

BIODEGRADATION

TEST SUBSTANCE

Identity: Perfluorooctanesulfonylamido(ethyl)acetate; may also be referred to as PFOSAA, FC-128 or as the major component of FC-127, FC-129, FC-109, or FC-109-X. (Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt, CAS # 2991-51-7)

Remarks: The test sample is FC-109-X. Current information indicates it is a mixture of 19-23% test substance, 61% water, 12% 2-methoxymethylethoxypropanol, 2% ethanol, and 2-6% C₄-C₇ fluoroalkyl carboxylate compounds. Test sample was from 3M production lot 2.

The following summary is abbreviated because the test sample is a mixture of the test substance in a water/organic solvent solution. Data will not accurately relate biodegradation of the test sample with that of the test substance.

METHOD:

Method: Not noted.

Type: Aerobic Carbonaceous BOD with Dichromate reflux determination of COD

GLP: No

Year completed: 1987

Contact time: 20 days

Innoculum: Not noted

RESULTS

Chemical Oxygen Demand: 375,000 mg O₂ / kg product

Biochemical Oxygen Demand:

5-Day:	31,000 mg/L
10-Day:	61,000 mg/L
20-Day:	69,000 mg/L

Remarks: The BOD and COD values are expected to be the result of biodegradation of the organic solvent components of the test sample. These values are not expected to be representative of the Perfluorooctanesulfonylamido(ethyl)acetate.

CONCLUSIONS

This testing indicated that some portion of the test sample biodegraded in aerobic environments capable of supporting biodegradation.

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

DATA QUALITY

Reliability: Klimisch ranking 3. This study lacks information on the methodology, characterization of the test substance purity and analytical measurement of test concentrations. Testing cannot conclude what portions of the test sample were responsible for the apparent biodegradation values.

REFERENCES

This study was conducted by Pace Incorporated of Minneapolis, MN at the request of 3M Company, Lab Request number E2113, 12/31/87.

OTHER

Last changed: 5/18/00

05/17/2000

ENVIRONMENTAL LABORATORY
ARCHIVED FINAL REPORT

1

LAB REQUEST NO. E2113
REQUESTOR NAME: EAR/MTE
DEPARTMENT: 0535
PROJECT NO: 9970013000
DATE RECEIVED: 09/15/1987
DESC: FC-109-X ENVIRONMENTAL SCREENS

CONTRACT LAB(S): PACE
EXP COMP DATE: 12/31/1987
DATE COMPLETED: 12/31/1987
PROJECT LEAD: SA BEACH
PHONE NO: 651-778-7452
3M FAX NO: 651-778-6176

41-2601-0414-0 LOT 2

SAMPLE(S) SENT TO ABC LABS FOR FISH AND DAPHNIA WORK - SEE LR# E2566.

SAMPLE	DATE	CODE	DESCRIPTION	RESULT	MDL or (95% C.I.)
1		FC-109-X	-----		
	96-HR-LC50	FISH ACUTE TEST - 96 HOUR		SEE COMMENT ABOVE	
PACE	C-BOD-05	*BOD-05 (CARBONACEOUS)		31000 MG/KG	
PACE	C-BOD-10	*BOD-10 (CARBONACEOUS)		61000 MG/KG	
PACE	C-BOD-20	*BOD-20 (CARBONACEOUS)		69000 MG/KG	
PACE	COD-RFX	*COD (DICHROMATE REFLUX)		360000 MG/KG	
	MICROTOX	MICROTOX - EC50		COMPLETE	
PACE	REP-INORG	*INORGANIC TESTS REPORT		SEE ATTACHED REPORT	
	SLUDG-RESP	SLUDGE RESPIRATION - EC50		COMPLETE	
2			DUP OF #1		
PACE	COD-RFX	*COD (DICHROMATE REFLUX)		390000 MG/KG	