

### 1. PRODUCT IDENTIFICATION

<u>TRADE NAME (AS LABELED):</u>	<b>Linear Alkylbenzene Sulfonic Acid</b>
<u>SYNONYMS:</u>	Dodecylbenzene Sulfonic Acid
<u>CHEMICAL SHIPPING NAME/CLASS:</u>	Non-Regulated Material
<u>U.N. NUMBER:</u>	None
<u>MANUFACTURER'S NAME:</u>	<b>GreenChem Industries, LLC</b>
<u>ADDRESS:</u>	222 Clematis Street, Suite 207 West Palm Beach, FL 33401 USA
<u>EMERGENCY PHONE:</u>	(800) 424-9300 (CHEMTREC - US)
<u>BUSINESS PHONE:</u>	1-561-659-2236 (For product information)
<u>DATE OF PREPARATION:</u>	February 1, 2017
<u>DATE OF REVISION:</u>	New

### 2. HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW:** Warning!

**Product Description:** This product is a clear to hazy brown liquid with a characteristic odor.  
**Health Hazards:** Causes irritation to skin, eyes and respiratory system. Harmful if swallowed.  
**Flammability Hazards:** Non-Flammable Liquid  
**Reactivity Hazards:** This product is not reactive.  
**Environmental Hazards:** Release of the product may cause adverse effects to the aquatic environment.  
**Emergency Recommendations:** Emergency responders must have personal protective equipment and fire protection appropriate for the situation to which they are responding.

**EU LABELING AND CLASSIFICATION:** This product meets the definition of a hazardous substance or preparation according to EU Regulations (EC) No 1272/2008.

**INDEX NUMBER:**

**EC# 248-289-4** This substance is not classified in the Annex I of Directive 67/548/EEC




**EC# 203-572-1 Annex 1 Index# 016-020-00-8**

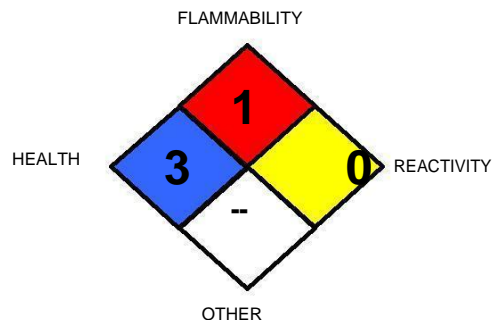
**GHS CLASSIFICATIONS:**

Eye Irritant Category 2  
 Skin Irritant Category 2

**SIGNAL WORD :** Warning!



HAZARDOUS MATERIAL IDENTIFICATION SYSTEM		
HEALTH HAZARD	(BLUE)	3
FLAMMABILITY HAZARD	(RED)	1
REACTIVITY	(YELLOW)	0
PROTECTIVE EQUIPMENT		
EYES/RESPIRATORY	HANDS	BODY
 SEE SECTION 8	 SEE SECTION 8	 SEE SECTION 8
<small>For Routine Industrial Use and Handling Applications</small>		



**HAZARD STATEMENT:**

H315            Causes skin irritation  
 H319            Causes serious eye irritation

Scale: 0 = Minimal 1 = Slight 2 = Moderate  
 3 = Serious 4 = Severe \* = Chronic hazard

**PREVENTION STATEMENT :**

P264            Wash skin thoroughly after handling  
 P280            Wear protective gloves/protective clothing/eye protection/face protection.

**RESPONSE STATEMENT:**

P363            Wash contaminated clothing before reuse.  
 P333 + P313    IF skin irritation or rash occurs : Get medical advice/attention.



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### HEALTH EFFECTS OR RISKS FROM EXPOSURE: ACUTE:

**EYE:** Causes eye irritation and discomfort.

**SKIN:** Possible skin irritation from prolonged contact.

**INGESTION:** May be harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and delayed diarrhea.

**INHALATION:** Exposure may cause upper respiratory irritation.

**CHRONIC:** This product does not contain an ingredient(s) designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients:	WT%	CAS#	EINECS #	Hazard Classification	Risk Phrases
Dodecylbenzene Sulfonic Acid	>96%	27176-87-0	248-289-4	[Xi] Irritant	R36
Sulfuric Acid	>2%	7664-93-9	231-639-5	[Xi] Irritant	R36/38
Balance of other ingredients is less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					None

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250: 2000.

### 4. FIRST-AID MEASURES

**SKIN EXPOSURE:** If this product contaminates the skin, begin decontamination with running water. Minimum flushing is for 5 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual should seek medical attention if any adverse effect occurs.

**EYE EXPOSURE:** If this product enter the eyes, open contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Remove contact lenses if worn. Have contaminated individual "roll" eyes. Minimum flushing is for 15 minutes. Contaminated individual must seek medical attention if irritation develops or persists or if visual changes occur.

**INHALATION:** If vapors/mists generated by this product are inhaled, remove contaminated individual to fresh air. If necessary, use artificial respiration to support vital functions. SEEK IMMEDIATE MEDICAL ATTENTION.

**INGESTION:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT induce vomiting; if vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow. SEEK IMMEDIATE MEDICAL ATTENTION.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Individuals with pre-existing skin conditions may be more susceptible to effects of this material.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate overexposure.

### 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Non-Flammable

**AUTOIGNITION TEMPERATURE:** Not Applicable

**FLAMMABLE LIMITS (in air by volume, %):** Lower NA Upper NA

**FIRE EXTINGUISHING MATERIALS:** Use fire extinguishing methods listed below:

Water Spray: Yes

Carbon Dioxide: Yes

Foam: Yes

Dry Chemical: Yes

Halon: Yes

Other: Any "C" Class

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known



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Explosion Sensitivity to Mechanical Impact: Not sensitive

Explosion Sensitivity to Static Discharge: Not sensitive

**SPECIAL FIRE-FIGHTING PROCEDURES:** Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

### 6. ACCIDENTAL RELEASE MEASURES

**SPILL AND LEAK RESPONSE:** Evacuate unprotected personnel from the area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in section 8. Contain and recover liquid if possible. Cover or absorb spilled liquid with sand, earth or other inert material. Clean up spill immediately and place in appropriate containers. Do not discharge to sewers and surface waters. Notify authorities if entry occurs.

U.S. Regulations (CERCLA) requires reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

### 7. HANDLING and STORAGE

**WORK PRACTICES AND HYGIENE PRACTICES:** As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Do

not ingest. Do not breathe gas/fumes/vapor/spray/mist. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents and acids.

**STORAGE AND HANDLING PRACTICES:** Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use.

### 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Chemical Name	CAS#	ACGIH TLV	OSHA TWA
Dodecylbenzene Sulfonic Acid	27176-87-0	Not Listed	Not Listed
Sulfuric Acid	7664-93-9	Not Listed	Not Listed

**VENTILATION AND ENGINEERING CONTROLS:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use a chemical fume hood or local exhaust ventilation, and process enclosure if necessary, to control airborne dust. Ensure eyewash/safety shower stations are available near areas where this product is used.

*The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.*

**RESPIRATORY PROTECTION:** Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

**EYE PROTECTION:** Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area. Contact lenses pose a special hazard; Do not wear contact lenses.

If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

**HAND PROTECTION:** Use chemically-resistant gloves when handling this product. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.



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**BODY PROTECTION:** Use body protection appropriate for task (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

### 9. PHYSICAL and CHEMICAL PROPERTIES

**VAPOR DENSITY:** Not Available (air=1)

**% VOLATILE:** Not Available

**SOLUBILITY IN WATER:** Miscible

**VAPOR PRESSURE:** Not Available

**ODOR:** Characteristic

**APPEARANCE and COLOR:** Clear/hazy brown Liquid with a characteristic odor

**EVAPORATION RATE (n-BuAc=1):** Not Available

**MELTING/FREEZING POINT:** Not Available

**BOILING POINT:** >201°F

**pH:** <2

**SPECIFIC GRAVITY:** Not Available

### 10. STABILITY and REACTIVITY

**STABILITY:** Stable under normal conditions

**HAZARDOUS DECOMPOSITION PRODUCTS:** Irritating and/or toxic fumes and gases may form when heated to decomposition.

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** Strong oxidizing agents, acids and bases

**POSSIBILITY OF HAZARDOUS REACTIONS:** Will not occur.

**CONDITIONS TO AVOID:** Incompatible materials,

### 11. TOXICOLOGICAL INFORMATION

**TOXICITY DATA:**

Oral, rat: LD50 = 650 mg/kg;

**ROUTES OF ENTRY:** Dermal contact. Eye contact. Inhalation and Ingestion

**CHRONIC EFFECTS ON HUMANS:**

**CARCINOGENIC EFFECTS:** Does not contain an ingredient(s) designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

**DEVELOPMENTAL TOXICITY:** None Known

**OTHER TOXIC EFFECTS ON HUMANS:** None Known

### 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

**ENVIRONMENTAL STABILITY:** No Data Available

**CHEMICAL EFFECT ON PLANTS, ANIMALS AND AQUATIC LIFE:** No Data Available. Not expected to be bioaccumulating.

### 13. DISPOSAL CONSIDERATIONS

**PREPARING WASTES FOR DISPOSAL:** Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

## 14. TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

**U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:** This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation.

<b>PROPER SHIPPING NAME:</b>	ALKYLSULFONIC ACID, LIQUID (Dodecylbenzenesulfonic Acid))
<b>HAZARD CLASS NUMBER and DESCRIPTION:</b>	Class 8 Corrosive
<b>UN IDENTIFICATION NUMBER:</b>	UN 2586
<b>PACKING GROUP:</b>	PGIII
<b>DOT LABEL(S) REQUIRED:</b>	Corrosive
<b>NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER:</b>	153
<b>RQ QUANTITY:</b>	1,000 Lbs

**MARINE POLLUTANT:** The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA): This product is considered as dangerous goods.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is considered as dangerous goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is considered by the United Nations Economic Commission for Europe to be dangerous goods.

## 15. REGULATORY INFORMATION

### UNITED STATES REGULATIONS:

**U.S. SARA REPORTING REQUIREMENTS:** The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

**U.S. SARA THRESHOLD PLANNING QUANTITY:** There are no specific Threshold Planning Quantities for the components of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

**U.S. CERCLA REPORTABLE QUANTITY (RQ):** CAS# 27176-87-0 1,000 Lbs.

**U.S. TSCA INVENTORY STATUS:** The components of this product are listed on the TSCA Inventory or are exempted from listing.

**OTHER U.S. FEDERAL REGULATIONS:** None

### STATE REGULATIONS:

None known

**CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):** Ingredient(s) within this product are not on the Proposition 65 Lists.

**RCRA 40 CFR:** None

### CANADIAN REGULATIONS:

**CANADIAN DSL/NDL INVENTORY STATUS:** The components of this product are on the DSL Inventory, or are exempted from listing.

**OTHER CANADIAN REGULATIONS:** Not applicable.

### CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:

**WHMIS:** This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

**CANADIAN WHMIS CLASSIFICATION and SYMBOLS:** Class E Corrosive material



**EUROPEAN ECONOMIC COMMUNITY INFORMATION:**

**EU LABELING AND CLASSIFICATION:** This product meets the definition of the following hazard class as defined by the European Economic Community Guidelines.

**EU CLASSIFICATION:** [Xi] Irritant

**EU RISK PHRASES:** R36/38: Irritating to eyes and skin

**EU SAFETY PHRASES:** S26: In case of contact with eye, rinse immediately with plenty of water and seek medical advice; S36: Wear suitable protective clothing; S45: In case of accident or if you feel unwell, seek medical advice immediately.



**AUSTRALIAN INFORMATION FOR PRODUCT:** The components of this product are listed on the International Chemical Inventory list.

**JAPANESE INFORMATION FOR PRODUCT:**

**JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS:** The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

**JAPANESE ENCS INVENTORY:** The components of this product are on the ENCS Inventory as indicated in the section on International Chemical Inventories, below.

**POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW:** No component of this product is a listed Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.

**INTERNATIONAL CHEMICAL INVENTORIES:**

Listing of the components on individual country Chemical Inventories is as follows:

- Asia-Pac: Listed
- Australian Inventory of Chemical Substances (AICS): Listed
- Korean Existing Chemicals List (ECL): Listed
- Japanese Existing National Inventory of Chemical Substances (ENCS): Listed
- Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed
- Swiss Giftlist List of Toxic Substances: Listed
- U.S. TSCA: Listed

**16. OTHER INFORMATION**

Prepared By: Paul Eigbrett (MSDS Authoring Services)

Part Number: --

Approved By: GreenChem Industries, LLC, Environmental Health and Safety Department

Approval Date: February 2017

Supersedes New

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**END OF MSDS SHEET**