

## FIRE FIGHTERS GUIDANCE NOTE # 6-21

### ISSUE:    AIRCRAFT FIRE FIGHTING HAZARDS

In order to safely conduct aircraft rescue and fire fighting operations, fire fighters should be trained to the level of response as defined by their local Council or Board. The level of response and specific Operating Guidelines should be established. Fire fighters should be knowledgeable about the various aircraft systems and their associated hazards.

Some hazards with crash scenes could include:

- control of access to the airport site
- types of materials of aircrafts – there are three types
  - i) simple composite (fiberglass)
  - ii) advanced aerospace materials (boron\epoxy, carbon\epoxy, depleted uranium)
  - iii) radar absorbent materials (stealth technology)

**Note: Composite materials become unsafe when the bonding material burns away during a fire – the composite fibres become exposed and free to contaminate living organisms.**

- Jet fuels – there are three basic types: Jet A, Jet B, and Avgas. Jet A is less flammable than Avgas with a flash point of 38C and a flame spread rate of 33 meters\minute (100 ft.\min.) Avgas is very volatile, having a flash point of -45C and a flame spread of approximately 264 meters\minute (800 ft.\min.) They are skin irritants and are heavier than air and will collect in low lying areas.

Hazards associated with Airport response could include:

- propeller hazards
- helicopter rotors

- jet engine hazards
- landing gear hazards
- cargo hazards – could contain hazardous materials – locate cargo manifest usually on or near cockpit door

**References:**

- IFSTA Aircraft and Rescue Firefighting – 4<sup>th</sup> edition
- NTSB – National Transportation Safety Board
- ARFFWG – Aircraft and Rescue Firefighting Working Group