



ChemMasters®

Durapatch™ mMa

Methyl Methacrylate
Concrete Repair Mortar

SPECIALTY CONSTRUCTION PRODUCTS

P R O D U C T D A T A

DESCRIPTION

Durapatch mMa is a two component, methyl methacrylate based concrete patching material. **Durapatch mMa** sets very rapidly to minimize downtime or traffic disruption. When mixed, **Durapatch mMa** forms a durable polymer concrete which bonds tenaciously to the concrete substrate and develops very high compressive strength. **Durapatch mMa** resists freeze thaw damage and has excellent chemical resistance.

USES

- Rehabilitation of bridge decks, airport runways and expansion joints
- Cold weather patching
- Industrial and commercial concrete repair application where quick turnaround is important
- Chemical resistant patching applications such as in chemical / food processing or containment areas
- Areas where high strength patching is required such as loading docks, high traffic aisles, tipping floors or floors subjected to steel wheel traffic

ADVANTAGES

- Cures rapidly for emergency repairs in high traffic areas
- Superior compressive, tensile and flexural strengths; withstands high levels of abrasion and impact loading
- Excellent bond to existing concrete
- Optimum flexibility to withstand vigorous thermal cycling
- Freeze thaw resistant
- Excellent resistance to acids and alkalis
- Exceptional ultraviolet light stability
- Can be extended with up to 20 pounds (9 kg) of 3/8" washed dry pea gravel or used neat

Packaging Product Number

Kit F5370.05 35 lb unit	Part A Resin Part B Filler (aggregate/catalyst)	2 x 945 ml 31 pounds
F5320.xx	Optional Additional Catalyst	Consult tech service
F5380.xx	Optional Accelerator	Consult tech service

TECHNICAL DATA

USDA approved for incidental contact in federally inspected meat, fish and poultry plants.

Test Data

Pot Life @ 70°F AASHTO T237	10 to 15 minutes
Compressive Strength ASTM C109 (psi) <small>(all testing conducted neat and extended with 20 lbs of pea gravel per unit)</small>	
1 hour @ 100°F	Extended 4,580
1 hour @ 19°F	Neat 4,240 Extended 8,030
24 hour @ 70°F	Neat 5,980 Extended 9,510
ASTM C881 Bond Strength @ 7 days	4,380 psi
AASHTO T97 Flexural @ 7 days (extended)	3,100 psi
Tensile Strength @ 7 days AASHTO T198	2,330 psi
Elongation	15 to 20%

Yield per standard unit

Neat	0.27 ft ³ (0.0076 m ³)
Extended (20 lbs pea gravel)	0.39 ft ³ (0.0110 m ³)

Estimating Guide Coverage (neat)

13 ft ² at 1/4 inch 0.77 m ² per centimeter
Yield per standard unit: Neat: 0.27 ft ³ (0.0076m ³) Extended 20 lbs pea gravel 0.39 ft ³ (0.0110 m ³)



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February 2017

DIRECTIONS SURFACE PREPARATION:

Concrete must be free of coatings, dirt, oil or other contaminants. Concrete frost free and dry. The perimeter of the patch should be saw cut to a minimum depth of 1/2 inch. All loose and deteriorated concrete should be removed. Sand-blast all exposed reinforcing steel to remove all rust.

MIXING:

Mix using a heavy duty 1/2" or larger drill equipped with a jiffiler type mixing prop. Mix one complete unit at a time. Pour all of Part A Resin into a clean dry pail, add Part B Aggregate while mixing. Blend until all aggregate is coated and thoroughly wet out. Do not mix more than can be mixed and placed within 10 minutes at 70°F (21°C).

For smaller quantities, mix 5 parts of Part B by volume to 1 part of Part A. If the **Durapatch mMa** is to be extended with pea gravel or if more than one unit at a time is to be mixed, a mortar mixer is recommended. Add Part A to the mixing vessel first. Blend the Part B while mixer continues to blend and add up to 20 pounds of clean dry pea gravel for each unit of **Durapatch mMa**. Mix for 1 to 2 minutes. The depth and width of the patch will determine how much pea gravel can be used. Contact ChemMasters for details.

If patching in freezers or if quicker set is desired, additional catalyst Benzoil Peroxide (BPO) and Accelerator can be added to the mix. Contact ChemMasters for dosing information or revised mixing instructions.

When using additional Catalyst and Accelerator first add the Resin, second Aggregate with Catalyst, then additional Catalyst and if needed Accelerator last.

Dosing profile for use of Accelerator, Catalyst @ x temp		
Temp °F	Accelerator fl oz	BPO Catalyst Ounce (cups)
40	0.0	4 oz (1/2 cup)
30	0.5	4 (1/2)
20	1.0	6 (3/4)
10	1.0	6 (3/4)
0	1.5	6 (3/4)

APPLICATION:

Use a mason's trowel or steel finishing trowel to place and compact mortar into voids to be filled. Deeper areas may be vibrated to properly consolidate the material. Larger areas can be topped by spreading with a short pronged rake. Do not featheredge the material.

Caution must be taken due to the rapid setting time of material. Do not overwork the surface.

CLEANUP

When operations are completed or interrupted for more than 15 minutes, the mixing vessel and application tools must be cleaned. Clean tools and equipment before material dries and sets with xylene, xylol or the Part A monomer of the **Durapatch mMa** kit. If the monomer is used for cleaning, it can be saved and used for the next mix or saved for future cleanings. Adding coarse aggregate to the mixer while cleaning aids in removing the polymer concrete.

STORAGE Store factory sealed containers of unmixed material at 50° to 75°F temperatures away from direct sunlight and sources of heat. Temperatures in excess of 75°F cause premature aging of the material. Shelf life of properly stored material is one year from date of manufacture.

LIMITATIONS

- **Durapatch mMa** is exothermic, generating a large amount of heat when initially mixed. After mixing immediately pour all of the material into the area to be patched to dissipate the heat
- It is important to use all of the Part A Resin and Part B Aggregate provided.
- **Durapatch mMa** is extremely fast setting. Substrate must be completely prepared and ready before material is mixed
- Good ventilation of the repair area is recommended to aid in the thorough cure of **Durapatch mMa**.

PRECAUTIONS:

Part A Resin:

DANGER: Highly Flammable Liquid and Vapour. Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation. Harmful to aquatic life with long lasting effects. Precautionary Statements: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be worn out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection

Part B Aggregate/Catalyst

WARNING: Suspected of causing cancer. May cause damage to lungs through prolonged or repeated exposure if inhaled. **Precautionary Statements:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection.

mMa Catalyst (BPO) : DANGER: Heating may cause a fire. May be harmful if swallowed. May cause allergic skin reaction. Causes eye irritation. May cause respiratory irritation. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life. May cause long lasting harmful effects to aquatic life

mMa Accelerator: DANGER Combustible liquid. Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life. Harmful to aquatic life with long lasting effects .

This Product is Formulated and Labeled for Industrial and Commercial Use Only

FOR BEST RESULTS AND SAFEST USAGE, USER IS SPECIFICALLY DIRECTED TO CONSULT THE CURRENT PRODUCT & SAFETY DATA SHEETS AND PACKAGE LABEL FOR THIS PRODUCT. We warrant our products to meet our published specifications and to be free from defects in materials and workmanship to the acceptable quality levels defined in these specifications. If acceptable quality levels are not specified, the acceptable quality levels will be those normally supplied by us for the product. We make no guarantee of the results to be obtained from the use of our products. The determination as to the adaptability of any of our products to the specific needs of the Buyer is solely Buyer's prerogative and responsibility. We are glad to offer suggestions on the use of our products. Nevertheless, there are no warranties given except such expresses warranties offered in connection with the sale of a particular product. Our liability shall be limited to replacement of, or refund of an amount not to exceed the purchase price attributed to, the goods as to which such claim is made. Our selection of one of these alternatives shall be Buyer's exclusive remedy. IN NO CASE SHALL WE BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES, EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, CO-CONDITIONS AND REPRESENTATIONS, EITHER EXPRESSED OR IMPLIED, WHETHER ARISING UNDER ANY STATUTE, COMMON LAW, USAGE OR TRADE, COURSE OF DEALING OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.