

May 11, 2000



Mr. Charles Auer
US EPA/OPPT/CCD (7405)
401 M Street, SW
Room 403 (East Tower)
Washington, DC 20460

Dear Charlie:

Pursuant to our recent communications, 3M is sending you this additional information relating to perfluorooctylsulfonate (PFOS) salts. We are providing this information to you on a voluntary basis as part of our continuing discussions with EPA regarding fluorochemistry.

TABLE 1

CAS Number	3M Product Designation	Chemical Description
29081-56-9	FC-93	Ammonium Perfluorooctylsulfonate
29457-72-5	FC-94 and FC-96	Lithium Perfluorooctylsulfonate
2795-39-3	FC-95	Potassium Perfluorooctylsulfonate
70225-14-8	FC-99	Diethylamino Perfluorooctylsulfonate

The products listed above are all sold as the salts. None are used as reactive intermediates in other 3M products nor are they deliberately added, except as noted below. The applications made of the CAS Numbers listed in Table 1 are detailed in Table 2.

Table 2

CAS NUMBER	APPLICATION
2795-39-3	1. Film former in Fire Fighting Foams 2. Mist suppressant for acid baths in metal plating factories 3. Surfactant in acid etching processes for production of circuit boards
29457-72-5	1. Surfactant in alkaline cleaners 2. Emulsifier in commercial floor polish 3. Mist suppressant for acid baths in metal plating factories 4. Surfactant in acid etching processes for production of circuit boards 5. Registered active ingredient for insect control. Used in formulations used in bait traps
70225-14-8	1. Emulsifier in commercial floor polishes 2. Mist suppressant for acid baths in metal plating factories 3. Surfactant in acid etching processes for production of circuit boards
29081-56-9	1. Surfactant in acid etching processes for production of circuit boards

It is apparent from Table 2 that multiple uses may be made of any one product. Table 3 details the multiple CAS Numbers which may be used in any one application.

Table 3

CAS NUMBER	APPLICATION
2795-39-3	Film former in Fire Fighting Foams
2795-39-3 29457-72-5 70225-14-8	Mist suppressant for acid baths in metal plating factories
2795-39-3 29457-72-5 70225-14-8 29081-56-9	Surfactant in acid etching processes for production of circuit boards
29457-72-5 70225-14-8	Emulsifier in commercial floor polishes
29457-72-5	Surfactant in alkaline cleaners
29457-72-5	Registered active ingredient for insect control. Used in formulations used in bait traps

Potassium perfluorooctylsulfonate is deliberately added to 3M aqueous fire fighting foams (AFFF). These are described in Table 4.

Table 4

3M AFFF Product	% PFOS Potassium Salt per Dry Pound
FC-201F	3.0
FC-203	1.34
FC-203CF	1.0
FC-206CF	0.67
FC-401	23.5
FC-600	1.0
FC-600F	1.0
FC-602	0.5
FC-603F	0.5
FC-783F	0.5
FC-786F	0.25
FC-4040	3.0
FX-9162	1.0

Direct 3M customers significantly dilute the above products before final use.

No other products produced from the functional derivatization of POSF contain perfluorooctane sulfonate as a deliberately added ingredient. 3M does not routinely analyze these final products for PFOS. In addition, recent analytical studies on core fluorochemical intermediates used in the manufacture of the majority of POSF-based products demonstrate the presence of trace levels of PFOS ranging from .00071% to .0042%. As these intermediates are further reacted and formulated into final products, the trace concentrations of PFOS could be further diluted.

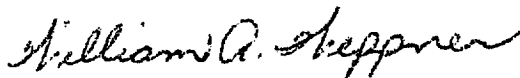
However, recently four of the highest volume POSF-based products were analyzed for the presence of PFOS in the final commercialized product. The results are listed in Table 5.

TABLE 5

Product	# of Lots Analyzed	% PFOS in Final Product
Paper Protector	15	0.00005% $\pm$ 0.000025
Textile Protector	3	0.0008% $\pm$ 0.0002
Carpet Protector	3	0.0003% $\pm$ 0.00007
Carpet Protector	2	0.001% $\pm$ 0.001

Please let me know if you need further information.

Regards,



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