

Ricinoleic Acid Standard Liquid CAS# 141-22-0

PRODUCT DATA SHEET

PARAMETERS	SPECIFICATION	TEST METHODS
Acid Value	175 min (at time of production)	AOCS Da 14-48
Saponification Value	180 min	AOCS Cd 3-25
Iodine Value	80 – 91	AOCS Tg 1a-64
Color Gardner (1963)	7 max	AOCS Td 1a-64
Hydroxyl Value	150 min	AOCS Cd 13-60
Specific Gravity @ 25°/25°C	0.940 (Typical)	AOCS Cc 10a-25

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Inquiries:

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- * INCI Name: Ricinoleic Acid
- * Vegetable-based, non-animal derived product
- * 6 Month Shelf-Life from the date of manufacture kept at ambient temperatures unopened.
- * Refer to Shelf-Life Disclaimer for shelf-life details
- * No Genetically Modified Organisms (GMO's)
- * Bovine Spongiform Encephalopathy/Transmissible Spongiform Encephalopathy (BSE/TSE) free
- * No animal testing performed on/during any part of the product process
- * Peanut, tree nut, wheat, grain, dairy, eggs, fish and gluten free
- * No Residual Solvents
- * Refer to SDS as a guideline for Safety, Handling and Storage information

The data herein are based on our current knowledge and believed to be reliable. They are intended for use by persons having technical skill and at their own discretion and risk. Due to numerous factors that may affect handling, processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any data given herein may change without prior notice and do not constitute a contractual agreement regarding quality.

Acme-Hardesty Co., specifically disclaims any implied warranties of merchantability, suitability or fitness for a particular purpose or application, and assumes no liability in connection with the use of this information. Final determination of suitability is the sole responsibility of the user who alone knows the conditions of intended use.

Date: February 17, 2016
/Acme

Shelf-Life of Ricinoleic Acid

Acme-Hardesty Co assigns *an estimated and typical shelf life* of 6 months from the date of manufacture for the Ricinoleic Acid we import and sell. However, this shelf life is contingent upon several factors, including the customer handling and storing the product in compliance with the instructions in the SDS for this product. Additional information on the shelf-life of this product and excerpts from the SDS are provided below, as this product has some unique characteristics which can affect the typical shelf-life.

Due to these characteristics, and the minimum 40 day transit time from the manufacturer to the US, Acme cannot guarantee that the material will still meet the manufactured analysis upon receipt by the customer, even if received in less than the 6 month estimate. Therefore, the customer is responsible to read and understand the information below, and acknowledge that the COA we provide applies only to the material at time of manufacture, and may not represent the material at the time of sale, and the product is being purchased as-is.

HANDLING AND STORAGE

HANDLING:	Handle in accordance with good industrial hygiene and safety procedures.
STORAGE:	Store in a dry, cool and well-ventilated place. Keep container closed when not in use.
INCOMPATIBLE PRODUCTS:	Strong acids. Strong bases. Strong oxidizers

STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Direct sunlight. Extremely high or low temperatures.
INCOMPATIBLE MATERIALS:	Strong acids, Strong bases, Strong oxidizers, Alkalis
HAZARDOUS DECOMPOSITION:	Under fire conditions this material may produce hazardous carbon dioxide (CO ₂), carbon monoxide (CO), various low molecular weight hydrocarbons, and smoke.

Ricinoleic Acid is chemically 12-hydroxyoctadec-9-enoic acid. The castor oil fatty acid is obtained by the hydrolysis of castor oil. This castor oil fatty acid is approximately 86% Ricinoleic Acid and is commonly called Ricinoleic Acid.

The Ricinoleic Acid is generally liquid in most regions ambient temperatures, having a melt point of about -10°C. As noted above, the Ricinoleic Acid has a hydroxyl group and carboxylic group in the same fatty acid chain. Due to this inherent structure and liquidity, the hydroxyl groups and acid groups on the fatty acid chains esterify depending on the temperature. At higher temperatures, the esterification rate is faster whereas at lower temperatures, the esterification rate is less. *Due to this esterification, there is a decrease in the acid value & hydroxyl value of the Ricinoleic Acid during storage.* This esterification leads to the formation of polymerized Ricinoleic Acid, which is also called polycicinoleic acid.