



KEY 9430 FLEXIBLE MMA

DESCRIPTION

KEY 9430 MMA is a high viscosity, 100% reactive, flexible methyl methacrylate resin used to fill expansion joints and as a crack isolation membrane in freezers under **KEY MMA Systems**. **KEY 9430 MMA** resists cracking caused by horizontal substrate movement providing a crack resistant, resilient surface. **KEY 9430 MMA** offers stress relieving properties for floor slabs showing movement and/or vibration. The extremely high elongation of **KEY 9430 MMA** makes it suitable for filling both exposed expansion joints and contraction joints.

KEY ADVANTAGES

- Flexible enough for expansion joint filler.
- Crack resistant flexibility in cold temperatures.
- Reduces noise created by mechanical vibrations.
- May be applied as basecoat membrane in thickness of 1/16"-1/4".
- VOC Compliant (100% Solids), Meets USGBC LEED Requirements

KEY CONSIDERATIONS

- When used as basecoat membrane, broadcast **KEY 9430 MMA** with 20 mesh silica sand.
- When used as joint filler, lightly sprinkle sand onto surface to eliminate slight tackiness.
- Concrete must be dry, free of dirt, waxes, curing agents and other foreign materials.
- Do not store outside in direct sunlight, storage temperature must be < 80°F.
- On or below grade installation must have an efficient vapor barrier under the slab (minimum 10-15 mil).
- Moisture vapor transmission must be less than 3 lbs per ASTM-F-1869 and less than 80% RH per ASTM F-2170.

COMPOSITION

KEY 9430 MMA is a 100% reactive methyl methacrylate resin.

COLOR SELECTION

KEY 9430 MMA is supplied clear (slight haze). Color packs are available for selected colors. Color pack mix ratio is 1 quart pigment per 5 gallons resin. See **Key Resin MMA** color card.

SURFACE PREPARATION

Surface preparation is the most critical portion of any successful resinous flooring system. All substrates must be properly prepared as outlined in **Key Resin Company's Technical Bulletin #1**. In addition, **All Key MMA Flooring Systems require a minimum surface profile of CSP 4-5**, as outlined in ICRI Guideline 310.2-1997, formerly named G-03732 (available from www.ICRI.org). Work must be performed by trained or experienced contractors or maintenance personnel.

MIXING AND INSTALLATION

KEY 9430 MMA should be mixed with 10% to 20% (by volume) **Key Self-Leveling Filler** powder when used as a joint filler, and requires the addition of **KEY 9000 MMA HARDENER** to start the hardening process. If used "neat" without adding filler powder, the cured surface will be slightly tacky, which may be acceptable for narrow

joints filled concave. When used as a membrane basecoat, **KEY 9430 MMA** must be mixed with 20% (by volume) filler powder and fine aggregate and requires the addition of Key MMA hardener to start the hardening process. The amount of hardener must be adjusted to the respective surface temperature (see table below). At temperatures below 40°F, **KEY 9101 MMA COLD TEMPERATURE ACCELERATOR** must be used in addition to the amount of hardener used at the 40°F or 30°F level.

Add hardener to the clear resin and blend; add pigment pack and filler/sand (if used) and mix thoroughly with jiffy mixer. Blend for 1-2 minutes until pigment is thoroughly mixed and no lumps from filler/sand are present. For joint filling, transfer mixed resin to a pourable container or caulk gun. One gallon of **KEY 9430** will yield 231 cubic inches, or fill a joint with dimensions of ½ inch x ½ inch x 77 lineal feet. Closed cell backer rod should be used to support bottom of **KEY 9430** joint filler.

For use as membrane basecoat, apply mix to the primed surface using a gauge rake or notched trowel. The fresh slurry coat must be broadcast to excess with aggregate. Rates will vary from 0.25-1.25 lbs./sq. ft. depending on type and size of aggregate and thickness of slurry. It is recommended to broadcast 20 mesh aggregate. Do not use broadcast aggregate smaller than 30 mesh or random cure problems may result. Aggregate may be natural or colored quartz, sand, aluminum oxide, emery, etc.

KEY 9430 when used as a membrane basecoat must be top coated as outlined for **Key MMA Elastomeric Freezer Flooring System 2**. Consult with Key Resin for details

Mix Ratios, Pot Life and Hardening/Temperature

Temp. (°F) of Resin, Air & Floor Surface	Hardener by Volume (oz.) Per Gallon of 9430 Resin	Pot Life (min.)	Hardening Time* (min.)
+30°F	12 vol. oz.	Approx. 25	Approx. 75
+40°F	10-12 vol. oz.	Approx. 25	Approx. 70
+50°F	9-10 vol. oz.	Approx. 25	Approx. 65
+60°F	6-7 vol. oz.	Approx. 20	Approx. 50
+70°F	5-6 vol. oz.	Approx. 20	Approx. 45
+90°F	4-5 vol. oz.	Approx. 20	Approx. 45

*Hardening times shown apply to spreading **KEY 9430** as a membrane in a thin layer. Hardening time will be reduced when filling a joint due to exothermic reaction, and will vary depending on the width and depth of the joint. If the resin bubbles due to excessive exothermic reaction, reduce **KEY 9000 MMA HARDENER** on subsequent mixes.

KEY 9101 MMA COLD TEMPERATURE ACCELERATOR: At temperatures below 40°F, Key 9101 MMA Cold Temperature Accelerator must be used in addition to the amount of hardener used at the 40°F or 30°F level. As a rule of thumb, add about ½ oz by volume per gallon of resin @ 39° to 32°F, up to 2.0 oz by volume per gallon @ -20°F, increasing the quantity gradually in a consistent linear progression as the temperature decreases.

VERY IMPORTANT: KEY 9101 MMA COLD TEMPERATURE ACCELERATOR MUST be added to the MMA resin and thoroughly blended BEFORE adding the **KEY 9000 MMA HARDENER**, or hazardous decomposition may occur (i.e., violent foaming). **KEY 9101 MMA COLD TEMPERATURE ACCELERATOR** will cause yellowing, it is advised to use pigmented MMA resin versus clear to reduce the appearance of yellowing, darker colors will be less affected than lighter colors.

PHYSICAL PROPERTIES

Percent Reactive	100%, zero VOC
Working Life, 50° - 70°F	20-25 minutes
Recoat Time	45-75 minutes
Viscosity, cps	1,200-1,500 cps
Weight per Gallon	8.3 lbs.
Tensile Strength	250 psi
Elongation at Break	1100%

CLEAN-UP

Clean tools and equipment with lacquer thinner or MEK. Consult Material Safety Data Sheet for safety and health precautions.

AVAILABILITY

Key Resins are available throughout the United States, Canada, Mexico and a number of other countries. Contact the **Key Representative** in your area. Telephone (888)943-4532 or visit www.keyresin.com.

STORAGE

Store in a cool and dry place, below 80°F, out of direct sunlight. Do not store near open flame or food. Shelf life is 6 months in the original unopened containers. After extended storage: Additives and fillers can separate with storage, materials should be inspected for any visible signs of settlement, polymerization, or paraffin coagulation (clumps, strands). Thoroughly mix pails or drums (use a drum mixer, do not rely on rolling drum on floor) and pour into new containers to inspect resin before use.

HELPFUL HINTS

Adequate cross ventilation should be provided. Good ventilation during the processing ensures a good cross linking and hardening. Read, understand and follow Material Safety Data Sheets and Application Instructions prior to use. Use only as directed. If substrate and/or material temperature is above 90°F, DO NOT apply material.

TECHNICAL SERVICE

Key Resin Company and **KRC Associates, Inc.** provide services and consultations on material selection, specification, troubleshooting, and other information on the proper repair and protection of concrete surfaces. **Key Resin Sales/Technical Representatives** are available to assist you. Telephone (888)943-4532 or visit www.keyresin.com.

WARRANTY

Information regarding Key Resin brand MMA resins and systems is based upon extensive research and experience in the field of applied engineering by the manufacturer **Plasti-Chemie GMBH International**. By making such information available, Key Resin does not thereby assume any liability beyond express terms of our standard limited material warranty. Key Resin does not warrant the accuracy or completeness of any such information, whether conveyed orally or in writing, but to the best of our knowledge believe it to be accurate. We reserve the right at any time and without notice to update or improve our products and process and our information concerning the same. By Key Resin making this information available does not relieve the purchaser or user from his obligation to verify the suitability of our products and processes for the intended use or application. The purchaser and user likewise have the responsibility to ensure that the purchase, use or application does not infringe upon patent rights or other rights of third parties.

Key Resin Company ("**Key**") warrants for a period of one (1) year that its products will be free of manufacturing defects and will be in conformity with published specifications when handled, stored, mixed, and applied in accordance with recommendations of **Key**. If any product fails to meet this warranty, the liability of **Key** will be limited to replacement of any non-conforming material if notice of such non-conformity is given to **Key** within one (1) year of delivery of materials. **Key** may in its discretion refund the price received by **Key** in lieu of replacing the material. No customer, distributor, or representative of **Key** is authorized to change or modify the published specifications of this warranty in any way. No one is authorized to make oral warranties on behalf of **Key**. In order to obtain replacement or refund the customer must provide written notice containing full details of the non-conformity. **Key** reserves the right to inspect the non-conforming material prior to replacement. EXCEPT FOR THE EXPRESSED WARRANTY STATED ABOVE, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE. **KEY'S OBLIGATION SHALL NOT EXTEND BEYOND THE OBLIGATIONS EXPRESSLY UNDERTAKEN ABOVE AND KEY SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO THE PURCHASER OR ANY THIRD PARTY FOR ANY LOSS, COST, EXPENSE, DAMAGE OR LIABILITY, WHETHER DIRECT OR INDIRECT, OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**