

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.

Naftoseal[®] MC-780 Class B can be mixed by MCI-Mixer or by appropriate 2-component mixing and dosing systems.

The mixed compound is a thixotropic paste easily applied by extrusion, injection gun or spatula. It has excellent tooling properties. For a good surface finish Naftosmooth can be used after application.

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

| 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/mm ² | | |
| 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.

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.

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