

# Jet Fuel Resistant Sealants

## The Reason for the Bulletin:

The following sealants are acceptable to be used where jet fuel resistant sealants are specified.

- Dymonic 100, polyurethane sealant
- Vulkem 45SSL, semi self-leveling polyurethane sealant

Sealants specified for this use require first, that the sealant is able to waterproof the joints through any applicable 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 relevant standard federal or ASTM specification for single-component, high performance sealants for use in these applications, Tremco developed its own test based on decades of commercial sealant application experience in an effort to relate lab testing to actual airfield sealant applications where today's high performance one-part sealants can be used.

The Tremco Jet Fuel Resistance Test utilizes the standard ASTM C 719 Test Method for Adhesion and Cohesion of Elastomeric Sealants Under Cyclic Movement (Hockman Cycle) to evaluate the sealant after subjected to typical airfield fluids.

The cured Tremco sealant 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 the tested sealants 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. These sealants are not approved for use where a jet blast sealant is specified or required.

