DENDRITICS, LLC
DYNESEAL 300

48-Hour Acute Toxicity Test Report

Pimephales promelas

May 2022

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48-HOUR LC50 PRODUCT REPORT

Client	Dendritics, LLC	Project No:	DYN-300
Sample	Dyneseal 300	Test Date	May 2022

INTRODUCTION

Several ceramic tiles approximately 2"x 3" were delivered to Huther and Associates on May 3, 2022. One tile had been soaked in a product identified as Dynaseal 300, the second was not soaked and functioned as a control. One acute LC50 toxicity test was requested: a static acute 48-hour definitive toxicity test using *Pimephales promelas* (fathead minnow). Test procedures followed recommended methods contained in "*Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition*", EPA/600/4-90/027F, August 1993.

SAMPLE PREPARATION

Each tile was placed in a 2,000 mL glass beaker containing 1,000 mL distilled, deionized water reconstituted with reagent grade chemicals to a hardness of 100 mL $CaCO_3$ and a pH of 7.8. The tiles were soaked for 24 hours.

TEST DESIGN

Pimephales promelas

The 48-hour static, non-renewal, definitive *Pimephales promelas* test was conducted in 250 mL beakers containing 200 mL of test solution. The test was initiated May 5, 2022. Five *P. promelas* larvae were added to each of four replicate beakers. Larvae originated from laboratory cultures and were ten days old at test initiation. Larvae were fed laboratory cultured *Artemia* nauplii during test exposure. The test was conducted for 48-hours during which survival was recorded daily.

Two controls were conducted concurrently with the product test: a control in which the untreated tile had been soaked and a control of reconstituted laboratory water. The test was terminated on May 7, 2022.

RESULTS
Pimephales promelas

Due to greater than 50% survival in the treated water a LC50 could not be determined for Dyneseal 300:

48-Hour Definitive Test

Conc. (ml/L)	# exposed	# alive	#dead	% survival
Lab Control	20	20	20	100.0
Untreated	20	20	20	100.0
Treated	20	18	2	90.0

Estimated LC50 :	**N/A**
95% Upper C.L. :	N/A
95% Lower C.L. :	N/A

CONCLUSION

There was 90% survival to *Pimephales promelas* in the treated water and 100% survival in the untreated water control and the laboratory water control.