



**TECHNICAL DATA SHEET**  
LITTLE FALLS PLANT – MN/US  
VERSION 1.0  
09/05/2025

**Generic Name:** C12 LAURIC FATTY ACID

**CAS Number:** 143-07-7

**EINECS Number:** 205-582-1

**SPECIFICATION:**

ANALYSYS	UNIT	RANGE
Acid value	mg KOH/g	279.5 - 281
Iodine value	g/100g	0.2 Max
Saponification value	mg KOH/g	190 - 210
Colour 5.25" Lovibond Cell	Red	0.2 Max
Colour 5.25" Lovibond Cell	Yellow	1.0 Max
<b>CARBON CHAIN DISTRIBUTION</b>		
C10	%	1
C12	%	99
C14	%	1

**PRODUCT DESCRIPTION/APPLICATION**

NUOL C12 Lauric is a fatty acid, also known as dodecanoic acid, is a saturated medium-chain fatty acid with the chemical formula  $C_{12}H_{24}O_2$ . It is typically derived from natural oils such as palm kernel oil, where it constitutes a significant portion of the fatty acid content. NUOL C12 Lauric is a white, waxy solid at room temperature, with a mild odor and slightly greasy texture. It is highly soluble in alcohols and organic solvents and is less soluble in water.

It is widely valued for its unique properties, including its ability to act as an effective surfactant, emulsifier, and detergent. Its relatively low molecular weight and medium-chain structure also contribute to its rapid absorption and utilization in various industrial and consumer applications.

Primarily used in the production of surfactants and detergents, where it helps to reduce surface tension, enabling better cleaning and emulsification. It is a key raw material in the manufacture of soaps and personal care products such as shampoos, body washes, and facial cleansers, thanks to its ability to create rich lather and remove impurities.

In the food industry, lauric acid is often utilized in the production of processed fats and oils, where it helps improve the texture, consistency, and stability of food products. It is also used in the formulation of certain food additives and flavoring agents.

NUOL C12 Lauric is a key component in the production of methyl esters for biodiesel, making it an important renewable energy feedstock. Additionally, it is utilized in the chemical industry to synthesize various derivatives, such as lauryl alcohol, and in the manufacture of lubricants and emulsifying agents for industrial applications.

In the pharmaceutical industry, NUOL C12 Lauric has gained attention for its antimicrobial and antifungal properties. It is sometimes included in topical formulations, ointments, and creams used for skin care, particularly for acne treatment or to treat fungal infections.

It is a versatile and valuable ingredient in various industries, including personal care, food processing, pharmaceuticals, and renewable energy. Its emulsifying, surfactant, and antimicrobial properties, combined with its natural origin, make it a sustainable and effective component for a wide range of formulations. It is a 100% green product, making it a green choice for formulators.

#### **HANDLING PRECAUTIONS:**

When handling NUOL C12 Lauric, it is important to take appropriate safety measures. Always wear personal protective equipment (PPE), such as gloves, safety goggles, and protective clothing, to avoid skin and eye contact. Ensure that the work area is well-ventilated to prevent inhalation of fumes or vapors. Store NUOL C12 Lauric in a cool, dry, and well-ventilated area, away from heat sources and incompatible materials, such as strong oxidizers. In case of spills, absorb the material using an inert absorbent and dispose of it according to local regulations. If skin or eye contact occurs, rinse the affected area immediately with plenty of water and seek medical attention if necessary. Always refer to the Safety Data Sheet (SDS) for detailed handling, storage, and emergency procedures.

Keep away from sources of ignition. This material is noncorrosive, and has no toxicity associated with it due to its high flash point.

Keep away from possible contact with incompatible substances.

#### **SHIPPING CLASSIFICATION**

NUOL C12 Lauric is generally classified as a non-hazardous substance for shipping. It is not considered a dangerous good under the United Nations (UN) classification system. However, it should still be handled and transported in accordance with standard chemical shipping regulations to prevent spills or leaks. The substance should be securely packed in appropriate containers to avoid contamination or damage during transport. Proper labeling and documentation, including the Safety Data Sheet (SDS), must accompany the shipment. Always verify specific shipping requirements with local and international regulations, such as those from the International Maritime Dangerous Goods (IMDG) Code or the U.S. Department of Transportation (DOT).

Not regulated for transport Not classified in RID/ADR - ADNR - IMDG - ICAO/IATA - DGR

### **REGULATORY STATUS**

The components of this material are listed on the U.S. TSCA Inventory and the Canadian Domestic Substance List.

NUOL C12 Lauric is widely recognized as safe for use in various applications, including in food, cosmetics, and industrial products. In the United States, it is approved by the Food and Drug Administration (FDA) for use in food and as a food additive, subject to specific concentration limits. It is also commonly used in cosmetics and personal care products, complying with FDA regulations. In the European Union, NUOL C12 Lauric is permitted for use in cosmetics and as a food ingredient, as long as it adheres to EU safety standards. For industrial applications, lauric acid is subject to regulations such as REACH in the EU and the U.S. Toxic Substances Control Act (TSCA). Always consult the Safety Data Sheet (SDS) and local regulatory authorities to ensure compliance with applicable laws and standards.

### **DELIVERY FORM**

Powder in 25 kgs bags or 188 kgs net in steel drums.