

**TEXAS SPECIFICATION NO. 180-54-02B**  
**FOAM STABILIZER - COCO DIETHANOLAMIDE**

Effective Date: May 2011

1. **SCOPE:** This specification establishes the minimum requirements for a superamide derived from coconut fatty acid and diethanolamine in a 1:1 mole ratio. This product is intended for use as a component of a liquid detergent formulation for hand dishwashing use.

Coco diethanolamide is normally liquid, but may partially solidify in extremely cold weather. Although it has comparatively low toxicity and irritancy, the product should be handled with a sufficient amount of caution to prevent splashing on the skin or eyes, etc. If this happens by accident, it should be removed by washing with water.

2. **DEFINITIONS:**

Terminology used in this specification is intended to be generic in nature and consistent with meanings that have been defined through general use and/or accepted trade practices. Where variant meanings may exist, the applicable interpretation shall be determined by the Texas Procurement and Support Services, a division of the Texas Comptroller of Public Accounts (CPA).

3. **SPECIFICATION REQUIREMENTS:** Coco diethanolamide furnished under this specification shall meet or exceed the following requirements:

- 3.1 **GENERAL REQUIREMENTS:** The product shall be in the form of a light yellow or straw-colored liquid at 20°C. It shall be effective as a foam stabilizer for a liquid dishwashing detergent formulated in accordance with Texas Specification No. 485-38-04A

[\(http://www.window.state.tx.us/procurement/pub/specifications-library/485/38-04a/\)](http://www.window.state.tx.us/procurement/pub/specifications-library/485/38-04a/).

- 3.2 **CHEMICAL AND PHYSICAL REQUIREMENTS:** The product shall conform to the requirements below, when tested by the procedure of Section 4.

Requirement	Minimum	Maximum	Testing Method
Nonionic components, *pbw	82.00	--	4.1
Free fatty acid, *pbw	--	1.0	4.2
Free amine, *pbw	--	9.0	4.3
Moisture, *pbw	--	1.0	4.4
Specific gravity, 60/60° F (15.56/15.56° C)	0.96	1.02	4.5
pH in 1% aqueous solution	8.5	10.5	4.6
Color, Gardner	--	5	4.7
Chiefly diethanolamides of fatty acids.			

**\*pbw: percent by weight**

4. **TESTING:** Testing shall be performed by **American Society for Testing and Materials (ASTM)** procedures: [www.astm.org](http://www.astm.org) and **Cosmetic, Toiletry and Fragrance Association, Inc. (CTFA)** procedures: [www.ctfa.org](http://www.ctfa.org)

ASTM D 891 - Specific Gravity, Apparent, of Liquid Industrial Chemicals

ASTM D 1172 - pH of Aqueous Solutions of Soaps and Detergents

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ASTM D 1544 - Standard Test Method for Color of Transparent Liquids (Gardner Color Scale)

C.T.F.A. Compendium of Cosmetic Ingredient Composition D 25-1 -- Total Fatty Acids in Alkylolamides

C.T.F.A. Compendium of Cosmetic Ingredient Composition D 24-1 - Total Titratable Amines in Alkylolamides

C.T.F.A. Compendium of Cosmetic Ingredient Composition D 22-1 - Total Amide in Alkylolamides

Testing shall be done by an independent laboratory (preferred ASTM recommended, <http://www.astm.org/LABS/search.html>). Tests shall be performed on products will be provided to ordering agencies.

The product furnished under this specification shall be tested by the following methods:

- 4.1 **Nonionic Components:** Determine compliance with Table 1; Chemical and Physical Requirements, Item 1, by the procedure of C.T.F.A. Method No. D 22-1.
- 4.2 **Free fatty acid:** Determine compliance with Table 1; Chemical and Physical Requirements, Item 3, by the procedure of C.T.F.A. Method No. D 25-1.
- 4.3 **Free amine:** Determine compliance with Table 1; Chemical and Physical Requirements, Item 3, by the procedure of C.T.F.A. Method No. D 24-1.
- 4.4 **Moisture:** Determine compliance with Table 1; Chemical and Physical Requirements, Item 4, by the procedure of ASTM E 203, or an equivalent Karl Fischer titration method.
- 4.5 **Specific Gravity:** Determine compliance with Table 1; Chemical and Physical Requirements, Item 5, by the hydrometer method of ASTM D891, Method B.
- 4.6 **pH in 1% aqueous solution:** Determine compliance with Table 1; Chemical and Physical Requirements, Item 6, by the procedure of ASTM D 1172, with the exception that the solution strength shall be 1% by weight.
- 4.7 **Color:** Determine compliance with Table 1; Chemical and Physical Requirements, Item 7, by the procedure of ASTM D 1544.
5. **INSPECTION:** Products furnished under this specification shall be inspected by, or at the direction of the customer at the time of delivery.
6. **PACKAGING:** The product shall be packaged in polyethylene drums of approximately 450 pounds (204 kg) net contents.

The product shall neither affect nor be affected by the unopened container for a period of one year from date of shipment.

Packing for shipment shall be in accordance with the manufacturer's standard practice and in a manner readily accepted by common carriers engaged in interstate commerce. Within the shipping carton, units

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shall be packed in a manner designed to minimize damage during the shipment because of rough or improper handling.

**6.1. PACKAGE MARKINGS:** Each shipping container shall be clearly marked with the following:

- 6.1.1. Name of contents, including brand name, if any.
- 6.1.2. Quantity contained in pounds and/or kilograms.
- 6.1.3. Name and address of the manufacturer.
- 6.1.4. Warning statements as required by governmental regulations. A label on a container of a hazardous chemical must meet the requirements of the most current OSHA standards.
- 6.1.5. The following additional information shall either be marked on the container or appear on the shipping documents:
  - Purchase order number or contract number.
  - Name and address of customer.
  - Customer's requisition number.

**6.2. LABELING:** Each container shall bear a durable label containing the name of the product and instructions for use, including required precautionary statements.

**7. COMPLIANCE:** The vendor must comply with the following documents upon delivery:

**7.1. Certificate of Analysis (CA):** A certificate of analysis from the manufacturer shall be submitted with each shipment.

**7.2. Material Safety Data Sheets (MSDS):** All Items must conform to the Texas Hazard Communications Act by being certified as nontoxic or providing an official MSDS sheet conforming to the requirements of the most current OSHA standards. A copy of the official MSDS sheet for each applicable chemical product must be submitted with each sample; each initial shipment; and updated MSDS must be provided with the first shipment after update.

**8. APPROVED PRODUCTS LIST (APL):**

The CPA maintains an APL of products that meet or exceed the requirements of this specification. The products being approved are listed as follows:

<b>Manufacturer</b>	<b>Brand Name / Product Number</b>
ChemCor	Chemterge SA 100
Finetex, Inc.	Aminol Cor-4
Henkel Chemical Corporation, Chemical Specialty Group	Emid 6514
Henkel Chemical Corporation	Nitrene C Extra
Pilot Industries of Texas, Inc.	Calamide C
Goldschmidt	Varamide MA-1
Stepan Chemical Company	Ninol 40CO
Crompton	Witcamide 128T

**To have a new product listed on the APL, the following procedures are required:**

8.1. Submit a written request to CPA, Texas Procurement and Support Services Division and include the following documentations:

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- **Official Certificate of Analysis from an independent laboratory**

The official Certificate of Analysis must list the following:

- ✓ Chemical Name (CTFI/INCI name) and CAS No.
- ✓ Manufacturer Name
- ✓ Brand Name or Trade Name
- ✓ Batch or Lot Identification Number
- ✓ Each analytical result given as outlined in the RFP specifications
- ✓ Laboratory Name, Address, and Contact Information

- **Detailed technical specifications**
- **Product literature**
- **Material Safety Data Sheet (MSDS)**

- 8.2. The Certificate of Analysis will be reviewed and if approved, samples will be requested, in writing by CPA, for compatibility testing. The shipping instructions will be provided to the vendor at the time of the request.
- 8.3. A minimum of sixty (60) days will be required for compatibility testing to be conducted.
- 8.4. Sample sizes should be no less than 250 grams for powders and 500 ml for liquids. **Each sample must be accompanied with a current MSDS from the manufacturer.** More samples may be requested in writing by CPA. Samples will not be accepted unless accompanied with the current MSDS document for that material.
- 8.5. CONTINUED COMPLIANCE: Listing an approved product shall not relieve the vendor of providing products meeting each requirement of this specification. The vendor shall notify the CPA, in writing, of any changes in the product, address, brand name, etc.
- 8.6. REMOVAL FROM APL: Products on the APL may be removed for non-compliance, as determined by the CPA, or for failure to provide notification of any change to APL product(s).