

DISPERSANT AIRCRAFT CAPABILITY FORM

PLATFORM

AIR TRACTOR
AT-802 A or F
 with 308 gallon fuel tank

Operator: EDAC
 OSRO: -----



Photo compliments of Emergency Aerial Dispersant Consortium (EADC)

DATA SOURCE LEGEND

1. (Black): Indicates the data are based on documented field trials or is a fixed design value
2. (Blue): Indicates the data are based on limited field observations or operator's stated practice or stated value (little or no documentation)
3. (Red): Indicates the data are based on reasonable calculations or performance of comparable systems

		Unit	U.S. Regulatory Calculation Values	Data Source 1-2-3	Range	Reference(s)
AIRCRAFT PARAMETERS						
1	Swath Width	feet	90	1	70-90	See Other Comments 1*
	a. Application (gallons per acre)	gpa	5	1	1-10	See Other Comments 1*
	b. Altitude	feet	16	1	15-50	See Other Comments 1*
	c. Application Speed	knots	150	1	110-180	See Other Comments 1*
	d. Pump Rate (gallons per minute)	gpm	157	1	15-370	Emergency Aerial Dispersant Consortium (EADC) operator
	e. Boom Pressure (pounds/square inch)	psi	40	1	30-45	EADC operator
2	Transit Speed at Altitude	knots	166	2	163-192	EADC operator & Air Tractor specifications
	From Base to Staging Airport	feet	1,500		1,500	
3	Transit Speed at Altitude	knots	150	2	150-192	EADC operator & Air Tractor specifications
	Staging Airport to/from spill	feet	1,500		1,500	
4	Dispersant Spraying Reposition Speed	knots	170	2	110-180	EADC operator & Air Tractor specifications
5	Time to Fully Load Dispersant Tank	min	10	2	5-30	EADC operator
6	Time to Fully Load Fuel Tanks	min	5	2	5-30	EADC operator

7	Load Dispersant & Fuel simultaneously (Yes/No)	-----	Yes	1	Yes	EADC operator. See Other Comments below 5*-6*
8	Time to Make U-turn (Turn 180 degrees)	min	1.0	2	1.0	EADC operator
9	Dispersant Payload Maximum	gal	800	1	800	EADC operator
10	Fuel with maximum dispersant payload	lbs	2,064	1	2,064	EADC operator
11	Approach Distance for spraying	nm	1.0	2	1.0	EADC operator
12	Departure Distance for spraying	nm	1.0	2	1.0	EADC operator
13	Taxi Time Take-Off	min	3	2	2-15	EADC operator
14	Taxi Time Landing	min	3	2	2-15	EADC operator
15	On-site Check-In/Safety Time	min	10	2	5-15	Estimated from exercise
	CASCADE PARAMETERS*					
16	Take-off with Maximum Payload and Maximum Take-off Weight (assume no wind and VFR fuel reserve)					
*	a. Maximum Flight Time	hours	3.3	2	3.1-4.2	EADC operator
	b. Maximum Flight Range	nm	495	2	465-630	EADC operator
	c. Optimal Altitude	feet	8,000	2	8,000	EADC operator
	d. True Air Speed	knots	150	2	150	EADC operator
	e. Fuel Consumption	lbs/hour	536	2	536	EADC operator
17	Take-Off with Maximum Fuel and No Payload (assume no wind and VFR fuel reserve)					
*	a. Maximum Flight Time	hours	4.5	2	4.5	EADC operator
	b. Maximum Flight Range	nm	747	2	747	EADC operator
	c. Optimal Altitude	feet	8,000	2	8,000	EADC operator
	d. True Air Speed	knots	166	2	166	EADC operator
	e. Fuel Consumption	lbs/hour	402	2	402	EADC operator
18	Staging area briefing	min	45	2	30-60	Estimate from exercises
	AIRPORT PARAMETERS					
19	Runway length - Minimum (For take-off at maximum gross weight assuming sea level, 90° F, no wind using a balanced field concept, i.e., go, no go speed)	feet	2,000	2	2,000	EADC operator
20	Runway weight restrictions for maximum aircraft weight	lbs	16,000	2	16,000	EADC operator

	OTHER COMMENTS					
1*	References: 1. Field test at Texas A&M at Tynan, TX on 31 August 1995 for AT-802 2. MSRC Technical Report Series 94-019 “Aerial Dispersant Application: Field Testing Research Program,” Alpine, Texas 1994 for AT-802					
5*- 6*	The time to load dispersants and fuel are stand alone times independent of each other. If item 7 indicates that fuel and dispersants can be loaded simultaneously, then the longer of fuel or dispersant load time is used in the capability calculations. If item 7 indicates fuel and dispersants can NOT be loaded simultaneously, then the times are added together to calculate the aircrafts capability. To load simultaneously depends upon the airport, aircraft, and support crew. The loading times depend upon the loading system i.e., 5000 tank truck, 55 gallon drums or other means and the pumping system used. The time shown in items 5 and 6 is for loading from a tank truck which is standing by ready to commence loading when the aircraft comes to a stop in the loading area, i.e. the fastest loading time possible.					
16 * & 17 *	Visual Flight Rules (VFR) require a 30 minute reserve fuel supply. AT-802s are not certified for IFR flight conditions.					
*	Cascade Parameters: The aircraft’s calculated capability when cascading uses the same fuel loading and taxi times for dispersant operations as listed in items 6, 13 and 14.					