

DAPCO™ 18-4F Silicone Firewall Sealant

Description:

DAPCO™ 18-4F is a two-component, solvent-free, thixotropic silicone paste. DAPCO™ 18-4F is most commonly used as a coating, sealant, or filleting material in the construction, repair and maintenance of all types of aircraft. The product can be applied using a variety of methods and is especially useful where fire resistance, exposure to phosphate ester fluids, and/or exposure to extreme temperatures -65°F (-54°C) to 400°F (204°C) are major considerations.

The product is available in a variety of kit sizes including: ¼ pint (200 grams), pints, quarts, gallons, and 55 gallon drums. (Contact your local representative for special packaging requests.)

For more information, contact:

D Aircraft Products, Inc.

Technical Service

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Features and benefits:

- **Qualified to Boeing BMS 5-63**
- **Compatible with DAPCO™ 2100**
- **Lead free**
- **Good adhesion to a variety of substrates when primed with DAPCO™ 1-100**
- **Excellent fire retardency**
- **Weatherability**
- **Performance at low operating temperatures**
- **Good resistance to chemicals commonly used in aerospace applications**
- **Repairability**

Typical properties

	PART A	PART B	MIXED
Color:	Dark Green	Blue	Dark Green
Solids, %:	100	100	100
Consistency:	Thixotropic Paste	Viscous Liquid	Thixotropic Paste
Density, lb./gal:	12.5	9.0	12.2
Shelf Life at 77°F:	12 months	12 months	

Handling

Mixing:	Part A and B must be mixed in the correct ratio and mixed thoroughly.		
Mix Ratio:	The recommended mix ratio for DAPCO™ 18-4F is		
	Weight	Volume	
	Part A	100	11.7
	Part B	7	1
Working Life:	The working life of the mixture is 4 hours at 72°F (22°C) after mixing. Useable life can be extended by packaging the mixed product into plastic cartridges and then freezing immediately. Product can be mixed and frozen at or below 40 ± 5 °F for 28 days. If this practice is followed, the frozen cartridges should be thawed uniformly prior to using.		

Application

Mixing

When using mechanical methods, care must be taken to avoid high shear equipment that may destroy thixotropy.

Applying

The substrate must be free from contamination, i.e. dirt, oil grease, etc. Clean the surface by wiping with a suitable solvent/cleaning agent and dry thoroughly. Apply DAPCO™ 1-100 primer and then DAPCO™ 18-4F sealant (Note: DAPCO™ 18-4F must be applied within 90 minutes after the primer has dried). When circumstances prevent immediate application of DAPCO™ 18-4F, the surface must be cleaned thoroughly to remove the primer before repeating the entire process. Handling strength is achieved in 24 hours at 72°F (25°C) (loads on the product should be limited until full cure is achieved).

Curing

DAPCO™ 18-4F is generally cured at ambient temperatures above 55°F (13°C). Cure can be accelerated by warming to 150°F (65°C) for a minimum of 4 hours. Moisture helps develop final properties (a relative humidity ranging between 30-70% is preferred). Optimum physical properties are developed when the product is cured a minimum of seven days at 72°F (22°C) and 50% R.H.

Cure may be inhibited by proximity or contact with a variety of materials including old RTV silicone sealant of the tin-cure variety, polysulfide, sulfur, amine and amide compounds, natural, nitrile or other organic rubbers, paper masking tape, plasticizers, lubricants, release agents or solvents.

Cleanup

Before the material has cured, the excess may be removed using DAPCO™ 2000 diluent.

Typical cured properties

When cured in accordance with the recommended schedule, the following typical properties are developed:

Hardness (shore A)	50
Lap shear strength, psi	
· initial	200
· after 7 day aging at 400° F (204° C)	220
· after 7 day exposure to condensing humidity at 120° F (49° C)	250
· after 7 day immersion in BMS 3-11 hydraulic fluid	220
Specific gravity	1.47
Flame resistance, BMS 5-63 Rev. J	0 flame penetration
Compression set 72 hrs @ 350° F	~55%

Storage and handling

Shelf life: 12 months from date of shipment
Store AT OR BELOW 77°F (25°C)
Keep containers tightly sealed.

Safety

Material Safety Data Sheet available upon request

Important notice

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