

CrownMMA™

TECHNICAL DATA SHEET

Product System Numbers: See chart below

Revision Date: 05/11/17

Methyl Methacrylate Floor Product

DESCRIPTION

CrownMMA™ is a low viscosity, thermosetting methyl methacrylate initiated by the addition of CrownMMA™ BPO. CrownMMA™ is designed especially for flooring applications which require quick turnaround and a quick return to service. This coating cures extremely fast and is ready for immediate use within one hour of application.

TYPICAL USES

- Pharmaceuticals
- Hospitals
- Laboratory
- Restaurants
- Retail Stores
- Laundry Facilities
- Schools
- Hotels

BENEFITS

- Ready for full services in one hour
- 100% Active, Low Viscosity for excellent flow and concrete penetration
- Complete system can be build-up to ¼" thickness within 1day.
- Very good chemical resistance
- UV resistance
- Excellent for quick resurfacing
- Elevated temperature resistance
- Hot tire resistance
- Good scratch and wear resistance

MMA Product Selection Guide

Crown Polymers offers a complete line of methyl methacrylate for the everyday flooring needs where quickest turnaround time or return to services are required or low temperature application, -20°F, is needed.

Prod #	Name	Description
8701	CrownMMA™ Sealer	This is the premier MMA sealer for direct to concrete. The lower viscosity allows for quick penetration into the concrete for a strong bond and surface reconditioning.
8702	CrownMMA™ Base	This is the MMA mid layer/ body coat for broadcasting, slurry or self-leveling application for achieving thin to thicker coat and/or resurfacing of spalled concretes.
8703	CrownMMA™ TopCoat	This is the MMA high wear and chemical resistance coating. It is a very hard surface for every day all-purpose high performance topcoat.
8704	CrownMMA™ FlexTop	This MMA topcoat is where thermal shock or high heat resistance or UV resistance is required for area such as kitchen, hot/cold wash down or outdoor pool deck or just outdoor coating.
8705	CrownMMA™ Cove	Specially designed for hanging on wall or wall coating to cove based designed or where quick-patching is required or specified.
8706	CrownMMA™ BPO	Designed for used as an initiator or activator to harden all CrownMMA product. BPO is an initiator for free radical formation. Its dosage is temperature dependent.
8707	CrownMMA™ Cleaner	MMA solvent use to clean all of Crown Polymers MMA product.

PHYSICAL & CHEMICAL DATA / MECHANICAL PROPERTIES

PHYSICAL CHARACTERISTICS

DESCRIPTION	PHYSICAL PROPERTIES
Components	2 Sides
Visual Appearance	Satin
Density	8.0 lb/gal
VOC content	<100g/l
Pot Life @ 70°F 50% RH	20 minutes
Equipment	brush, roller
Theoretical Coverage	80-100 ft ² /gal @ 15-20 mils WFT
Dry to Touch @ 70°F, 50%RH	1 hour
Full Cure	1 hour
Recoat Time @ 70°F	1 hour
Min. Application Temp.	-20°F

CHEMICAL DATA @ 70°F

DESCRIPTION	DATA
pH Range	4 to 13
Inorganic Acids	Good
Organic Acids	Good
Alkali	Excellent
Solvents	Good
Hydrocarbons	Good

PACKAGING

Available in 1 gallon and 5 gallon pails

COLORS

Pigmented Only – See “Crown’s Color Guide”.

STORAGE

This product has a maximum shelf life of one year when stored off the ground in a dry area at 50° to 90°F, in the original sealed container.

MECHANICAL PROPERTIES

CrownMMA™ SYSTEM PRODUCTS	CrownMMA Sealer	CrownMMA Base	CrownMMA TopCoat	CrownMMA FlexTop
Surface Prep Required	ICRI CSP-3	N/A	N/A	N/A
Adhesion, ASTM D7234 (concrete)	>400 PSI, Concrete Failure	N/A	N/A	N/A
Tensile Strength, DIN EN ISO 604	1276 psi	2610 psi	1276 psi	870 psi
Tensile Elongation, DIN EN ISO 527	0.8 %	2.3 %	0.8 %	2.3 %
Hardness, Konig (3 mils) ASTM D4366	110	110	110	105
Water Absorption, ASTM D570	<0.1%	<0.1%	<0.1%	<0.1%
Abrasion Resistance, ASTM D4060	N/A	N/A	50 mg loss	30 mg loss

PRELIMINARY FLOOR INSPECTIONS & SURFACE PREP

COVERAGE

MMA is thickness driven apply at 15-20 mils on average is required. 1 gallon covers 80-100 sq.ft. at 15-20 mils. Important: Proper ventilation is required to move the surface air to ensure proper curing.

LIMITATIONS

This product is best suited for application in temperatures between 60°F and 90°F. Certain colors appear white when scratched such as blue based. Higher temperature will result in faster dry time or poor workability. Color may vary due to batch to batch variation, especially in higher temperature. MMA is sensitive to too much air flow or not enough air movement. MMA cannot tolerate any moisture present in concrete. Do not overwork MMA. MMA is driven by proper thickness – adhere to recommended spread rate/film thickness.

HANDLING/SAFETY

DANGER. MMA is highly flammable. Eye and skin irritant. May cause dermatitis and sensitization. Always read and understand the product SDS. Avoid contact with eyes, skin or clothing. Avoid breathing vapor, mist or spray. Always wear an OSHA approved respirator when using this product. Use with good ventilation.

FIRST AID

In case of contact:

1. Eyes: Immediately flush with water for at least 15 minutes.
2. Skin: Immediately remove from skin with dry cloth followed by thorough washing with soap and water.
3. Inhalation: Remove to fresh air. If breathing is difficult, give oxygen.
4. Ingestion: Immediately call a Poison Center/Doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

CAUTION

Always read and understand the specific product data guide and SDS sheets before using this product. For more information contact Crown Polymers.

CHECK THE CONCRETE

Concrete must be structurally sound and free of curing membrane, paint or other sealer. If you suspect that the concrete has been previously sealed, call Crown Polymers technical support for further instructions.

CHECK FOR MOISTURE

Concrete must be dry before application of this floor coating material. Concrete moisture testing must occur. Calcium chloride testing or in-situ relative humidity testing is recommended. Test methods can be purchased at www.astm.org, see ASTM F1869-11 or F2170-11, respectively or follow manufacturer's instructions. Readings must be below the defined threshold as specified for each Crown Polymers system to be installed directly to the concrete substrate. Please refer to the appropriate Technical Data Sheet for this information. Concrete moisture vapor transmission cannot supersede 3lb or more than 75% relative humidity.

*Note: Although testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or the vapor barrier is not functioning properly and/or you suspect you may have concrete contamination from oils, chemical spills or excessive salts.

CHECK THE TEMPERATURE & HUMIDITY

Floor temperature and materials should be between 65°F (18°C) and 90°F (32°C). Humidity must be less than 80%. DO NOT coat unless floor temperature is more than (5°F) over the dew point.

APPLICATION

1. SURFACE PREPARATION

This product requires preparation to perform as expected. Substrate must be mechanically profiled (ASTM 4259-83), clean, sound, dry, and contaminate free.

2. APPLICATION EQUIPMENT

Tools: 3" Disposable brush, low speed drill (450rpm) with 3.5" Jiffler blade, 3/8" nap non-shedding phenolic core roller. Note: A 1/8" V-notch rubber squeegee is only required for self-leveling applications.

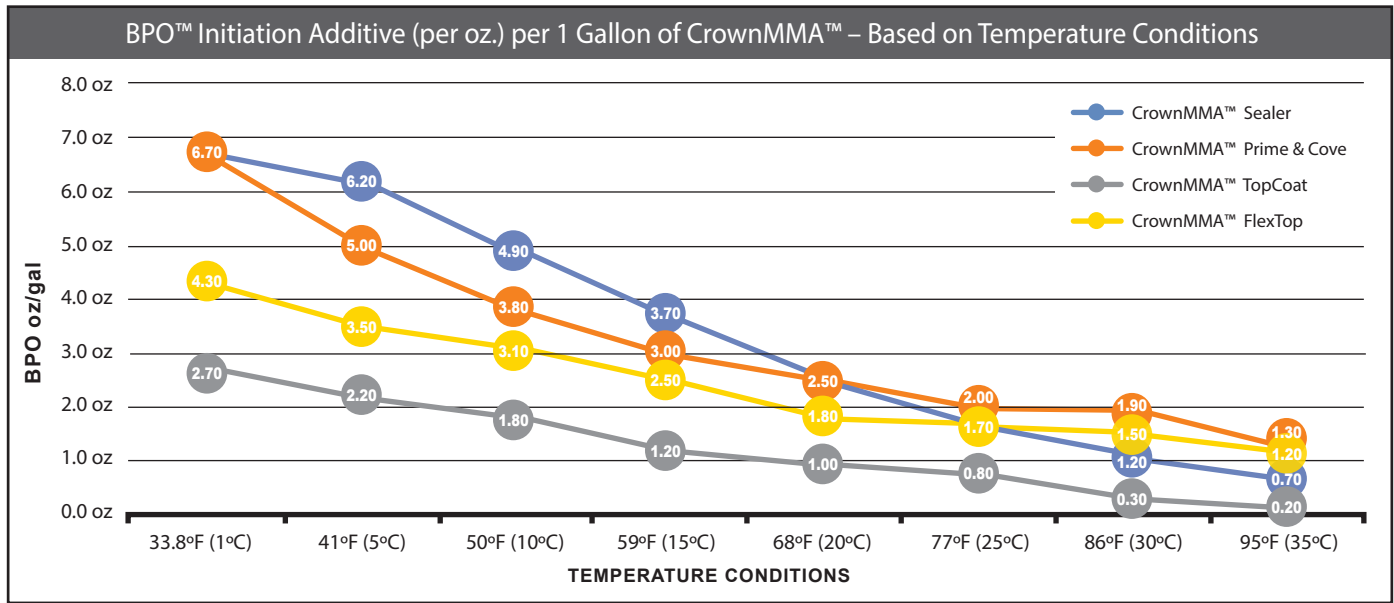
3. MIXING

The temperature of the material should be between 60-80°F (15-25°C).

1. Premix CrownMMA™ well to ensure liquid uniformity.
2. DO NOT THIN CrownMMA™.
3. Thoroughly mix CrownBPO™ into CrownMMA™.

Note: CrownBPO™ (benzoyl peroxide) is the initiation system required to harden CrownMMA™. CrownBPO™ must be completely dissolved to ensure rapid curing of CrownMMA™. Boxing is very helpful when installing. This will ensure the colors are consistent. See mixing ratios chart on next page.

THE APPLICATION PROCESS cont.



TEMPERATURE FOR BPO ADDITIVE	33.8°F (1°C)	41°F (5°C)	50°F (10°C)	59°F (15°C)	68°F (20°C)	77°F (25°C)	86°F (30°C)	95°F (35°C)
CrownMMA™ Sealer	6.7 oz	6.2 oz	4.9 oz	3.7 oz	2.5 oz	1.7 oz	1.2 oz	0.7 oz
CrownMMA™ Prime	6.7 oz	5.0 oz	3.8 oz	3.0 oz	2.5 oz	2.0 oz	1.9 oz	1.3 oz
CrownMMA™ TopCoat	2.7 oz	2.2 oz	1.8 oz	1.2 oz	1.0 oz	0.8 oz	0.3 oz	0.2 oz
CrownMMA™ FlexTop	4.3 oz	3.5 oz	3.1 oz	2.5 oz	1.8 oz	1.7 oz	1.5 oz	1.2 oz
CrownMMA™ Cove	6.7 oz	5.0 oz	3.8 oz	3.0 oz	2.5 oz	2.0 oz	1.9 oz	1.3 oz

4. ROLL ON

Priming concrete is critical. After mixing all contents as instructed, immediately pour out into a ribbon on the surface. Spread the material out evenly and check for desired film thickness by using a wet-film thickness gauge. Roll spread then quickly back roll. Flat squeegee is not recommended for use with CrownMMA™. Material is ready for full services in one hour.

IMPORTANT

Proper ventilation is required to move air to ensure proper curing. Observe all fire hazards, legal, and health and safety precautions when handling or storing solvents, particularly in confined spaces. Make sure the working area is well ventilated at all times during application and curing times.

CLEAN-UP

Clean-up mixing station, tools and application equipment immediately after completion. Use CrownMMA cleaner.

DISPOSAL

Dispose all excess materials, packaging, and other waste in accordance with federal, state, and local regulations.

TECHNICAL SUPPORT

For any application questions, please call our Crown Polymers Technical Team. PLEASE SEE SAFETY DATA SHEET (SDS) FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED. KEEP OUT OF THE REACH OF CHILDREN.

DISCLAIMER

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests. The accuracy and completeness of such tests are not guaranteed and are not to be construed as a warranty, expressed or implied. It is the responsibility of the user to document information and tests to determine the intent of the product for ones' own use. The application, job conditions and user assumes all risks and liability resulting from use of the product. We do not suggest or guarantee any hazards listed herein are the only ones, which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use the product. Recommendations or statements, whether in written or verbal, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and Crown Polymers makes no claim that these tests or any other tests accurately represent all environments. Not responsible for any typographical errors.

LIMITED WARRANTY

Crown Polymers warrants its products to be free of manufacturing defects and meets all Crown Polymers current published physical properties. Crown Polymers' sole responsibility shall be to replace the portion of any product proved to be defective. There are no other warranties by Crown Polymers of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Crown Polymers shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. Crown Polymers shall not be responsible for the use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee pertaining to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator will be issued. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. Crown Polymers reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

