

Table 1. Sulfuryl Fluoride: Brain Effects reported from animal studies.				
9-13-05: Fluoride Action Network Submission to US EPA. Docket No. OPP-2005-0174.				
Excerpts from: Table 1.--Subchronic, Chronic, and Other Toxicity				
Ref: January 23, 2004. Sulfuryl Fluoride; Pesticide Tolerance. Final Rule. Federal Register				
Type of Study	Animal	NOAEL mg/kg/day	LOAEL mg/kg/day	Based on:
2-Year combined chronic/ carcinogenicity	RAT	3.5 for M 16 for F	14 for M 62 for F	histopathology in brain (vacuolation in cerebrum and thalamus/hypothalamus). [See Note below]
2-Week inhalation	RABBIT	30/30 (M/F)	90/90 (M/F)	malacia (necrosis) in cerebrum, vacuolation of cerebrum
90-Day inhalation toxicity	RAT	24/25 (M/F)	90/90 (M/F)	malacia (necrosis) in cerebrum, vacuolation of cerebrum
90-Day inhalation toxicity	RAT	-	180/180 (M/F)	malacia (necrosis) in cerebrum, vacuolation of cerebrum
90-Day inhalation toxicity	RAT	-	240/250 (M/F)	vacuolation of caudate-putamen nucleus and white fiber tracts of the internal capsule of the brain
90-Day inhalation toxicity	MOUSE	38/36 (M/F)	125/121 (M/F)	microscopic lesions in caudate-putamen nucleus and external capsule of the brain
90-Day inhalation toxicity	DOG	25/26 (M/F)	50/51 (M/F)	light histopathology of the caudate nucleus of the basal ganglia
90-Day inhalation toxicity	RABBIT	8.6/8.5 (M/F)	29/28 (M/F)	vacuolation of white matter of the brain (F only)
90-Day inhalation toxicity	RABBIT	-	86/85 (M/F)	malacia (necrosis) and vacuolation of putamen, globus pallidus and internal and external capsules in the brain
Chronic toxicity	RODENTS	3.5 for M 16 for F	14 for M 62 for F	histopathology in brain (vacuolation in cerebrum and thalamus/hypothalamus)
1-Year chronic inhalation toxicity	DOG	5.0/5.1 (M/F)	50/51 (M/F)	malacia (necrosis) in caudate nucleus of brain
18-Month carcinogenicity inhalation	MOUSE	25/25 (M/F)	101/101 (M/F)	cerebral vacuolation in brain
Note: no evidence of carcinogenicity. Studies performed had high rate of mortality, however they were deemed acceptable.				

