

# PCADS: A Military Solution to Wildland Firefighting

Dec. 24, 2010 by [Mike Archer](#)

Precision Container Aerial Delivery System™ (PCADS™) is a unique and innovative aerial delivery system designed to combat Wildfires. PCADS provides direct aerial attack at safe altitudes, able to operate in high winds, day or night and opens the operational window for mass attack using multiple aircraft. An aerial firefighting crisis exists in the U.S. Nearly four dozen heavy air-tankers could be called upon to assist firefighters roping in past wildfires. But even as wildfires have increased in size and ferocity, air-tanker numbers have dwindled to a shadow of their former strength. Fire agencies have tried to fill the gap with helicopters and Single Engine Air-Tankers (SEATs), but the speed and retardant capacity of the heavy, fixed-wing air-tankers is sorely missed. Is there any way to increase the firefighting capacity of PCADS (Precision Aerial Container System) Bottom line: PCADS increases the number of aircraft capable of fighting wildfires. The PCADS project is an exciting development as an alternative aerial firefighting application approach, said Gordon Springell, Gel Business Leader for ICL Performance Products. With the use of *Phos-Chek Aqua Gel-K*, as seen during the recent Kingman trial, the enhancement of the water medium [with gel] improves, quite dramatically, the PCADS drop characteristics, and retention of moisture on the ground, and, therefore, the ability to extinguish burning fuels on forest fires, especially in **direct attack**. *I assume this is its main use.*

The air speed plus the drop create a force against this modest cardboard container; what force combination is needed to have its contents expelled? How much time from fire heat is needed to expel the PCADS contents? Was the PCADS tested over a fire to show what percentage fell thru a fire and onto the ground. SAFETY EVALUATION for ground firefighters.

PCADS™ consists of a 1 ton bulk liquid package that disperses liquid media onto a specific target from 300+ ft Above Ground Level (AGL). The system requires no modifications to the airframe and is deployed using standard Container Delivery System (CDS) procedures during air drop operations. The system can drop up 3,800-12,000 gallons of suppression media onto a wildfire to extinguish flames. All residual debris is 100% biodegradable.

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Needless to say, the military is already adept at night-dropping cargo. “They have night-vision goggles, air-dropping requirements that they drop within certain distances at night, so we’re using the same crews who do the air-dropping for fighting fires,” explains Cleary. “What the IC [Incident Commander] has to provide the aircrew is latitude and longitude as to where you want PCADS.”

And the military is warming to the mission. “We’re now at a point where we’ll be working with the Air National Guard on the strategy and tactics for using PCADS on fires,” Cleary reports. “We’re very excited about the Air National Guard work because they have lots of ideas for PCADS and they have a requirement to fight wildfires.”

Where is this system TODAY ?

RESEARCH: Air Mobility Command (AMC & ATTILA) for C-130H/J and C-17 airframes.