KIC Chemicals, Inc.
87 South Ohioville Road
New Paltz, NY 12561 USA
Phone: 845-883-5306 Fax: 845-883-5326
http://www.kicgroup.com

12502

LAURIC ACID SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Identifier:

Substance Name: Lauric Acid
Trade Name: Dodecanoic acid
Chemical Formula: $C_{12}H_{24}O_2$
Product Type: Fatty Acid
CAS Number: 143-07-7
EC Number: 205-582-1
Other Means of Identification: n/a

Recommended uses & restrictions on use:

Intended Use: Raw material for manufacturing oleochemical derivatives
Identified Uses: Laboratory chemicals, Manufacture of substances
Uses advised against: None listed

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E-mail address of person responsible for this SDS: QC@kicgroup.com

Emergency Telephone #: 800-424-9300 CHEMTREC

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification of Substance in accordance to Regulation (EC) No. 1272/2008 (CLP/GHS):

GHS Label Elements:

Signal Words: Warning
Eye Irritation: Category 2B

Hazard Statements:
H320: Causes eye irritation
H318 Causes serious eye damage.
H401 Toxic to aquatic life.
Precautionary Statements:
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance: Lauric Acid
Chemical identity: $C_{12}H_{24}O_2$
Common name/Synonyms: Dodecanoic acid

Ingredient name	CAS number	EC number	%	EU Classification	GHS Classification
Lauric Acid	143-07-7	205-582-1	99 min	n/a	Eye Dam. 1; Aquatic Acute 2; H318, H401

For the full text of the H-Statements mentioned in this Section, see Section 2.

Impurities and Stabilizing Additives

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and require reporting in this section. The table above was completed using guidelines posted at https://www.osha.gov/Publications/OSHA3514.html at time of initial revision 1.0, and the sample SDS on page 84 of the www.OSHA.gov/dsg/hazcom/ghsguideoct05.pdf.

Occupational exposure limits, if available, are listed in section 8.

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Take care to self-protect by avoiding becoming contaminated.

Most Important Symptoms and Effects, Both Acute and Delayed: Eye irritation.
Symptoms/Injuries after inhalation: Sore throat, cough
Symptoms/Injuries after skin contact: Irritating
Symptoms/Injuries after eye contact: Irritating
Symptoms/Injuries after ingestion: Sore throat, abdominal pain

Description of First Aid Measures

First-aid measures after inhalation: Remove to fresh air. If suffocation is serious, take to a doctor.
First-aid measures after skin contact: Remove contaminated clothing, flush skin with water or shower. Take to a doctor if necessary.
First-aid measures after eye contact: Flush with water; take to a doctor if necessary.
First-aid measures after ingestion: Rinse mouth, drink plenty of water, see physician.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media: Use dry powder, foam, carbon dioxide.
Unsuitable extinguishing media: Do not use water jet.

Special Hazards Arising from the Substance or Mixture

Fire hazard: Not flammable but is combustible. Keep away from open flame, no smoking.
Explosion hazard: Not explosive
Reactivity: Stable at ambient temperature and under normal conditions of use.

Advice for Firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire.

Protection during firefighting: Firefighters should wear full protective gear. Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing equipment if in confined place.

Other Information: Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Use special care to avoid static electric charges. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid breathing (vapor, mist). Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice.

Protective Equipment: Use gloves, face shield

Environmental Precautions

Do not allow to flow into drainage system.

Methods and Material for Containment and Cleanup

For containment: Collect leakage in sealable containers, soak up with sand or other inert absorbent and remove to safe place.

Methods for cleaning up: Wash site with sodium bicarbonate solution or soda ash. Wipe clean.

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Use gloves and wear goggles when handling. Workers should wash hands and face before eating, drinking and smoking.

Conditions for Safe Storage, Including any Incompatibilities

Keep in a cool and dry place, avoid extreme heat and cold. Avoid direct fire. Keep separate from oxidants. Store in clean, dry, and preferably stainless steel vessels. Storage class (TRGS 510): Non Combustible Solids.
In bulk, store at about 10 °C above melting point or ambient. Temperature higher than necessary degrades quality at rate dependent on time and temperature of exposure.

Exposure to ultraviolet light and sunlight must be minimized to prevent quality loss.
Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Incompatible products: Avoid contact with strong oxidizing agents.
Recommended Packaging materials: Stainless steel preferred for storage.
Unsuitable Packaging materials: Unlined MS drums

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

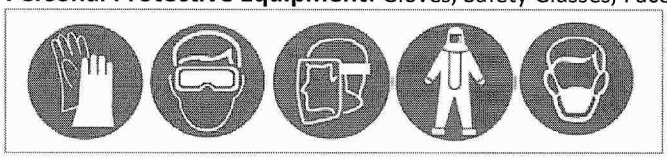
Occupational Exposure Controls: Contains no substances with occupational exposure limit values.
Technical measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

Appropriate Engineering Controls

Recommended monitoring procedures:
Use adequate ventilation to keep airborne concentration low. Avoid inhalation of vapors.

Individual Protection Measures

Personal Protective Equipment: Gloves, Safety Glasses, Face shield, Protective Clothing, Dust mask/Respirator



Materials for Protective Clothing: Corrosion-proof clothing.
Eye Protection: Faceshield (8-inch minimum) and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Hand Protection: Handle with gloves (nitrile rubber, 0.11 mm, >480 min breakthrough time). Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Skin and Body Protection: Wear protective gloves/clothing.
Respiratory Protection: None required when adequate ventilation available at ambient temperature. In presence of mist or vapors, use self-contained NIOSH/MSHA approved respirator.
Environmental Exposure Controls: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Other Information: Immediately remove soiled or soaked clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State: Glossy crystalline solid or flake
Color: White or faintly yellowish
Odor: Faint fatty odor
Molecular Weight: 200.4

Safety Data

pH: Not available
Initial boiling point and boiling range: 299 °C @ 760mm Hg
Flash point: 160 °C (Pensky-Martens closed cup)
Evaporation rate: Not available
Flammability (solid, gas): Not Flammable
Upper/lower flammability or explosive limits: Not Explosive
Vapor pressure: <1.0 mm Hg @ 131°C
Vapor density @ 20 °C: ~0.883 g/cm3
Relative density: 1.0099 @ 350°C
Solubility(ies): 0.000481g/100g @ 200°C in water; Ethanol: Soluble; Ether: Soluble; Organic solvent: Soluble
Partition coefficient: n-octanol/water: 4.2
Auto-ignition temperature: >250 °C
Decomposition temperature: Not available
Viscosity: 7.30 @ 50°C
Density @ 75 °C: 0.85 g/ml (or 0.8477 @ 80 °C)
Melting point/freezing point: 44 - 46 °C
Surface Tension: 26.6 mN/m at 70 °C

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Stable at ambient temperature and under normal conditions of use.
Chemical stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Avoid ignition sources. Direct sunlight. Extremely high or low temperatures.
Incompatible materials: Bases, Oxidizing agents, Reducing agents
Hazardous Decomposition Products: Carbon oxides (CO, CO2).

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity by oral route, inhalation and dermal route:

Product	Test	Species	Dose
Lauric Acid	LD_{50}, Oral	Rat	>5,000 mg/kg body weight

Skin irritation / corrosion: Primary skin irritation (rabbit): Mild irritation, does not require labelling, OECD 404 method.
Eye irritation: Irritating (rabbit): Risk of serious damage to eyes, OECD 405 method.
Skin sensitization: Non-sensitizing

CMR Effects

Mutagenicity: Not mutagenic (Ames test)
Carcinogenicity: Carcinogenicity - Mouse – Skin; Tumorigenic: Neoplastic by RTECS criteria.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: No data available
Developmental toxicity: No data available
Repeated dose toxicity - Oral route: No data available
Toxicokinetics: No data available

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial, where available)

Product	Toxicity to fish	Toxicity to crustaceans	Toxicity to algae/ terrestrial plants	Toxicity to bacteria
Lauric Acid	LC_{50} 96H: 5 mg/l (*Oryzias latipes*)	EC_{50} 48H: 3.6 mg/l (*Daphnia magna*)	EC_{50} 2H: >7.6 mg/l (*Selenastrum capricornutum*)	(*Pseudomonas putida*) >1,000 mg/l - 30 min

Persistence and Degradability: Readily and rapidly biodegradable
Bioaccumulative Potential: Log Pow = 4.2 (toxnet)
Mobility in the Soil: No data available
Other Adverse Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Waste Residue: Contact a licensed professional waste disposal service to dispose of this material. Offer surplus and non-recyclable solutions to a licensed disposal company. Waste incineration with the approval of the responsible local authority.
Disposal of Contaminated Packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

UN number: Not regulated as a hazardous material.
Transport Hazard Class: Not hazardous according to RID/ADR, GGVS/GGVE, ADNR, IMDG, ICAO-TI/IATA-DGR.
Packing Group: None

Environmental Hazard:
Marine pollutant (Yes/No): No
MARPOL Annex II: Category X

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Classification and labelling according to GHS: (No symbol) Irritant
Eye Irritation: Category 2B
Classification and labelling according to EC: Symbol, Xi
Risk-phrases: R36- Irritating to eyes

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components
Lauric acid
CAS-No. 143-07-7
New Jersey Right To Know Components
Lauric acid
CAS-No. 143-07-7
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: OTHER INFORMATION

Always work safely around open hatches on bulk tanks. The low density makes flotation difficult for immersed person.

HMIS Rating
Health hazard: 2
Chronic Health Hazard:
Flammability: 0
Physical Hazard 0

NFPA Rating
Health hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0

Revision Date:
1.0 – Initial Release (EMK), 04MAY2015

Training advice: Before using/handling the product one must read carefully present SDS.

Disclaimer:
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Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.