

Macrylex B18

Methyl methacrylate binder/bodycoat

düraamen

engineered to perform

DESCRIPTION

Macrylex B18 is a 100% reactive methyl methacrylate binder resin and body coat for self-leveling (SL), broadcasted, and troweled mortar systems. Macrylex B18 resin is ideal for decorative troweled broadcast quartz floors and industrial surfacing, subject to heavy loads and traffic. Flooring systems based on Macrylex B18 are excellent for food processing areas, restaurant kitchens, laboratories, machine shops, chemical storage warehouses, animal research facilities, and numerous other applications.

ADVANTAGES

- Rapid cure with short recoat time (60 min)
- UV resistant, Non-chalking
- Good leveling and flow characteristics
- VOC Compliant, Meets USGBC LEED Requirements
- Use over wide temperature range – even below freezing temperature

SUBSTRATE REQUIREMENTS

- The substrate must be dry, free of dirt, waxes, curing agents and other foreign materials
- Macrylex B18 must be mixed with SL filler or blended aggregate and sealed with appropriate Macrylex sealer
- Macrylex B18 must be applied at minimum thickness of 65 mils (1/16") per coat
- Do not store outside in direct sunlight, storage temperature must be less than 80°F
- On or below grade installation must have an efficient vapor barrier under the slab (min 10-15 mil)
- Moisture vapor transmission must be less than 3lb per ASTM F1869 and less than 80% RH per ASTM F2170 unless Düraamen moisture mitigation system is used
- The odor must be contained and/or ventilated with negative air flow as necessary
- Small enclosed spaces require proper negative air flow ventilation to ensure proper curing.

COMPOSITION

Macrylex B18 is a 100% reactive methyl methacrylate resin.

COLOR SELECTION

Macrylex B18 is applied for use with decorative quartz granules or colored resin chips. Color packs are available for selected colors in self-leveling systems. The mix ratio for color pack is 1 quart pigment per 5.0gallons of resin.

SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful Surface Preparation is the most critical portion of any successful high performance flooring system. All substrates must be properly prepared as Outlines in Düraamen's Technical Bulletin #1. In addition, all Macrylex Flooring Systems require a minimum surface profile of 4 or 5 (CSP 4 to 5) as outlined in ICRI Guideline 310.2-1997 formerly G-03732 (available from www.ICRI.org). Work must be performed by trained or experienced contractors or maintenance personnel. Shot blast the substrate to remove laitance and expose surface cracks. Clean out cracks with oil-free compressed air.

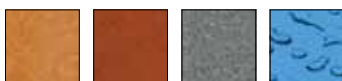
MIXING & INSTALLATION

Macrylex B18 requires the addition of Macrylex Hardener to start the hardening process. The amount of hardener must be adjusted to the respective surface temperature (see the table below). At temperatures below 40°F, Macrylex CTA must be used in addition to the amount of hardener used.

| Temp (F) of resin, air & surface | Hardener by volume (oz) per gallon of resin | Pot Life (min) | Hardening Time (min) |
|----------------------------------|---|----------------|----------------------|
| +40°F | 8 oz | 40 | 70 |
| +50°F | 5-6 oz | 35 | 65 |
| +70°F | 3-4 oz | 25 | 50 |
| +80°F-90°F | 2 oz | 15 | 45 |

* Do not use less than 2 oz of Macrylex Hardener by volume unless confirmed by on-site testing

Macrylex CTA: At temperatures below 40°F, Macrylex CTA, 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 1/2oz by volume per gallon of resin at 39°F to 32°F, up to 2.0oz by volume per gallon at 20°F; increasing the quantity gradually in a consistent linear progression as the temperature decreases.



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IMPORTANT NOTE: Macrylex CTA MUST be added to the Resin and thoroughly blended BEFORE adding Macrylex Hardener, or hazardous decomposition may occur (violent foaming). Macrylex CTA will cause yellowing of the resin. Therefore, it is advised to use pigmented Macrylex resins to reduce the appearance of yellowing.

PHYSICAL PROPERTIES

| | |
|---------------------------|---|
| Percent Reactive | <100% |
| VOC | <50g/L |
| Appearance | Viscous liquid |
| Viscosity, cps @ 73°F | 280-290 cps |
| Weight per gallon | 8.1lb |
| Working life, 40°F – 86°F | Refer to mix chart, will vary w/temp & amount of hardener |
| Cure rate | Refer to mix chart |
| Recoat time | Refer to mix chart |

MACRYLEX B18 SL SYSTEMS

Macrylex B18 SL is a slurry topping formulation which provides excellent wear-ability and chemical resistance. It has proven successful in food processing, warehouses, chemical storage, commercial kitchens, laboratories, pharmaceuticals, locker rooms, clean rooms, lobbies and veterinary hospitals. If used over hard surface tile such as quarry tile, it is recommended to use an additional application of Macrylex FR under Macrylex B18 SL. The self-leveling resin system based on Macrylex B18 resin and self-leveling filler, hardens rapidly after the addition of Macrylex Hardener. Macrylex B18 SL can be smooth or non-skid. The Macrylex B18 resin is formulated for use as a binder resin only, it must be mixed with self-leveling filler for slurries and blended mortar aggregate for troweled mortars. It must be top coated with Macrylex S22, Macrylex S26 or Macrylex S29 sealers depending on the expected service conditions.

FORMULATION GUIDE

Macrylex B18 SL is formulated with fillers as indicated below. The amount of hardener will vary with temperature. At temperatures below 40°F Macrylex CTA must be used in addition to the hardener (about ½ oz/gal at 32°F up to 2 oz/gal at -20°F) while maintaining the amount of hardener powder at the 40°F level.

Typical batching size for self-leveling system

| Product | % parts by weight | Weight | Volume |
|------------------------|-------------------|----------------|--------------------|
| Macrylex B18 | 26.7 | 8.2lb | 1.0gallon |
| Self-leveling additive | 72.0 | 15-22lb | 1.0 to 1.5 gallons |
| Pigment pack | N/A | N/A | 6.4 oz |
| Hardener | Varies w/ temp | Varies w/ temp | Varies w/ temp |

Coverage – Yield – 1.5-2.0gallons of slurry

| | |
|-------|----------------------|
| 1/16" | 36-50ft ² |
| 1/8" | 18-25ft ² |
| 3/16" | 13-18ft ² |

The yield of mixed slurry will vary depending on mix design used

APPLICATION

Add hardener to the clear resin and add dry components and mix thoroughly with a low speed mixer. Add liquid pigment and mix 1-2 minutes until no lumps are present. Apply to primed substrate using a gauge rake or trowel. After spreading and loop/spike rolling, apply broadcast media. The fresh base coat may be broadcast to excess with aggregate or vinyl chips (flake). Rates will vary from 0.25-1.25lb/ft² depending upon type and size of media used. When using aggregate, it is recommended to broadcast 20 mesh or larger size aggregate to ensure adequate through curing. Aggregate may be natural or colored quartz, sand, aluminum oxide, emery, etc. For other decorative floors, decorative vinyl chips and/or glass aggregate may be broadcast into the costing.

Macrylex B18 SL must be topcoated or sealed with Macrylex S22, S26 or S29. These sealers can be pigmented or clear depending on type of system. Top coating is necessary for improved scratch resistance, stain resistance and chemical resistance.

MACRYLEX B18 TM SYSTEMS

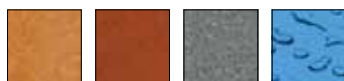
Macrylex B18 TM can be a decorative topping formula with colored quartz or industrial mortar using blended mortar silica aggregate. It is used in food and beverage processing, commercial kitchens, laboratories, veterinary hospitals, pharmaceuticals, locker rooms, grocery stores and/or areas requiring a heavy duty floor topping. If applied over hard tile such as quarry tile, use the flexible membrane Macrylex FR system formulated with aggregates containing no silica flour which must be troweled. The use of colored quartz granules and aggregates provides the decorative affects. Macrylex B18 TM must be top coated with Macrylex S22, S26 or S29 depending on expected service conditions. These sealers can be pigmented or clear depending on the type of system. Top coating is necessary for improved scratch resistance, stain resistance and chemical resistance.

FORMULATION GUIDE

Typical batching of Macrylex B18 TM is listed below. The amount of hardener will vary based on the substrate temperatures, be aware that for temperatures below 40°F the material will be stiff and difficult to trowel.

Typical Batch formula for troweled quartz

| Material | %parts by weight | Weight | Volume |
|--------------|------------------|--------|--------|
| Macrylex B18 | 24.0 | 8.2lb | 1 gal |



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| | | | |
|------------------------------|---------------|---------------|---------------|
| Blended Quartz + Cove Powder | 76.0 | 26.0lb | 2 gal |
| Hardener | Varies w/temp | Varies w/temp | Varies w/temp |

Yield:- ±2 gallons of mortar

| | |
|-------|----------------------|
| 1/8" | 24-25ft ² |
| 3/16" | 18 ft ² |
| 1/4" | 12-13ft ² |

Yield of mixed mortar will vary depending on mix design used

Typical Batch Formula for blended mortar aggregate

| Material | % Parts by Weight | Weight | Volume |
|--------------|-------------------|---------------|---------------|
| Macrylex B18 | 14-17 | 8-10lb | 1-1.25 gal |
| BMA | 83-86 | 50lb | 3.25 gal |
| Pigment pack | N/A | N/A | 6.4 oz |
| Hardener | Varies w/temp | Varies w/temp | Varies w/temp |

Yield: ±2.75-3 gallons of mortar

| | |
|-------|----------------------|
| 1/8" | 28-35ft ² |
| 3/16" | 20-25ft ² |

Yield of mixed mortar will vary depending on mix design used

NOTE: Use properly graded aggregate blend to ensure proper thorough curing. Mortar mix design MUST yield resin-rich, pourable consistency, which has a resin rich surface after troweling. A mortar with a resin-lean, dry consistency may have cure problems.

APPLICATION

Add the hardener to the clear resin followed by the dry aggregates and mix thoroughly for 1-2 minutes until no lumps are present. Apply mixture to the primed substrate using a rake and then smooth with a trowel. After troweling, surface may be broadcast, if necessary. After curing, remove any excess broadcast and apply the proper sealer. Macrylex B18 TM must be coated or sealed with Macrylex S22, S6 or S29 depending on expected service conditions. Top coating is necessary for improved scratch resistance, stain resistance and chemical resistance.

WARRANTY

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CLEAN UP

Clean tools and equipment with lacquer thinner or MEK. Consult MSDS for safety and health precautions.

AVAILABILITY

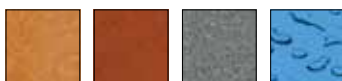
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STORAGE

Store in a cold 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 may separate. It 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 the drum on the 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 SDS instructions prior



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