



AC-[®]665 Class C Corrosion Inhibitive Sealant

SIN #834-100

Description

AC-[®]665 Class C is a two-part, manganese-cured, chromate containing, corrosion inhibiting sealant. This sealant provides an effective barrier against the common causes of corrosion on aluminum and between dissimilar metals. AC-[®]665 Class C has outstanding resistance to aviation gasoline and jet fuel, as well as resistance to chemicals, hydraulic fluids, and petroleum products common to the aircraft industry. The mixed compound is a flowable, faying surface grade material, easily applied by brush, spatula, extrusion gun or roller. It maintains its flexibility and bond strength on most metal substrates under extremes of temperature, weathering and stress.

Applications

- sealing faying surfaces of mating parts
- sealing joints from passage of liquid or air
- prevent corrosion and channeling leakage

Specifications

CSNP-035 - Qualified
 STM 40-112 - Qualified
 MIL-PRF-81733 Type IV – C-12, C-24, C-48 qualified
 GAMPS 7115 – C-12 qualified

Typical Physical and Application Properties

Color	
Base:	Yellow
Accelerator:	Black
Mixing Ratio	100 base/10 accelerator (by weight)
Non-Volatile Content	93%
Base Viscosity (RVF Brookfield #6 spindle @ 2 rpm, 77°F)	2000 to 3500 poise

Application Life and Cure Time (@ 75°F, 50% Relative Humidity)

	Minimum Application Life ¹	Assembly Time ²	Typical Cure Time ³
C-12	12 hours	24 hours	14 days
C-24	24 hours	48 hours	21 days
C-48	48 hours	168 hours	56 days
C-96	96 hours	336 hours	16 weeks
C-96	96 hours	336 hours	20 weeks*

*time to 35A hardness

Typical Physical and Performance Properties of Cured Compound when tested per MIL-PRF-81733D

Color	Black
Specific Gravity	1.52 to 1.55 g/cc
Hardness	45- 50 Shore "A"
Soluble Chromate Content*	4-5%
Low Temperature Flexibility	No cracking, checking or adhesion loss when tested at -65°F (-54°C)
Thermal Stability, (48 hrs @ 250°F)	Does not soften, blister, crack or blow
Service Temperatures	-65 to +250°F (-54 to +121°C)
Corrosion	Excellent protection from corrosion caused by galvanic coupling of dissimilar metals
Repairability	43 piw to itself and other MIL-PRF- 81733 qualified sealants
Fungus Resistance	Non-nutrient
Tensile Strength	260 psi
Elongation	550%

*Not part of specification

¹Application life refers to the length of time the mixed compound remains at a consistency suitable for application with brush roller, spatula or caulking gun. Application life is measured at a standard temperature of 77°F with a relative humidity level of 50%. In general, for every 20°F rise in temperature, the application life is halved; and for every 20°F drop, it is doubled. High humidity levels during the mixing process will shorten application life.

²Assembly Time is the amount of time that a sealant will remain useable in a faying surface joint such that the sealant will allow excess material to squeeze out of a joint to less than 0.004 inches

³Cure time is defined as the length of time it takes AC-[®]665 Class C sealant to reach 30A hardness. It depends on three factors: remaining application life, temperature and relative humidity. The temperature/humidity factors for application life also apply to curing. To accelerate the cure, heat may be applied up to (but not more than) 120°F. The sealant should be covered when heating to allow the best cure.



Peel Strength**

Substrate	Conditioning	Load/% Cohesion
Mil-C-81706	Dry	47 lbs./100%
Mil-C-81706	3% NaCl, 48 hours @ 140°F	43 lbs./100%
Mil-C-81706	JRF 48 hours @ 140°F	34 lbs./100%
Mil-A-8625	Dry	41 lbs./100%
Mil-A-8625	3% NaCl, 48 hours @ 140°F	42 lbs./100%
Mil-A-8625	JRF 48 hours @ 140°F	33 lbs./100%
Mil-T-9046	Dry	38 lbs./100%
Mil-T-9046	3% NaCl, 48 hours @ 140°F	40 lbs./100%
Mil-T-9046	JRF 48 hours @ 140°F	36 lbs./100%
QQ-P-416 TyII ¹	Dry	41 lbs./100%
QQ-P-416 TyII ¹	3% NaCl, 48 hours @ 140°F	38 lbs./100%
QQ-P-416 TyII ¹	JRF 48 hours @ 140°F	36 lbs./100%

**Tested per Mil-PRF-81733D

Specification requirement: 15-piw/100% cohesive failure

¹ Surface treated with AMS-3100 adhesion promoter

Two-Part Sealant Cartridges:

1. Holding the cartridge, grasp the dasher rod and pull back approximately one inch.
2. Insert the ramrod into the hollow of the dasher rod, break the piston loose, and inject about 1/3 of the contents into the cartridge.

Note: Do not inject all of catalyst in one location. Distribute evenly throughout base material.

3. Repeat steps 2 and 3 until all the contents of the rod are emptied into the cartridge. Remove the ramrod.
4. Mix for the required number of strokes (hand mixing) or for the required amount of time (machine mixing) indicated in the kit instructions.

5. When mixing is complete, remove bottom cap.
6. Pull the dasher rod back to the neck of the cartridge, grasp the cartridge firmly at the neck, unscrew the dasher rod and remove.
7. Screw the nozzle into the cartridge, insert into the extrusion gun and use as required. For hand extrusion, press the used dasher rod against the plunger to force the material from the cartridge.

Storage

The shelf life of AC-®665 Class C is 9 months from date of packaging, when stored at temperatures below 80°F in its original container.

Mixed AC-®665 Class C may be stored under refrigeration as follows:

15 days at -10°F
30 days at -40°F

It is important to remember that freezing, storing and thawing procedures reduce application life. Also, frozen storage will reduce application life by varying amounts depending on the storage temperature and length of storage time. All aspects of storage, freezing and thawing should be planned carefully and it is not recommended to mix and freeze with less than ½ hour of available application time.

Health and Safety Precautions

AC-®665 Class C sealant is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Material Safety Data Sheet (MSDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An MSDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

All values are typical and are not intended for specification use.

AC-665C-04/09

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