



TECHNICAL BULLETIN CP-06

EUCOLASTIC 1SL AND JET FUEL RESISTANCE

Eucolastic 1SL is acceptable to be used where jet fuel resistant sealants are specified.

Sealants specified for applications requiring jet fuel resistance require that after exposure to jet fuel, the sealant is still able to waterproof joints while being exposed to temperature changes. This means that the sealant must remain elastomeric and maintain its movement capability as categorized by ASTM C 920. The sealant must also resist adhesion loss due to contact with jet fuel and other airfield fluid contact if a spill of such fluids were to occur. Typical fluids that an airfield sealant may be exposed to are:

1. **Jet Fuel.** Typically Jet A-1, Jet A, Jet B, or JP-4
2. **Hydraulic Fluid.** Typically Skydrol B
3. **De-icing Fluid.** Typically a 50/50 mix of ethylene glycol and water

In absence of any industry standard specification for single-component, high performance sealants for use in airfield applications, Euclid Chemical developed a "Jet Fuel Resistance Test" that utilizes the standard ASTM C 719 Test Method for Adhesion and Cohesion of Elastomeric Sealants Under Cyclic Movement (Hockman Cycle) to evaluate Eucolastic 1SL after exposure to typical airfield fluids.

The cured Eucolastic 1SL samples were subjected to the types of fluids representative of a spill on a runway or taxiway at an airfield. After the fluids were allowed to dissipate, the sealants were tested according to the standard ASTM C 719 for each of the sealant's movement classes. After exposure to the fluids no visible physical changes were observed. In addition, after conducting C 719 to the exposed samples, it was shown that Eucolastic 1SL remained elastomeric and continued to expand and contract with no adhesion loss.

It is important to note that this is approval for jet fuel resistance only. Eucolastic 1SL is not approved for use where a jet blast sealant is specified or required.