

**Calcium Sulfonate Salts  
(CaDDBSA)**

Stepan Agricultural Solutions offers a complete line of calcium sulfonate salts, both linear and branched, using a variety of solvent systems. These products are appropriate for use in emulsifiable concentrates, suspoemulsions and oil dispersions. Stepan Company's manufacturing process produces clear products with minimal color.

## Product Overview

Trade Name	CAS No.	Chain Type	Actives (%)	Solvent	Density, g/ml @ 25°C	Flash Point, PMCC, °C (°F)	Pour Point, °C (°F)	EPA Clearances
NINATE® 401-A	68953-96-8	Branched	60	Aromatic 150	1.03	66 (151)	-7 (19)	40 CFR 180.910 40 CFR 180.930
NINATE 50-H <sup>1</sup>	68584-23-6	Linear	50	Alkyl dimethylamide	0.99	>94 (>201)	-14 (7)	40 CFR 180.920
NINATE 50-H-M <sup>1</sup>	68584-23-6	Linear	50	Alkyl dimethylamide	0.99	>94 (>201)	-17 (1)	40 CFR 180.920
NINATE 50-H-ME <sup>1</sup>	68584-23-6	Linear	50	Alkyl dimethylamide and alkyl methyl ester mixture	0.99	>94 (>201)	-9 (16)	40 CFR 180.920
NINATE 60E	68584-23-6	Linear	60	2-Ethyl hexanol	0.99	65 (149)	-17 (1)	40 CFR 180.910 40 CFR 180.930 (<27% in pesticide)
NINATE 60L	68584-23-6	Linear	60	Aromatic 150	1.02	54 (129)	-11 (12)	40 CFR 180.910 40 CFR 180.930
NINATE 70B	68584-23-6	Linear	70	Isobutanol	1.01	32 (90)	7 (45)	40 CFR 180.920

## Formulation Examples

### Trifluralin 4E (480 g/L) EC

Component	%
Trifluralin	48.75
NINATE 401-A	2.75
Surfactants	3.25
Aromatic 150	45.25

### Bifenthrin 2E (240 g/L) EC

Component	%
Bifenthrin	26.04
HALLCOMID® M-8-10	67.97
NINATE 60E	1.26
Surfactants	4.74

### Triclopyr 3E (360 g/L) EC

Component	%
Triclopyr	44.40
NINATE 60L	5.60
Surfactants	4.40
Aromatic 150	45.60

### Methylated Seed Oil

Component	%
STEPOSOL® ME	90.00
NINATE 50-H	5.00
Surfactants	5.00

<sup>1</sup> For commercial status of this product, please contact your Stepan Sales Representative.

© Stepan Company, 2018. All Rights Reserved.

HALLCOMID®, NINATE®, and STEPOSOL® are registered trademarks of Stepan Company.

The information contained herein is based on the manufacturer's own study and the works of others and is subject to change without prior notice. The information is not intended to be all-inclusive, including as to the manner and conditions of use, handling, storage or disposal or other factors that may involve additional legal, environmental, safety or performance considerations. Nothing contained herein grants or extends a license, express or implied, in connection with any patents issued or pending of the manufacturer or others, or shall be construed as a recommendation to infringe any patents. STEPAN COMPANY MAKES NO PRODUCT WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR USE, EXPRESS OR IMPLIED, AND NO OTHER WARRANTY OR GUARANTY, EXPRESS OR IMPLIED, IS MADE, INCLUDING AS TO INFORMATION REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY, ACCURACY, COMPLETENESS, OR ADEQUACY. Stepan Company (and its employees, subsidiaries and affiliates) shall not be liable (regardless of fault) to the vendee, its employees, or any other party for any direct, indirect, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy, furnishing, use, or reliance upon information provided herein. The vendee assumes and releases Stepan Company (and its employees, subsidiaries and affiliates) from all liability, whether in tort, contract or otherwise to the fullest extent possible under the relevant law.

December 2018