

BIODEGRADATION (BOD/COD/TOC)

TEST SUBSTANCE

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

Remarks: The test sample is FC-128. Current information indicates it is a mixture of 86% test substance and 14% C₄-C₇ fluoroalkyl carboxylate compounds. 3M production lot number 751.

METHOD:

Method: Not noted.
Type: Aerobic
GLP: No
Year completed: 1977
Contact time: NA
Innoculum: Not noted

RESULTS

BOD₂₀: <7600 mg/kg
COD: 140,000 mg/kg
TOC: 162,000 mg/kg

Remarks: The 5-, 7-, 11-, and 14-day BOD values could not be calculated because of insufficient dissolved oxygen depletion.

CONCLUSIONS

No reliable conclusions can be derived from this study.

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

DATA QUALITY

Reliability: Klimisch ranking 4. Summary was created using only a listing of test values. The original study procedure and raw data were not found.

REFERENCES

The COD and BOD studies were conducted by the 3M Company, Environmental Laboratory, St. Paul, MN, Lab Request number 3844, 7/8/77.

The TOC study was conducted by ARRO Laboratories at the request of 3M, Lab Request number 3849, 1977

OTHER

Last changed: 5/16/00

000327

PRODUCT ECOLOGICAL ASSESSMENT
REQUEST FOR LABORATORY WORK

Ref: ENVJR. ASSESS. INQ. # _____ DIVISION _____

LAB REQUEST NO. 3844

PRODUCT: _____

REQUESTER		LABORATORY	
Name: <u>Dale Bacon</u>	Phone No. <u>5453</u>	Date Received Sample: _____	Analyst: _____
Request Date: <u>7/8/77</u>		Date Completed: _____	Hours Spent: _____
Project No.: <u>99861-0000</u>	Prob. No. _____	Y _____ B _____ P _____	
Code No.: _____		Please Call Requester If Delays Are Encountered.	
Sample Date: _____	Date Needed: _____		
Description: _____			
Purpose of Tests: _____			

PHYSICAL & CHEMICAL PROPERTIES	FC	FC 219-3	FC 128/4751	FC 807 4790
Heat of Combustion Cal/G (BTU/Lb.)	805 61540			
Density				
Ash				
Other				

WATER POLLUTION	FC	FC 219-3	FC 128/4751	FC 807 4790
pH	✓ < 0.0			
COD	✓ 1,100,000	✓ 440,000	✓ 170,000	✓ 420,000
BOD ₅	✓	✓	✓ N.I.	✓
BOD, Ultimate	✓	✓	✓ < 7,600	✓
TOC	✓	✓	✓ 162,000	✓
GC				
Oxygen Uptake				
Dehydrogenase Activity (TTC)				
Other				
Cr 16	✓			
Cr 7.3	✓			

BIOASSAY	FC	FC 219-3	FC 128/4751	FC 807 4790
Specify Organism and Method:				
Fat head - 96 hr.	✓	✓	✓	✓

LEACHATE FROM LEACHING TEST	FC	FC 219-3	FC 128/4751	FC 807 4790
pH				
COD				
BOD ₅				
BOD, Ultimate				
TOC				
GC				
Bioassay				
Other				

OTHER	FC	FC 219-3	FC 128/4751	FC 807 4790
Bioaccumulation				
Persistence				
Degradation Products				

600328

* ALL RESULTS EXPRESSED AS mg/Kg - EXCEPT PH

ANALYSIS FORM 1038-A

FILE

SEC.

DATE

SHEET

ENVIRONMENTAL LAB DATA SHEET

RE: LR. NOS. 3844 AND 3849

PH C.O.D. T.O.C. HEX.CHROM. T.CHROMIUM ULTIMATE BOD BOD3 BOD4 BOD5 BOD7 BOD11 BOD14 BOD20

1	FC 43	LOT 253		< 180	‡											
2	FC 95	LOT 583		< 4,000	78,000				*	-	*	*	*	*	< 7,800	
3	FC 98	LOT 315		< 4,000	119,000				*	-	*	*	*	*	< 3,800	
4	FC 128	LOT 751		140,000	162,000				*	-	*	*	*	*	< 7,600	
5	FC 143	LOT 261		< 4,000	186,000 238,000				*	-	*	*	*	*	< 10,200	-
6	FC 171	LOT 1		600,000	206,000				-	*	*	*	*	28,000	36,000	53,000
7	FC 207	LOT 2		420,000	91,000				-	72,000	129,000	160,000	300,000	348,000	320,000	
8	FC 207B	LOT 2		420,000	195,000				-	66,000	88,000	140,000	260,000	350,000	340,000	
9	FC 214-30	LOT 508		250,000 222,000	182,000				140,000	-	140,000	180,000	160,000	170,000	160,000	
10	FC 217	LOT 517		280,000	84,000				-	95,000	130,000	120,000	130,000	140,000	120,000	
11	FC 218	LOT 687	3.3	500,000	194,000				110,000	-	110,000	120,000	120,000	110,000	100,000	
12	FC 232	LOT 539	5.5	460,000	171,000				110,000	-	130,000	150,000	140,000	130,000	120,000	
13	FC 321	LOT 572	7.9	290,000	‡			‡								
14	FC 379	LOT 525		280,000	240,000				34,000	-	84,000	110,000	120,000	120,000	86,000	
15	FC 387	LOT 100		> 510,000	‡			‡								
16	FC 430	LOT 24		1,100,000 1,200,000	456,000				*	-	*	*	*	*	< 39,000	
17	FC 431	LOT 8		1,100,000	338,000				378,000	-	485,000	431,000	446,000	445,000	480,000	
18	FC 504	LOT 1		> 990,000	‡			‡								
19	FC 650	LOT 2		730,000	150,000				*	-	*	*	*	*	28,000	
20	FC 805	LOT 540	< 0.0	1,100,000	203,000	< 10	50,000		*	-	330,000	740,000	740,000	720,000	740,000	
21	FC 807	LOT 900		420,000	84,000				*	-	*	140,000	250,000	210,000	170,000	
22	FC 859	LOT 715		130,000	‡			‡								
23	FC 3019N			160,000	‡			‡								
24	FM 3422	LOT 716		260,000	‡			‡								

FC 77 (HOLDING)

NOTES: - SOLIDS FORMED DURING COD TEST AFTER (12) HOUR OF REFLUXING OF SAMPLES #13, #14 AND #23.

- TOC ANALYSES WERE PERFORMED BY ARRO LABORATORIES.

* INDICATES AN INSUFFICIENT DISSOLVED OXYGEN DEPLETION NECESSARY TO CALCULATE RELIABLE BOD VALUES.

‡ INDICATES THE SAMPLE IS WATER INSOLUBLE - TESTS NOT PERFORMED.

SAMPLES
FOR
HYDROLYSIS
STUDIES

FC 214-30
FC 218
FC 232
FC 321
FC 805
FC 807

000329