

### TECHNICAL DATA SHEET

#### DESCRIPTION

Sure Seal HMWM is a 3 component high molecular weight methacrylate, 100% solids penetrating sealer for horizontal concrete. Sure Seal HMWM's low viscosity formula penetrates deep into pores, voids and small hairline cracks protecting the concrete from deterioration due to migration of moisture, oils, chlorides and other contaminants that cause corrosion to reinforcing steel.

#### USE

Sure Seal HMWM is formulated to be used as a healer/sealer on concrete bridge decks, parking structures, runways or other structurally sound horizontal concrete.

#### FEATURES

- 100% solids/reactive formula
- Low viscosity
- Extends the life of concrete structures
- High bond strength
- Low odor
- Wide temperature range for application
- Return to service quickly

#### PROPERTIES

ASTM C 882 – Slant Shear Bond Strength  
> 1,700 psi

ASTM D 695 – Compressive Yield Strength  
3 days 4400 psi  
7 days 5600 psi

ASTM D 695 – Crushing Strength (compressive)  
3 days 11,200 psi  
7 days 12,800 psi

ASTM D 638 – Tensile strength  
3 days 3,750 psi  
7 days 3,900 psi

ASTM D 2240 – Hardness (shore D)  
3 days 74  
7 days 76

ASTM D 1475 – Specific Gravity 1.029

ASTM D 2196 – Viscosity <25 cps

ASTM D 3278 – Flash Point >200° F

ASTM D 323 - Vapor Pressure 0.00 mm Hg

Caltrans 551 – Tack Free Time <400 Minutes

CALTRANS 551 SSD Adhesion >650 psi

#### Estimating Guide

65-150 sq. ft. per gallon (1.6 - 3.7 sq. m/L)\*

\*Texture and absorption of surface will determine final coverage rates. Porous concrete surfaces may require additional material.

#### Packaging

Product Code	Packaging	Component	Amount
101328	5 gal Kit	Part A Sure Seal HMWM Resin	4.5 gal (17 L)
-	-	Part B Sure Seal HMWM Promoter	12.5 fl oz (369.7 ml)
-	-	Part C Sure Seal HMWM Initiator	23 fl oz (680.2 ml)
101329	55 gal Kit	Part A Sure Seal HMWM Resin	54 gal (204.4 L)
-	-	Part B Sure Seal HMWM Promoter	12 pre-measured 12.5 fl oz (369.7 ml)
-	-	Part C Sure Seal HMWM Initiator	12 pre-measured 23 fl oz (680.2 ml)

#### Accelerator

Accelerator Part D (Optional)			
Product Code # 145727	Gallon/Case	Part D Sure Seal HMWM Accelerator	1 Gallon (3.78 L) 6 per case

#### STORAGE

Store in original, unopened containers with labels intact. Store all components in dry location at a temperature of 50°F to 85°F (10°C to 29°C). All components should be kept separate from one another during shipping and storage, especially the Sure Seal HMWM Initiator "C" and Sure Seal HMWM Promoter "B".

The direct mixing of Sure Seal HMWM Initiator and Sure Seal HMWM Promoter will result in a violent chemical reaction!

Shelf Life when properly stored is twelve months from date of manufacture. All components should be kept separate from one another, especially the Sure Seal HMWM Initiator "C" and Sure Seal HMWM Promoter "B".

#### Surface Preparation:

All surfaces must be thoroughly clean and dry with no contaminants or previous treatments or coatings. Surfaces must be absorptive. Shot blasting is recommended. Surfaces must be dry. Allow surface to dry after any rain or wet cleaning method prior to application. Concrete surface must be less than 4% moisture content when tested with a moisture pin meter. Surface and air temperatures should be 40°F (4°C) and rising and no more than 100°F (38°C). When surface or air temperatures are above 90°F (32°C), night time applications are recommended. Dew points must be greater than 5°F (-15°C) less than the ambient air temperature.

**TECHNICAL DATA SHEET****Mixing**

To avoid a hazardous, violent reaction, ensure that the following mixing sequence is followed. Correct amounts for mixing listed below. Mix the correct amount of Part A Sure Seal HMWM Resin with the correct amount of Part B Sure Seal HMWM Promoter. Stir well for one minute. The correct amount of Sure Seal HMWM Part C Initiator can then be added and mixed with the blend of Sure Seal HMWM Part A Resin and Sure Seal HMWM Part B, mix for two minutes.

If Sure Seal HMWM Accelerator is to be used, it should be added after the Sure Seal HMWM Part B Promoter and mixed in for one minute before the addition of the Sure Seal HMWM Part C Initiator.

Never mix Part B Sure Seal HMWM Promoter with Part C Sure Seal HMWM Initiator, a violent chemical reaction will occur!

**Component Mixing Amounts****Small batch**

Sure Seal HMWM Part A: 1 gallon (3.78 L)  
Sure Seal HMWM Part B: 2.73 fl oz (80.73 ml)  
Sure Seal HMWM Part C: 5 fl oz (147.86 ml)

**Large batch (maximum recommended batch size)**

Sure Seal HMWM Part A: 4.5 gallon (17.0 L)  
Sure Seal HMWM Part B: 12.5 fl oz (369.7 ml)  
Sure Seal HMWM Part C: 23 fl oz (680.2 ml)

Maximum recommended batch size to mix at one time on the job is 5 gallons (18.92 L) total.

**Temperature**

Sure Seal HMWM Accelerator Part D (Optional) amount for various temperatures.

**60-70F (15.5-21.1C)**

Small Batch 2 fl oz (59.14 ml)  
Large Batch 10 fl oz (295.73 ml)

**50-60F (10.0-15.5C)**

Small Batch 3 fl oz (88.72 ml)  
Large Batch 15 fl oz (443.60 ml)

**40-50F (4.4-10.0C)**

Small Batch 4 fl oz (118.29 ml)  
Large Batch 20 fl oz (591.47 ml)

\*Temperature refers to temperature of air, substrate and material components.

Note that cure and set times will vary with environmental, lighting, and substrate conditions. Contractor should always do a small trial to find the proper levels of Accelerator Part D needed on each job.

**Healer/Sealer Application**

Apply the mixed materials immediately after complete mixing. Pour the material onto the properly prepared and dry substrate. Flood the surface to ensure all cracks are completely filled. Within 15 minutes of application, material may be squeegeed or broomed to aid in even distribution or removal of excessively puddled material.

Nighttime applications can increase the cure times of Sure Seal HMWM. Temperatures should be 50 F and rising during application. Colder temperatures, low fog, dew, etc. will drastically slow cure times. In cold or damp conditions, un-reacted monomer may appear on the surface and may leave an oily residue. This "oily residue" may alter skid resistance properties of the treated surface even after the aggregate has been applied and well bonded. The un-reacted monomer (residual oiliness) can be reduced/removed by distributing approximately 5 lb/100 sf of surface area with diatomaceous earth plus mechanically sweeping the area. A skid tester may be used to verify bridge deck friction values.

**Aggregate Broadcast**

Immediately after final placement, uniformly broadcast clean dry aggregate on to the wet material. Use aggregate type and grade per project specification. Sufficient aggregate should be applied to completely cover the wet sealer. Once the material has cured, the excess aggregate can be removed and then the area can be opened to traffic. Material and aggregate remaining on surface is sacrificial and will eventually wear away. The sealing effect will continue from the material that was absorbed into the substrate.

**CURING**

Cure times will vary depending on the temperature, dew points, RH, daylight vs. dark and other environmental and substrate variances, but will generally range from 3 to 7 hours at 75°F (24°C). Night time applications typically experience longer cure times. Cooler temperatures, dew point temperatures close to ambient air temperature, high humidity, fog, etc may all contribute to longer cure times.

**TECHNICAL DATA SHEET****CLEAN UP**

Uncured material can be removed with Dayton Superior's Citrus Cleaner J48 or other solvents such as acetone. Cured material can only be removed mechanically.

**LIMITATIONS****FOR PROFESSIONAL USE ONLY**

Concrete surface must be less than 4% moisture content when tested with a moisture pin meter. Surface and air temperatures should be 40°F (4°C) and rising and no more than 100°F (38°C). When surface or air temperatures are above 90°F (32°C), night time applications are recommended. Dew points must be greater than 5°F (10°C) less than the ambient air temperature. Remove excess sand prior to opening the area for traffic. Not for use as a primer for overlays.

**PRECAUTIONS****READ SDS PRIOR TO USING PRODUCT**

- Never mix Part B Promoter with Part C Initiator, a VIOLENT CHEMICAL REACTION WILL OCCUR!
- The Part B Promoter and Part C Initiator should be stored and shipped separately away from one another and away from the Part A Resin.
- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (Goggles, Safety Glasses and/or Face Shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated.
- If skin contact occurs, wash immediately with soap and water and seek medical help as needed
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements.
- The Technical information presented in this document is based upon Dayton Superior's present knowledge. The purchaser is responsible for determining the suitability of the product for use and assumes all liability in connection with any particular application, use or compliance with any specifications. Dayton Superior reserves the right to make changes to this document at any time.

**MANUFACTURER**

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**WARRANTY**

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.