

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 | EADC operator & Air Tractor specifications |
| 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 | EADC operator & Air Tractor specifications |
| 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. |