

# Gas Factsheet

## Jet fuels

**Formula:** N/A

**CAS:** N/A

**Source:** Jet Fuelling & Military Use

**Detection Method:** Tiger, Tiger<sup>LT</sup>, Cub, Falco, TVOC 2, GasClam 2 & GasCheck G



Jet propellant (JP) fuels, used in military and civilian aircraft, are complex mixtures of aliphatic and aromatic hydrocarbons made by blending various distillate stocks of petroleum. The primary military fuel for land-based military aircraft is JP-8. JP-5 was developed by the U.S. Navy for shipboard service.

### ACUTE EXPOSURE TO JET FUELS HAS BEEN ASSOCIATED WITH NEUROLOGIC EFFECTS

#### Jet Fuel JP-5

JP-5 is a yellow kerosene-based jet fuel developed in 1952 for use in aircraft stationed aboard aircraft carriers, where the risk from fire is particularly great. JP-5 is a complex mixture of hydrocarbons, containing alkanes, naphthenes, and aromatic hydrocarbons.

Because some US naval air stations, Marine Corps air stations and Coast Guard air stations host both sea and land based naval aircraft, these installations will also typically fuel their shore-based aircraft with JP-5, thus precluding the need to maintain separate fuel facilities for JP-5 and non-JP-5 fuel. In addition, JP-5 may well have been used by other countries for their military aircraft. Its freezing point is -46 °C (-51 °F). It does not contain antistatic agents.

JP-5 is also a fuel derived from kerosene. It has a higher flash point than the JP-8, a feature that makes it appropriate for use in planes loaded on aircraft carriers, in which the risk of fire is greater.

#### Jet Fuel Jp-8

JP-8, is a fuel derived from kerosene with additives for military use. This product must meet certain specification, which stipulates that during its manufacture, CI/LI (corrosion inhibitor/lubricity improver), FSII (fuel system icing inhibitor) and a SDA (static dissipater additive) additives will be added.

In addition, according to this specification, the JP-8 may contain an AO (antioxidant) or MDA (metal de-activator) additive. To be able to add a metal de-activator to the JP-8 formula, according to regulations, express written authorization from the purchaser and user of the product must be obtained.

The main characteristics are:

- Fuel for military aviation.
- Colourless or slightly yellow.
- Density within the range of 6.47-7.01 lb/U.S. gallon (0.775 - 0.840 kg/L)
- Flammable at temperatures above 100.4°F (38°C) in the presence of flames or sparks.
- Freezing point -52.6°F (-47°C).

#### Jet fuel Detection Instruments



Fixed Instruments



Semi-Portable Instruments



Portable Instruments



Personal Instruments