Technical Information

Stepan

Stepan Company



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BIODEGRADATION OF ACCOSOFT® FABRIC SOFTENERS

Applicable to these current Stepan products:

| ACCOSOFT® 440-75 DEG | ACCOSOFT® 460 HC | ACCOSOFT® 501 |
|---|----------------------|-----------------------|
| ACCOSOFT® 501 DEG | ACCOSOFT® 502 | ACCOSOFT® 550-75 |
| ACCOSOFT® 550-90 HF | ACCOSOFT® 550-90 HHV | ACCOSOFT® 550-PG |
| ACCOSOFT® 570 | ACCOSOFT® 580 | ACCOSOFT® 620-75 |
| ACCOSOFT® 780 | ACCOSOFT® 780 PG | ACCOSOFT® 808 |
| ACCOSOFT® 808 HT | ACCOSOFT® 808-90 | ACCOSOFT® 550-80 HHV% |
| ACCOSOFT® T-90 | | |
| Applicable to these inactive Stepan products: | | |
| ACCOSOFT® 440-75% | ACCOSOFT® 540 | ACCOSOFT® 540 HC |
| ACCOSOFT® 550 HFC | ACCOSOFT® 550L-90 | ACCOSOFT® 750 |
| ACCOSOFT® 801 | ACCOSOFT® 620-90% | |

Biodegradation Information:

ACCOSOFT® Fabric Softeners, which consist of diamidoamine or imidazoline QAMS⁺, are part of the cationic group of surfactants. The biodegradation of these surfactants was extensively reviewed by experts at a symposium.

It was concluded that the fabric softeners are eliminated more than 90% by a two step process. During sewage treatment there is microbial degradation to carbon dioxide and also adsorption to the particulate sludge. The adsorbed portion is subsequently biodegraded when the sludge is incorporated into agricultural land. Therefore, ACCOSOFT® Fabric Softeners are considered to be inherently biodegradable.

References:

*Anonymous, 1982, Symposium: "Cationic Surfactants and the Environment", Summary in Tenside Detergents, 19 (3) pp. 183.

*Boethling, R.S., 1984. Environmental Fate and Toxicity in Wastewater Treatment of Quaternary Ammonium Surfactants. Water Res. 18 pp. 1061-1076.

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Last Update: November 9, 2023 Revision reference: BI009.07

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