TECHNICAL DATA SHEET

MF3590CL

POLYASPARTIC COATING SYSTEM
ALIPHATIC-HIGH SOLIDS

DESCRIPTION

MF3590CL is a two-component, high solids, V.O.C. compliant, long working time aliphatic polyaspartic, developed for UV stable floor topcoats. It provides outstanding appearance, superior chemical, UV, and solvent resistance. It exhibits excellent physical properties.
This system complies with the Canadian Food Inspection Agency (C.F.I.A.).
The clear version is primarily used as a topcoat over vinyl flake, providing excellent appearance

APPLICATIONS

- Marine protection for fiberglass, steel, concrete, or wood
- Aircraft hangar floors
- Low-temperature equipment
- Offshore platforms
- Industrial workshop floors
- Car washes or wash bays
- Decks

ADVANTAGES

- Superior chemical resistance
- Superior weather resistance
- Superior abrasion resistance
- Yellowing resistance
- Gloss retention
- Very low odor
- Applicable indoors and outdoors
- Excellent adhesive properties, allowing application over other firm and hard coatings
- VOC compliant in all 50 states and Canada

LIMITATIONS

- Minimum/maximum substrate temperature: 15°C/30°C (59°F/86°F).
- Maximum relative humidity during application and curing: 85%.
- Substrate humidity must be less than 4% during coating application.
- Protect from moisture, condensation, and water contact during the initial 24 hours of curing.
- **Does not protect against high hydrostatic pressure.**

TECHNICAL INFORMATION

FORMAT: Kit of 2 gallons.
RATIO:
Resin: 1 parts A / Activator: 1 part B
POT LIFE (450g) at 25 °C : 40-50 minutes
SHELFLIFE: 1 year in sealed container
ABRASION RESISTANCE:
ASTM D4060, Taber Abrader CS-17 Wheel / 1000g (2.2 lbs.) /1000 cycles**:** Lost de 30 mg
BOND RESISTANCE: ASTM D4541:
>500 psi (Substrate ruptures)
WATER ABSORPTION: ASTM D570: 0.2%
WATER VAPOR TRANSMISSION: ASTM E96 Water Procedure B - Film 0.01cm (0.004"):
1 perm
FALLING SAND ABRASION RESISTANCE 45 (L SAND/ 1 DRY MIL), ASTM D968
GLOSS ASTM D523 : 95+
FLEXIBILITY, 1/8" MANDREL ASTM D1737
Pass
FIRE RATING CAN/ULC S102: Estimated on similar coating:
Flame spread: 5
Smoke developed: 94
TEAR STRENGTH (PLI), ASTM D2240: 350
COMPRESSIVE STRENGTH: ASTM D695
9000-10 000+ psi,
TENSILE STRENGTH: ASTM D638
7000-8000 psi
ELONGATION: ASTM D638: 100-110%
HARDNESS: Shore D = 75-78

PROPRIETIES

GLOSS ASTM D523**: >**95%
SOLIDS IN WEIGHT MIX: 98.5%
SOLIDS BY VOLUM MIX: 98.5%
VOC: 28g/l
VISCOSITY: @25°C (CPS)
Mix: (A+B): 300-400

APPLICATION INFORMATION

15°C (59F – 25°C (77F), R.H below 85%
WORKING TIME: 35-45 min
NUMBER OF COATS: 1 or 2

COVERAGE/THICKNESS

THICKNESS:
Clear and colours:
1st coat: 5-10 mils
2ndcoat: 6-10 mils
3rd coat recommended: Non-slip satin polyurethane
COVERAGE PER GALLON:
CLEAR/COLOUR:
150-350 ft^2./ 3.78 L (1 US gal.) @ 5-10 mils.
Please note that a porous or imperfect surface will require more materials.

DRYING TIME

Substrate Temperature	10 °C	20 °C	30°C
Recoat min/max (h)	24/48	6/12	4/8
Foot traffic (days)	3	2	1
Light traffic (Days)	7	5	3
Full cure (Days)	10	7	5

MIXING

Materials must be preconditioned to a minimum of 15°C (50°F) before use. Thoroughly mix each component separately using paddle mixers and a drill for at least 2 minutes to place the solids content evenly in suspension. Pour Component B into Component A using the appropriate mixing ratio of 1A:1B by volume. Mix the two components for at least 3 minutes using a low-revolution drill (300 to 450 rpm) to reduce air entrapment. During mixing, scrape the bottom and sides of the container at least once to ensure a uniform mixture. Prepare only the amount that can be applied during the pot life of the mix.

PREPARATION SURFACE

Old Concrete
Concrete surface must be cleaned and mechanically prepared using shotblasting, sand blasting, and/ or diamond grinding. All oils, sealers, curing agents, waxes and fats must be removed prior to product application. Do not apply onto wet substrates. Chloride, moisture, and pH levels should be checked prior to application. Strongly recommended to use primer (MF2700) prior to application of MF3590CL. All cracks and substrate imperfections should be filled and repaired prior to application.
New Concrete
New concrete should be allowed to cure for a minimum of 30 days. Compression resistance of concrete must be at least 25 MPa (3625 lbs./inch2) after 28 days and traction resistance must be at least 1,5 MPa (218 lbs./inch2). Shotblasting, sand blasting, and/or diamond grinding is required to remove the surface laitance that appears during the concrete finishing and curing process. MF2700 primer is recommended to be used to seal porous concrete surfaces prior to application. All cracks and substrate imperfections should be filled and repaired prior to application.

REVÊTEMENTS MF PERFORMANCE COATINGS

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APPLICATION

Apply mixed product on the prepared surface tightly (thin film) using a rubber rake and pass a roller to obtain a uniform coating. Avoid creating puddles.
Relative humidity can have a significant impact on drying characteristics. The product dries faster at higher relative humidity, while lower relative humidity will slow drying and handling time. Ensure that the previously applied area is overlapped while it is still damp and not tacky to avoid overlap marks.

Flakes System

Use a colored base coat of MF2700 followed by a complete flake seeding. Wait 8-16 hours then scrape off the excess flakes and vacuum everything. Then apply the clear MF3590CL topcoat or a coat of MF3550 polyaspartic.

PRECAUTIONS FOR USE

Use the floor for light traffic until the coating is fully cured. It is best to keep the floor dry throughout the entire curing cycle. Depending on the system applied, the surface may be slippery, especially when wet or contaminated; keep the surface clean and dry. **Lower temperatures will prolong curing.**

CLEANING TOOLS

Clean all tools and equipment with epoxy cleaner/thinner. Wash hands and skin with soap and warm water. Once cured, the product can only be removed mechanically.

CLEANING THE SURFACE

Caution! Some cleaning products may affect the colour of the installed system. Test each cleaner on a small area, using the same cleaning technique that will be used for the rest of the surface. If no change is noted, continue cleaning.

DISPOSAL

Allow the mixture to harden and dry thoroughly before disposing of it.

Contact your local municipality for environmentally friendly disposal of containers and surplus materials.

WARRANTY

This product will give complete satisfaction if applied according to the manufacturer's instructions. In the event that it is found defective upon inspection, the manufacturer's liability is limited to replacement of the product and does not include labor during application.

RESTRICTIONS:

MF Performance and MF Performance Plus products should not be combined in the same system or with equivalent products from other brands. MF Paints does not guarantee compatibility with any combination of products from other brands. Any product change requires compatibility testing. It is your responsibility to verify product compatibility before use. The use of incompatible products may also void the warranty.
We strongly recommend that you read the instructions for use carefully before installing the selected system. If in doubt, do not hesitate to contact your representative for advice.

CAUTION

Exposure to propane combustion by-products during the curing period of the coating may cause discoloration. During the application and curing period, propane forklifts and other propane-powered vehicles or heaters should not be used in the area until the coating is completely cured, at least 72 hours.

CHEMICAL RESISTANCE

Acetic Acid 100%	C
Acetone	C
Ammonium Hydroxide 50%	RC
Benzene	C
Brine Saturated H_2O	R
Chlorinated H_2O	R
Clorox (10%) H_2O	R
Diesel Fuel	RC
Gasoline	RC
Gasoline/5% MTBE	RC
Gasoline/5% Methanol	RC
Hydrochloric Acid 20%	R
Hydrochloric Acid 10%	NR
Hydraulic Fluid (oil)	RC
Isopropyl Alcohol	R
Lactic Acid	RC
MEK	RC
Methanol	R
Methylene Chloride	C
Mineral Spirits	RC
Motor Oil	R
MTBE	C
Muriatic Acid 10%	R
NaCl/H20 10%	R
Nitric Acid 20%	NR
Phosphoric Acid 10%	R
Phosphoric Acid 50%	NR
Potassium Hydroxide 10%	R
Potassium Hydroxide 20%	R, Dis
Propylene Carbonate	RC
Skydrol	C
Sodium Hydroxide 25%	R
Sodium Hydroxide 50%	R, Dis
Sodium Hypochlorite 10%	R
Sodium Bicarbonate	R
Stearic Acid	R
Sugar/H_2O	R
Sulfuric Acid 10%	R
Sulfuric Acid >50%	RC
Toluene	R
1,1,1-Trichloroethane	C
Trisodium Phosphate	R
Vinegar/H_2O 5%	R
H_2O	R
H_2O 14 days at 82°C	R
Xylene	RC

R = Recommended/ little or no visible damage
RC = Recommended Conditional/ some effect, swelling or discoloration
C = Conditional/ cracking-wash within one hour of spillage to avoid affects
NR = Not Recommended
Dis = Discoloration

Before using any product, ensure that the Material Safety Data Sheet is read and understood.
Please contact your MF Paints Inc. representative at 1-800-363-8034 for further information.