

Naftoseal[®] MC-780 Class B

FUSELAGE AND FUEL TANK SEALANT

1 Description

Naftoseal[®] MC-780 Class B is a two-component, manganese-dioxide cured polysulfide polymer system with low density providing excellent fuel tank and fuselage seals. It 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 B 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.

The mixed compound is a thixotropic paste easily applied by extrusion, injection gun or spatula. It has excellent tooling properties.

Naftoseal[®] MC-780 Class B 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 B 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 B-1/4	15 minutes	≤ 3 hours	≤ 4 hours
Naftoseal [®] MC-780 B-1/2	30 minutes	≤ 4 hours	≤ 8 hours
Naftoseal [®] MC-780 B-1	1,0 hours	≤ 7 hours	≤ 10 hours
Naftoseal [®] MC-780 B-2	2,0 hours	≤ 10 hours	≤ 10 hours
Naftoseal [®] MC-780 B-4	4,0 hours	≤ 16 hours	≤ 24 hours

Typical Physical and Application Properties			
	Base		Hardener
Colour	Grey		Brown
Viscosity at 23 °C, Brookfield RV, Spindel 7	1.000 ± 400 Pa.s (B-1) 1.400 ± 400 Pa.s (B-1/4, B-1/2, B-2, B-4) (2 rpm)		400 Pa.s max. (10 rpm)
Mixing ratio by weight:	100		10 (B-1/2, B-1, B-2, B-4) 14 (B-1/4)
Mixing ratio by volume	100		6,2
Non-volatile content	≥ 94% (B-1) ≥ 97% (B-1/4, B-1/2, B-2, B-4)		
Typical Values of MC-780 Class B after 14 days at 23 °C (73 °F) / 50 % r.h.			
Colour	Grey		
Specific gravity	1,1 g/ccm (B-1/4 ca. 1,2 g/ccm)		
Ultimate Shore A Hardness:	Ca. 45		
Service temperature	-55 °C (-67 °F)/ +130 °C (+266 °F) (short term + 182 °C or 360 °F)		
Tensile Strength	≥ 1,5 N/mm²		
Elongation	Ca. 300 %		
Peel Strength on Aluminum, Epoxy Primer, Top Coat and other Substrates	≥ 120 N/25mm		
Mixing Instruction for Techkits			
Naftoseal® MC-780 B	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 Ardrex® products like Ardrex® 5529 / 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 Naftoseal® MC-115 Adhesion Promoter.

5 Packaging

Designation	Base Compound 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 B 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.

The above details have been compiled to the best of our knowledge on the basis of tests and research work and with regard to the current state of our practical experience. This technical product information is non-binding. No liabilities or guarantees deriving from or in connection with this leaflet can be imputed to us. Statements relating to possible uses of the product do not constitute a guarantee that such uses are appropriate in a particular user's case or that such uses do not infringe the patents or proprietary rights of any third party. The reproduction of any or all of the information contained in this leaflet is expressly forbidden without Chemetall's prior written consent.

**Headquarters and Regional Head Office
Europe, Middle East, Africa, South America**
Chemetall GmbH
Trakehner Straße 3
60487 Frankfurt am Main, Germany
Tel: +49 (0) 69 7165-0

**Regional Head Office
North America**
Chemetall US, Inc.
675 Central Avenue
New Providence, NJ 07974, USA
Tel: +1-908-464-6900

**Regional Head Office
Asia-Pacific**
Chemetall Asia Pte Ltd.
12 Loyang Crescent
Singapur 508980
Tel: +65 6885 7900