**Clean Water Act**

Contains no known priority pollutants at concentrations greater than 0.1%.

**The components of this product are reported in the following inventories:**

TSCA : On TSCA Inventory

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECl (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

---

**SECTION 16. OTHER INFORMATION****Further information**

Handle with care. Organic dusts have the potential to be explosive with static spark or flame initiation.

Revision Date : 04/15/2015

# MATERIAL SAFETY DATA SHEET



**LICOWAX S FL**

Page 15

---

Substance key: SXR021445

Revision Date: 04/15/2015

---

Version : 3 - 0 / USA

Date of printing :05/19/2015

---

This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof. We assume no responsibility for damage or injury from the use of the product described herein. Data provided here are typical and not intended for use as product specifications.

US / USA