TOXICITY TO AQUATIC INVERTABRATES (E.G., DAPHNIDS)

TEST SUBSTANCE

Identity: N-Ethylperfluorooctanesulfonamide; may also be referred to as U1464, EtFOSA, EtPOSA, F-6309, or FX-12. (1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-ethyl-, CAS # 4151-50-2)

Remarks: Material is a white solid, Lot 505 (cc842-3, F6309, L-1089). Sample purity was not recorded.

The following summary is abbreviated due to the fact that this study has been superceded by a more recent test.

METHOD

Method: Not provided
Type: Acute static
GLP: No
Year completed: 1984
Species: *Daphnia magna*

RESULTS

48-hour EC_{50} (immobilization): 3.2 (2.9-3.6) mg/L (Probit analysis)

DATA QUALITY

Reliability: Klimisch ranking = 3. This study was tested in excess of solubility and actual concentrations were not measured. Results were based on nominal concentrations. Additionally, sample purity was not adequately characterized.

REFERENCES

This study was conducted by the 3M Company, Environmental Laboratory, 1984.

OTHER

Submitter: 3M Company, Environmental Laboratory, P.O. Box 33331, St. Paul, Minnesota, 55133

Last changed: 5/18/00

ENVIRONMENTAL LABORATORY
CHEMICAL ENVIRONMENTAL EFFECTS EVALUATION
TOXICITY TEST: SUMMARY REPORT

Chemical Tested EXIDY LOT 505 (CR842-3) F6309, L1089 Test Type: DEFINITIVE (FULL-SCALE)

LC_{50}/(EC_{50})/IC_{50}/GR_{50} (95% C.L.): HANK EC_{50} 3.3 (2.8-4.0) / 3.2 (2.6-3.8) mg/l

Test Species: Daphnia magna

Test Date: 4-16-84 / 4-8-84 L.R. #: B1230

Analyst(s): [signature]

(Exposure/Test Conditions)

Exposure Type:

Static ✓ ACUTE Static/Continuous Orbital Shaking _____

Static Recirculatory _____ Static Renewal _____ Flow-Through _____

Diluent:

Aerated Well Water (Initial D.O. 8.4 mg/l; pH 8.2; Temp. 23 °C (73 °F))

Water Hardness: 240 ppm Hardness Classification: HARD

Dissolved Oxygen % Saturation:

	48-hr	96-hr	Extended Exposure
Control(s)	100	____	_____
Lowest Experimental Dose 1.0 mg/l	100	____	_____
Highest Experimental Dose 6.3 mg/l	100	____	_____

pH Levels:

	48-hr	96-hr	Extended Exposure
Control(s)	8.3	____	_____
Lowest Experimental Dose 1.0 mg/l	8.3	____	_____
Highest Experimental Dose 6.3 mg/l	8.4	____	_____

Test Temperature °C (°F):

48-hr	96-hr	Extended Exposure
23°C (73)	°C( )	°C( )

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Photoperiod: Sixteen hours light with a 15-30 minute transition period.

LR B1230

ENVIRONMENTAL LABORATORY
AQUATIC TOXICITY DATA SHEET
DEFINITIVE (FULL-SCALE TEST)

TYPE TEST 48HR ACUTE STATIC

MATERIAL TESTED EX12 LOT 505 (CC842-3) Fla 309, L1089

TEST ORGANISM Daphnia magna

LC_{50}'s (95% CONFIDENCE LIMITS)

* PROBIT ANALYSIS

TEST RUNS	24 HOURS	48 HOURS	72 HOURS	96 HOURS	COMMENTS
RUN		3.3 mg/l (2.8 – 4.0)			
REPLICATE		3.2 mg/l (2.6 – 3.8)			
COMBINED LC_{50}'s		3.2 mg/l (2.9 – 3.6)			

* MOVING AVERAGE ANGLE METHOD

TEST RUNS	24 HOURS	48 HOURS	72 HOURS	96 HOURS	COMMENTS
RUN		3.3 mg/l (2.8 – 3.8)			
REPLICATE		3.1 mg/l (2.7 – 3.6)			
COMBINED LC_{50}'s		3.2 mg/l (2.9 – 3.6)			

ENVIRONMENTAL LABORTORY
AQUATIC TOXICITY DATA SHEET

LR B1230

Type Test: 48hr Acute Static Material Tested: DX12(CC847-3) Lot: 505
F6309, L1089
Test Organism: Daphnia magna Source: USEPA-EMSL Date Rec'd: 12/81 Batch No.: _____
Age: First-Instar young (0.5-1.5mm) No. Organisms per treatment: 10
Test Chamber: 250ml glass beaker Test Solution Vol.: 200ml Test Solution Depth: 6cm.
Time Started: 3:45pm Date Started: 4/16/84 Date Completed: 4/18/84
Dilution Water: Carbon-filtered well water (Temp. 23 °C, D.O. 8.7 ppm, pH 8.2)
Investigator: _____ LC_{50} (95% Confidence Limits) _____
(Full Signature)
PROBIT ANALYSIS 3.2 (2.6-3.8) mg/l
MOVING AVERAGE ANGLE 3.1 (2.7-3.4) mg/l

Tank No.	Init. Conc. mg/l	Total Amount Added	24 Hours Total No. Dead	pH	D.O. ppm	48 Hours Total No. Dead	pH	D.O. ppm	72 Hours Total No. Dead	pH	D.O. ppm	96 Hours Total No. Dead	pH	D.O. ppm
II	Control	* ml	0			0	8.3	8.5						
1A	1.0	2.0	0			0	8.3	8.6						
2A	1.6	3.2	0			0	8.3	8.4						
3A	2.5	5.0	0			2	8.3	8.6						
4A	4.0	8.0	5			8	8.3	8.6						
5A	10.3	12.6	10			10	8.4	8.4						
Test Temp. °C.			23°C			23°C								
Initials & Date			[signature] 4/17/84			[signature] 4/18/84								

Comments: *Common stock solution: 10mg/100ml. Each ml = 0.1mg
Amount added; 2, 3.2, 5, 8, and 12.6 ml.

Effects other than Mortality EC_{50} _____

Tank No.	Symptoms or Reactions	Total No. Affected 24-Hr.	48 Hr.	72-Hr.	96-Hr.
Control					

Comments: _____

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ENVIRONMENTAL LABORTORY
AQUATIC TOXICITY DATA SHEET

LR: B1230

Type Test: 48HR Acute Static Material Tested FX12(C842-3) Lot 505
F6309, L7059
Test Organism Daphnia magna Source USEPA-EKT Duluth, MN Date Rec'd 12/81 Batch No. _____
Age: First-Instar young (0.5-1.5mm) No. Organisms per treatment 10
Test Chamber: 250ml glass beaker Test Solution Vol.: 200ml Test Solution Depth: 6cm.
Time Started 3:45 pm Date Started 4/6/84 Date Completed 4/8/84
Dilution Water Carbon-filtered well water (Temp. 23 °C, D.O. 8.7 ppm, pH 8.2)
Investigater [signature] LC50 (95% Confidence Limits) _____
(Full Signature) PROBIT ANALYSIS 3.3 (2.8-4.0) mg/l
MOVING AVERAGE ANGLE 3.3 (2.8-3.8) mg/l

Tank No.	Init. Conc. mg/l	Total Amount Added	24 Hours Total No. Dead	pH	D.O. ppm	48 Hours Total No. Dead	pH	D.O. ppm	72 Hours Total No. Dead	pH	D.O. ppm	96 Hours Total No. Dead	pH	D.O. ppm
I	Control	* ml	0			0	8.2	8.6						
1	1.0	2.0	0			0	8.3	8.6						
2	1.6	3.2	0			0	8.3	8.6						
3	2.5	5.0	0			1	8.3	8.6						
4	4.0	8.0	4			8	8.3	8.6						
5	10.3	12.6	10			10	8.3	8.6						
Test Temp. °C.			23°C			23°C								
Initials & Date			[signature] 4/4/84			[signature] 4/8/84								

Comments: * Ammonium Stock solution: 10mg/100ml. Each 1ml = 0.1mg
Amount added 2, 3.2, 5, 8, and 12.6 ml.

Effects other than Mortality EC50 _____

Tank No.	Symptoms or Reactions	Total No. Affected 24-Hr.	48 Hr.	72-Hr.	96-Hr.
Control					

Comments: _____