Naftoseal® MC-780 Class C

FUSELAGE AND FUEL TANK SEALANT

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1 Description

Naftoseal® MC-780 Class C is a two-component, manganese-dioxide cured polysulfide polymer system with reduced density providing excellent fuel tank and fuselage seals. It is designed for interfay surface sealing and wet riveting of fuselage components and has outstanding resistance to aviation gasoline and jet fuel, as well as resistance to the chemicals and petroleum products used in the aircraft industry. Additionally, it was developed for a service temperature between -55 °C (-67 °F) to +130 °C (+ 266 °F) and withstand a short-term temperature of +182 °C (+360 °F).
Naftoseal® MC-780 Class C maintains its flexibility and bond strength on most metal substrates like aluminum, stainless steel, steel, titanium, composite and many coatings under extremes of temperature, weathering and stress.
Naftoseal® MC-780 Class C combines low viscosity, for ease of mixing, with a high thixotropy giving good application characteristics. It can be effectively applied by extrusion, by injection gun, or by using a roller coating technique. The low viscosity means that it is easily squeezed from interfaying surfaces during the assembly process. It has a unique „self-filleting“ characteristic.
Naftoseal® MC-780 Class C can be mixed by MCI-Mixer or by appropriate 2-component mixing and dosing systems.
The curing time may be reduced considerably by increasing the temperature (up to 60°C or 140°F max).

2 Field of application

- Sealing fuselages and fuel tanks

3 Specifications

Naftoseal® MC-780 Class C fulfils the requirements of specifications from Airbus, Bombardier, Embraer and others (details see separate QPL).

Application life and cure time at 23°C (73°F) / 50% r.H.			
Type	**Min. Application Time**	**Tack Free Time**	**Time to Shore A 30**
Naftoseal® MC-780 C-1/3	20 minutes	30 minutes	≤ 3 hours
Naftoseal® MC-780 C-2	2 hours	3 hours	≤ 12 hours
Naftoseal® MC-780 C-4	4 hours	6 hours	≤ 30 hours
Naftoseal® MC-780 C-8	8 hours	12 hours	≤ 7 days
Naftoseal® MC-780 C-12	12 hours	20 hours	≤ 10 days
Naftoseal® MC-780 C-24	24 hours	80 hours	≤ 20 days
Naftoseal® MC-780 C-36	36 hours	120 hours	≤ 30 days
Naftoseal® MC-780 C-48	48 hours	168 hours	≤ 56 days

Naftoseal® MC-780 C-60	60 hours	240 hours	≤ 70 days

Typical Physical and Application Properties		
	Base	**Hardener**
Colour	Beige	Brown
Viscosity at 23 °C, Brookfield RV, Spindel 7	Spindel 6 (for C-1/3 + C-2), all others spindel 7, 10 rpm 250 Pa•s. max.	Spindel 7, 10 rpm 400 Pa•s. max.
Mixing ratio by weight	100	10
Mixing ratio by volume	100	7,26

Typical Values of MC-780 Class C after 14 days at 23 °C (73 °F) / 50 % r.h.	
Colour	Brown
Specific gravitiy	1,35 g/ccm max.
Ultimate Shore A Hardness	Ca. 45
Service temperature	-55 °C (-67 °F)/ +130 °C (+266 °F) (short term + 182 °C or 360 °F)
Peel Strength on Aluminum, Epoxy Primer, Top Coat and other Substrates	≥ 120 N/25mm

Mixing Instruction for Techkits			
Naftoseal® MC-780 C	Motor revolution in rpm	Strokes up and down	Mixing Time
	110 ± 10	90	2 Min ± 1 Min

4 Surface preparation

To obtain good adhesion, clean surfaces with appropriate cleaners (e.g. Chemetall's Ardrox® products like Ardrox® 5529 or Ardrox® 5575) to remove dirt, grease and processing oils just prior to sealant application. Use lint-free rags or paper towels that are free of oil. Always pour cleaner on the cloth to avoid contamination of the cleaner supply. Clean one small area at a time, quickly wiping it dry before the cleaner's solvent evaporates to prevent redeposition of oil, wax or other contaminants. Usually, in the case of most epoxy resin primers, surfaces need not be additionally prepared with an adhesion promoter to improve adhesion. PUR and EP topcoats as well as composite components should be pre-treated by the Naftseal® MC-115 Adhesion Promoter.

5 Packaging

Designation	Base Compund Content/Pierce	No. / Case
Techkit 55	58 ccm	24
Techkit 130	137 ccm	24
Kit 25	263 ccm	12
Kit 100	1050 ccm	4
Pail	162 litre	9 x 18 l Base + 1 x 12 l Hardener
Drum	162 litre	1 x 162 l Base + 1 x 12 l Hardener

6 Storage

The shelf life of Naftoseal® MC-780 Class C is 6 months from date of manufacture, when stored at temperatures below 26 °C in its original unopened container. Storage at lower temperatures increases shelf life.

7 Health and safety precautions

See Safety Data Sheet.

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