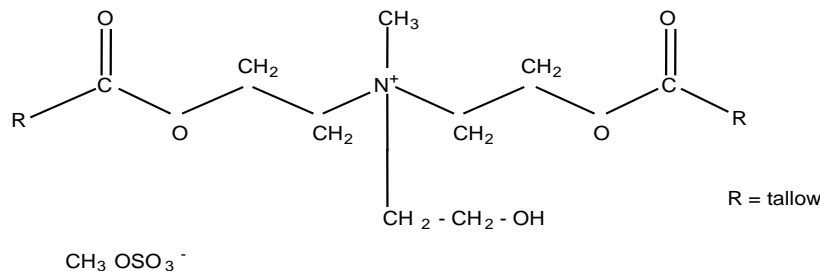


## Product Bulletin

### STEPANTEX® VT-90

Product Name

Chemical Structure



Chemical Description

Methyl bis[ethyl (tallowate)]-2-hydroxyethyl ammonium methyl sulfate

CAS Registry No.

157905-74-3

Applications

STEPANTEX VT-90 is a high quality fabric softener quaternary for use in household and commercial products. It can be used in a full range of dispersion concentrations with excellent storage stability and formulation capabilities. STEPANTEX VT-90 will produce 3 - 20% solids dispersions easily. These dispersions exhibit instant cold water dispersability and provide excellent softening. Under certain conditions, STEPANTEX VT-90 can make up to 25% dispersions. STEPANTEX VT-90 offers good rewet and is non-yellowing.

Typical Properties

Appearance at 25 °C .....	Off-white paste
pH, 5% in water .....	2.5
Solids, % by wt. ....	90
Color, Gardner.....	3 max.
Density, g/ml (lbs/U.S. gal).....	0.982 (8.18)
Pour Point, °C (°F).....	30 (86)
Minimum Handling Temperature (MHT), °C (°F) .....	45 (113)
Viscosity at MHT, cps.....	250
Flash Point, PMCC, °C (°F).....	32 (90)
RVOC, U.S. EPA, % (Isopropanol) .....	10
Preservative .....	Not required

Environmental Effects

STEPANTEX VT-90 is readily biodegradable. Additional information is available upon request.

Storage & Handling

Handle STEPANTEX VT-90 with care; use away from sparks and open flame. Use in a well ventilated area. Contact with the eyes and prolonged contact with the skin should be avoided. Use gloves and safety goggles when handling STEPANTEX VT-90.

Standard Packaging: STEPANTEX VT-90 is available in totes (1995 lb/907 kg), drums (396 lb/180 kg or 418 lb/190 kg) or bulk quantities.



## Storage & Handling

The color and odor of STEPANTEX fabric softener quaternaries are susceptible to degradation as a result of exposure to high temperatures, particularly in the presence of air.

It is recommended that STEPANTEX VT-90 be stored in stainless steel storage tanks of type 304L minimum, 316L is preferred. Also acceptable are Fiber Reinforced Plastic (FRP) with an Atlatc 382 type lining. Tanks should be padded with a nitrogen gas blanket, and equipped with conservation vents and flame arrestors. Tanks should be adequately insulated to maintain elevated temperatures. Generally, mixing is recommended to maintain homogeneity, either by a mechanical stirrer or recirculation loop.

Bulk storage facilities should be designed to maintain a minimum product temperature of 45 °C (113 °F) and a maximum temperature of 60 °C (140 °F). Hot water heating provided through No. 316L Stainless Steel heating coils is recommended. Steam heating through coils can be used.

No. 316L Stainless Steel centrifugal or positive displacement pumps should be used. Piping should be of No. 316L Stainless Steel, Schedule 40 or Steel Kynar lined P.V.F. Rubber hoses lined with Teflon or crosslinked polyethylene and equipped with No. 316L Stainless Steel fittings are recommended for loading and unloading. Contact with brass, copper, and aluminum components must be strictly avoided.

## Workplace Exposure

Occupational exposure can occur primarily through skin contact or via inhalation of vapors and mists. Engineering controls, personal protective equipment, and other workplace practices should be used to control these exposures.

## Clearances

All components of STEPANTEX VT-90 are listed in the following countries; the registration numbers for the active ingredients are included in parenthesis: U.S. (TSCA 157905-74-3), Canada (DSL 157905-74-3), Europe (EINECS 295-344-3), Australia (NICNAS 91995-81-2), China (IECSC 157905-74-3), Korea (ECL Serial No. 2005-3-3294), New Zealand (NZIoC 157905-74-3) and Philippines (PICCS 91995-81-2).

STEPANTEX VT-90 meets the U.S. EPA Safe Choice Program's surfactant screen and is listed on [www.cleangredients.org](http://www.cleangredients.org) (an on-line database for green formulators). For further information, visit [www.cleangredients.org](http://www.cleangredients.org). Additional Stepan ingredient listing can be found at [www.stepan.com](http://www.stepan.com).

**It is the responsibility of the formulator to review the chemical control regulations for each country where the end product is intended to be sold or used.**

## Product Stewardship

This product bulletin has been written in accordance with ACC's Product Stewardship guidelines.

## Additional Safety Information

A Safety Data Sheet is available upon request.



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