

## SHOP FLOOR MR

**IMPORTANT!** Read these instructions carefully several days prior to starting your work. Seek answers to any questions you may have before you begin. DUR-A-FLEX, Inc. maintains a Technical Staff that will be glad to answer your questions and give you advice pertaining to your particular installation. Large areas will require two or more mixers.

Shop Floor MR is a 100% solids, solid color epoxy flooring system consisting of an optional **Dur-A-Glaze MVP** primer/moisture barrier (for use over green concrete), **Elast-O-Coat** waterproofing membrane, single or double flintshot broadcast into pigmented **Dur-A-Glaze Shop Floor** epoxy broadcast coats, a pigmented **Dur-A-Glaze Shop Floor** epoxy grout coat, and finished with a recommended UV stable **Armor Top** urethane top coat. Shop Floor MR delivers a seamless, nonslip pigmented flooring system designed for heavy duty use in mechanical rooms where water proofing and working around drains is a constant concern.

**NOTE:** DO NOT apply at an ambient or surface temperature below 60°F or above 90°F

### STORAGE CONDITIONS

Store all components in a cool, dry area with plenty of ventilation. Do not allow resins to freeze. Solidified (crystallized) hardener must be heated above 100°F to properly melt crystals. The shelf life of all products used to make this system is 12 months.

### SURFACE PREPARATION

Use a shot blaster or surface grinder to achieve a CSP of 2-3 (if the substrate is non-porous a minimum CSP of 3 should be used). Vacuum all dust and debris, and ensure the surface is clean, dry, and free of all contaminants before you begin applying the system. Always honor moving joints and fill static joints as part of the preparation step. Refer to the master Surface Preparation and Joint Guidelines Guide on our website for more information.

### MIXING AREA

Select a convenient mix area as close as possible to the application area and protect the surface from spills by covering with a layer of cardboard and/or a sheet of plastic. Be generous with the amount of space allocated for this function. Do not mix this product in direct sunlight or when ambient temperatures exceed 90°F. Exposure to high temperatures will greatly reduce the working time of this product. **DO NOT MIX UNTIL READY FOR IMMEDIATE USE.**

### APPLICATION

Shop Floor MR is applied as an optional primer/moisture barrier (resin/hardener), waterproof membrane (resin/ hardener), broadcast coats (resin/hardener/broadcast aggregate), grout coat (resin/hardener), and a topcoat (resin/ hardener). Shop Floor MR has a finished nominal thickness of 1/16"-1/8".

**LABOR REQUIREMENTS** - Best practices are to assign one person to each job – do not multi-task:

- 1 person mixing / running mixed pails
- 1 person squeegee
- 1 person cross-rolling
- 1 person broadcasting flintshot for every 25 linear feet of wet edge

**NOTE:** Additional manpower will be required for complex installations requiring cut-in work or applications around drains.

### PRIMING / MOISTURE BARRIER

(optional – and best suited for use over green concrete)

#### **EQUIPMENT LIST**

- 5 gal mixing pails
- 450 RPM High-Torque Drill
- 5" Jiffler Mixing Blade
- 3/16" V-Notched Squeegee
- 3/8" inch nap roller
- Spiked Shoes
- Rubber/Nitrile Gloves
- Safety Glasses

Pour 1 part **Dur-A-Glaze MVP Hardener** into a mixing pail then add 2 parts **Dur-A-Glaze MVP Resin** – if pouring from small containers (1 gal/5 gal) be sure to scrape the inside of the pails to use as much of the material as possible. Use the measuring pail to scrape the mix stick and never scrape mix stick on the side of the mix pail. Mix for 2 minutes using a jiffler-type mixer at 300 – 450 rpm.

Apply a ribbon of mixed **Dur-A-Glaze MVP Primer** material starting at one side of the installation area and work towards an exit. Wearing spiked shoes, use a 3/16" v-notched squeegee

to evenly spread the material across the surface area at approximately 100 sq ft per mixed gallon (16 mils), joining batches together along a wet edge. After spreading the primer, follow by back-rolling and cross-rolling with a 3/8" nap roller.

**NOTE:** Out-gassing may occur in very porous concrete. To address this, apply a second coat of **Dur-A-Glaze MVP Primer** mixed with an equal amount of Cab-O-Sil. Apply using a flat squeegee at 250 – 350 square feet per mixed gallon.

## **WATERPROOFING MEMBRANE**

### **EQUIPMENT LIST**

- 5 gal mixing pails
- 450 RPM High-Torque Drill
- 5" Jiffler Mixing Blade
- 1/4" V-Notched Squeegee
- 3/8" Loop Roller
- Spiked Shoes
- Rubber/Nitrile Gloves
- Safety Glasses

Pour ½ gallon of **Elast-O-Coat Hardener** into a mixing pail and add in the 1 gallon of **Elast-O-Coat Resin**, making sure to scrape the inside of the pails to use as much of the material as possible. Use the measuring pail to scrape the mix stick and never scrape mix stick on the side of the mix pail. Mix for 2 minutes using a jiffler-type mixer at 300 – 450 rpm.

Apply a ribbon of mixed **Elast-O-Coat** material starting at one side of the installation area and work towards an exit. Wearing spiked shoes, use a 1/4" V-Notched Squeegee to evenly spread the material across the surface area at approximately 80 sq ft per mixed gallon (20 mils), joining batches together along a wet edge. After spreading the material, follow by back-rolling and cross-rolling with a 3/8" Nap Roller.

## **BROADCAST COAT**

### **EQUIPMENT LIST**

- 5 gal mixing pails
- 450 RPM High-Torque Drill
- 5" Jiffler Mixing Blade
- 3/16" V-Notched Squeegee
- 3/8" inch nap roller
- Spiked Shoes
- Carbon Filter Dust Mask
- Rubber/Nitrile Gloves
- Safety Glasses

**IMPORTANT:** **Shop Floor Resin** must be **pre-mixed** for 3 minutes using a jiffler type mixer at 300-450 rpm **prior to combining with hardener**

Pour 1/2 gallon of **Dur-A-Glaze #4** Hardener into a mixing pail and add 1 gallon of pre-mixed **Shop Floor Resin** making sure

to scrape the inside of the pails to use as much of the material as possible. Use the measuring pail to scrape the mix stick and never scrape mix stick on the side of the mix pail. Mix for 3 minutes using a jiffler-type mixer at 300 – 450 rpm

Apply a ribbon of mixed **Shop Floor** material starting at one side of the installation area and work towards an exit. Wearing spiked shoes, use a 3/16" V-Notched Squeegee to evenly spread the material across the surface area at approximately 100 sq ft per mixed gallon (16 mils), joining batches together along a wet edge. After spreading the material, follow by back-rolling and cross-rolling with a 3/8" nap roller.

**NOTE:** For each application of material and before mixing, mark your batches to ensure you achieve your spread rate targets. This is best accomplished by dividing your target spread rate by the width of the area being coated (or your planned wet edge). Example: If your spread rate is 100 square feet and your area is 20 feet wide you would make a mark every 5 feet (100 divided by 20 = 5).

## **BROADCAST:**

After the final cross-rolling, begin broadcasting into the broadcast coat. Place the Flintshot into a pail that is easily carried around. While wearing spiked shoes, throw the aggregate UP into the air while consistently moving so it "rains down" into the broadcast coat (~1/2 lb per sq ft). Do not throw the aggregates into the coating with any force. Continue broadcasting until rejection (until the floor appears dry and has no shiny spots).

Typical aggregate usage rate for Flintshot into 16 mils= ~1/2 lbs per sq ft

**IMPORTANT:** Do not broadcast the edge that will be joining the next section – leaving a wet edge of ~24" to merge with the next batch of mixed Shop Floor. Do not walk on the aggregate, even with spiked shoes. Be sure to keep any impurities out of the sand such as broom bristles, debris, etc.

Allow 8-12 hours for curing varying by temperature (warmer ambient temperature will cure at a faster rate). Once cured, sweep off the excess aggregate using a stiff, clean, dry broom with synthetic bristles and vacuum the area to remove excess aggregate.

## **SECOND BROADCAST COAT** (optional)

**IMPORTANT:** **Shop Floor Resin** must be pre-mixed for 3 minutes using a jiffler type mixer at 300-450 rpm **prior to combining with hardener**

Pour 1/2 gallon of **Shop Floor Hardener** into a mixing pail and add 1 gallon of pre-mixed **Shop Floor Resin** making sure to scrape the inside of the pails to use as much of the material

as possible. Use the measuring pail to scrape the mix stick and never scrape mix stick on the side of the mix pail. Mix for 3 minutes using a jiffler-type mixer at 300 – 450 rpm.

Apply a ribbon of mixed **Shop Floor** material starting at one side of the installation area and work towards an exit. Wearing spiked shoes, use a 3/16" V-Notched Squeegee to evenly spread the material across the surface area at approximately 100 sq ft per mixed gallon (16 mils), joining batches together along a wet edge. After spreading the material, follow by back-rolling and cross-rolling with a 3/8" nap roller.

After the final cross-rolling, begin broadcasting into the broadcast coat. Place a portion of the Flintshot into a pail that is easily carried around. While wearing spiked shoes, throw the aggregate UP into the air while consistently moving so it "rains down" into the broadcast coat (~1/2 lb per sq ft). Do not throw the aggregates into the coating with any force. Continue broadcasting until rejection (until the floor appears dry and has no shiny spots).

Typical aggregate usage rate for Flintshot into 16 mils= ~1/2 lbs per sq ft

Allow 8-12 hours for curing varying by temperature (warmer ambient temperature will cure at a faster rate). Once cured, sweep off the excess aggregate using a stiff, clean, dry broom with synthetic bristles and vacuum the area to remove excess aggregate.

## **GROUT COAT**

### ***EQUIPMENT LIST***

- 5 gal mixing pails
- 450 RPM High-Torque Drill
- 5" Jiffler Mixing Blade
- Flat Squeegee
- 3/8" inch nap roller
- Spiked Shoes
- Rubber/Nitrile Gloves
- Safety Glasses

**IMPORTANT: Shop Floor Resin** must be **pre-mixed** for 3 minutes using a jiffler type mixer at 300-450 rpm **prior to combining with hardener**

Pour 1/2 gallon of **Shop Floor Hardener** into a mixing pail and add 1 gallon of pre-mixed **Shop Floor Resin** making sure to scrape the inside of the pails to use as much of the material as possible. Use the measuring pail to scrape the mix stick and never scrape mix stick on the side of the mix pail. Mix for 3 minutes using a jiffler-type mixer at 300 – 450 rpm.

Apply a ribbon of mixed **Shop Floor** material starting at one side of the installation area and work towards an exit. Wearing

spiked shoes, use a 3/16" V-Notched Squeegee to evenly spread the material across the surface area at approximately 100 sq ft per mixed gallon (16 mils), joining batches together along a wet edge. After spreading the material, follow by back-rolling and cross-rolling with a 3/8" nap roller and allow to cure for 8-12 hours.

## **TOPCOAT** (recommended)

### ***EQUIPMENT LIST***

- 5 gal Mixing Pails
- 18" Wide Paint Tray
- 18" Long 3/8" Nap Roller
- 750 RPM High-Torque Drill
- 3" Jiffler Blade
- Paint Stir Stick
- Spiked Shoes
- Rubber/Nitrile Gloves
- Safety Glasses

**Armor Top** is typically applied using the dip and roll method with an 18" long 3/8" nap roller with a Wide Boy™ or Big Ben™ frame.

Pour 1 kit of **Armor Top Hardener** and **Armor Top Colorant** into a 5 gallon pail and mix using a 750 RPM drill with a 3" Jiffler blade for 30 seconds. Once Hardener and colorant are pre-mixed, pour 1 kit of **Armor Top Resin** and mix for an additional 30 seconds. If specified, slowly add **Armor Top Grit** and continue mixing for an additional 1 minute. Pour a small amount into a paint tray that is large enough to accommodate an 18" roller.

Dip roller into filled paint tray and roll off excess. Apply two 8-10 ft long paths left to right then right to left. Re-wet roller and continue application. Even out roller lines by using "W" shaped crosses and/or up & down passes. If not even, re-roll material up and down until uniform. A final cross-roll (use a dedicated person to cross-roll in order to avoid any roller lines) is necessary to even out roller lines and should be completed within 10 minutes of starting application.

**NOTE:** Occasionally re-mix **Armor Top** in paint tray or bucket with a paint stir stick to prevent settling of the grit or pigment.

<b>~KIT SPREAD RATES</b>	<b>Standard</b>	<b>Low Humidity (LH)</b>
Gloss Pigmented (w/grit)	700 SF/kit	775 SF/kit
Gloss Pigmented (no grit)	675 SF/kit	750 SF/kit
Satin Pigmented (w/grit)	850 SF/kit	-
Satin Pigmented (no grit)	825 SF/kit	-

**NOTE:** Do not apply thicker than 5 mils wet or leave excess material pooled on the floor as it may leave to blistering.

**CAUTION:** Application of Armor Top is only recommended if the floor temperature and materials are between 60°F and 80°F. **DO NOT APPLY** if standing moisture is present - The floor temp is less than 5°F above the dew point - The Relative Humidity is greater than 80%.

Allow the top coat to cure for 8-12 hours depending on temperature/relative humidity (curing is slower if RH is less than 30%). Once cured, it is safe to return to foot traffic, return to general service after 24 hrs, and will feature full chemical and abrasion resistance in 5-7 days at 70°F.

**IMPORTANT!**

*Before using DUR-A-FLEX products, read and understand its accompanying Safety Data Sheet.*

STANDARD TERMS AND CONDITIONS OF SALE, INCLUDING STANDARD WARRANTY APPLY - VISIT **DUR-A-FLEX.COM** FOR THE LATEST VERSION

**CAUTION!** As with all chemical products, individuals may have different reactions to exposure to specific products. This is dependent upon many factors, including the individual's personal characteristics, the size of the installation, the ventilation available, the intensity of the exposure or the length of the exposure. Individuals may experience discomfort during the installation process of one product, but not another.

In some cases this is experienced as a skin irritation and in others it is experienced as an inhalant irritation. Typically, it disappears once the exposure is eliminated. In some cases people can become "sensitized" to a product and experience the discomfort every time there is exposure without Personal Protective Equipment ("PPE").

To protect yourself from various exposures or discomfort during the mixing and application of our products, we recommend covering exposed skin including, using gloves, long sleeves, safety glasses and a respirator such as the 3M 8577 P95 Universal Disposable Carbon Respirator or a cartridge respirator.

Use only as directed. KEEP OUT OF REACH OF CHILDREN.

Do not reseal moisture-contaminated hardener. This will result in carbon dioxide generation or possible violent rupture of container.