DISPERSANT AIRCRAFT CAPABILITY FORM

PLATFORM

AIR TRACTOR AT-602
with 216 gallon fuel tank

Operator: EADC, Inc.
OSRO: -----

Photo compliments of Air Tractor, Inc.

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	**85**	**2**	**60-85**	**See Other Comments 1***
	a. Application (gallons per acre)	gpa	**5**	**1**	**1-10**	**See Other Comments 1***
	b. Altitude	feet	**20**	**1**	**15-50**	**See Other Comments 1***
	c. Application Speed	knots	**145**	**1**	**110-170**	**EADC operator**
	d. Pump Rate (gallons per minute)	gpm	**150**	**2**	**15-260**	**EADC operator**
	e. Boom Pressure (pounds/square inch)	psi	**40**	**2**	**30-45**	**EADC operator**
2	Transit Speed at Altitude From Base to Staging Airport	knots feet	**167** **1,500**	**2**	**150-172** **1,500**	**EADC operator & Air Tractor specifications**
3	Transit Speed at Altitude Staging Airport to/from spill	knots feet	**160** **1,500**	**2**	**150-172** **1,500**	**EADC operator & Air Tractor specifications**
4	Dispersant Spraying Reposition Speed	knots	**160**	**2**	**160**	**EADC operator**
5	Time to Fully Load Dispersant Tank	min	**10**	**2**	**5-30**	**EADC operator**
6	Time to Fully Load Fuel Tanks	min	**10**	**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	**1.00**	**2**	**0.75-1.25**	**EADC operator**
9	Dispersant Payload Maximum	gal	**630**	**1**	**630**	**EADC operator**
10	Fuel with maximum dispersant payload	lbs	**1,447**	**1**	**1,447**	**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	**2.5**	**2**	**2.5**	**EADC operator**
	b. Maximum Flight Range	nm	**400**	**2**	**400**	**EADC operator**
	c. Optimal Altitude	feet	**8,000**	**2**	**8,000**	**EADC operator**
	d. True Air Speed	knots	**160**	**2**	**160**	**EADC operator**
	e. Fuel Consumption	lbs/ hour	**469**	**2**	**469**	**EADC operator**
17 *	Take-Off with **Maximum Fuel and No Payload** (assume no wind and **VFR** fuel reserve)					
	a. Maximum Flight Time	hours	**3.0**	**2**	**3.0**	**EADC operator**
	b. Maximum Flight Range	nm	**500**	**2**	**500**	**EADC operator**
	c. Optimal Altitude	feet	**8,000**	**2**	**8,000**	**EADC operator**
	d. True Air Speed	knots	**167**	**2**	**167**	**EADC operator**
	e. Fuel Consumption	lbs/ hour	**388**	**2**	**388**	**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^{o} 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-602s 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.					