Atlas Minerals & Chemicals, Inc.

DATA SHEET

5-58PI (8-09)

ATLAS® VTF SETTING BED

DESCRIPTION
ATLAS VTF SETTING BED is a corrosion resistant setting bed utilized in the ATLAS VTF SYSTEM.

TYPICAL USES
ATLAS VTF SETTING BED is used to bond masonry or vitrified tile or brick to a substrate. ATLAS VTF SETTING BED is used as the bond coat over Portland cement concrete, sand cement and latex or epoxy modified leveling beds with vitrified tile, quarry tile and brick pavers.

PACKAGING - ATLAS VTF SETTING BED
32 lb. (14.5 kg.) Unit Consisting of:
One - 1-gal. can of Resin (7 lb. 9 oz. [3.4 kg.])
One - 1-pt. can of Hardener (14 oz. [397 g.])
One - bag of Powder (24 lb. 3 oz. [11.0 kg.])

171 lb. 3 oz. (77.7 kg.) Unit Consisting of:
One - 5-gal. pail of Resin (40 lb. 11 oz. [18.5 kg.])
One - 1-gal. can of Hardener (4 lb. 8 oz. [2.0 kg.])
Three - bags of Powder (42 lb. [19.1 kg.]) ea.

ESTIMATING OF THE ATLAS VTF SETTING BED

Thickness	32 lb. (14.5 kg.)	171 lb. 3 oz. (77.7 kg.)
3/32”	35 sq. ft.	190 sq. ft.

SURFACE PREPARATION
Concrete should be cured for a minimum of 28 days in accordance with American Concrete Institute (ACI) recommended concrete practices. Surface moisture may inhibit the bond of the ATLAS VTF SETTING BED. Moisture testing of the concrete substrate by ACI 515 R-16 “Dryness of Surface” is an acceptable practice. Securely tape the edges of a 4’ x 4’ film of PVC or PE to the surface at several locations on the floor surface. Allow the film to remain on the concrete for a minimum of 16 hours. Remove the film. If there is visible moisture or darkening of the concrete, the slab is too wet and additional drying is required. The substrate must be structurally sound, clean, dry and free of all contaminants such as sealers, curing compounds, coatings, oil, dirt and dust. The finished substrate must be free of ridges, protrusions, fins, mortar splatter and have a tight laitance-free steel trowel finish. Abrasive grit blasting or acid washing are recommended, but not always required, surface preparation methods. When these methods are used, a finish similar to the profile of 100 to 120 grit sandpaper is suggested.
For additional information, refer to Surface Preparation, Data Sheet PS-30.

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE
Density	ASTM C905	112 lb./cu. ft. (1.79 g./cc.)
Bond Strength, 7 days @ 77°F (25°C)		Concrete fails
Tensile Strength, 7 days @ 77°F (25°C)	ASTM C307	2,000 psi. (13.7 MPa)
Compressive Strength, 7 days @ 77°F (25°C)	ASTM C579	10,000 psi. (68.9 MPa)
Flexural Strength, 7 days @ 77°F (25°C)	ASTM C580	4,000 psi. (27.6 MPa)
Coefficient of Thermal Exp., in./in./°F (cm./cm./°C)	ASTM C531	3.0×10^{-5} (5.4×10^{-5})
Water Absorption	ASTM C413	0.2%

NOTE: ATLAS manufactures systems that may allow for installation to begin 5 days or less after concrete is poured. Please contact ATLAS Technical Service for additional information.

TEMPERATURE DURING APPLICATION
Store ATLAS VTF SETTING BED at 70°F (21°C) to 80°F (27°C) for 24 hours prior to use. The best working characteristics of the materials will be attained when the temperature of the substrate, air, masonry units and ATLAS VTF SETTING BED are between 60°F (16°C) and 85°F (29°C).
Minimum temperature for installation is 60°F (16°C).

MIXING OF THE ATLAS VTF SETTING BED
Mixing of the components should be with a KOL type mixer with a 5-gallon capacity. The mixing speed should be between 60 and 75 RPM.

32 lb. (14.5 kg.) Unit:
a. Combine the contents of the 1-gallon can (7 lb. 9 oz. [3.4 kg.]) of ATLAS VTF SETTING BED Resin with the 1-pint can (14 oz. [397 g.]) of ATLAS VTF SETTING BED Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.

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MIX RATIO CHART OF THE ATLAS VTF SETTING BED

ATLAS VTF SETTING BED	Weight	Volume
ATLAS VTF SETTING BED Resin	6 lb. 13 oz. (3.1 kg.)	93 fl. oz. (2.8 liters)
ATLAS VTF SETTING BED Hardener	123 oz. (340 g.)	12 fl. oz. (0.36 liters)
ATLAS VTF SETTING BED Powder	21 lb. (9.5 kg.)	1/2 of 42 lb. (19.0 kg.) bag
Batch Size	28-1/2 lb. (13.0 kg.)	0.25 cu. ft. (7.0 liters)

b. Slowly add the 24 lb. 3 oz. (11.0 kg.) bag of ATLAS VTF SETTING BED Powder.
c. Mix the combined components for approximately two minutes or until all the powder is thoroughly dispersed.

171 lb. 3 oz. (77.7 kg.) Unit:

a. Evenly divide the contents of one of the 42 lb. (19.1 kg.) bags of ATLAS VTF SETTING BED Powder into two equal parts by volume using two clean, dry 5-gallon pails.
b. Combine 93 fluid ounces (2.8 liters) of ATLAS VTF SETTING BED Resin with 12 fluid ounces (0.36 liters) of ATLAS VTF SETTING BED Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.
c. Slowly add a 1/2 bag of ATLAS VTF SETTING BED Powder, 21 lb. (9.5 kg.), as prepared in Step (a.).
d. Mix the combined components for approximately two minutes or until all the powder is thoroughly dispersed.

Note: The amount of the powder may be varied slightly to obtain the desired consistency. Decreasing the powder component will decrease the estimated coverage.

APPLICATION OF THE ATLAS VTF SETTING BED

Apply ATLAS VTF SETTING BED with a 3/16" V-notched trowel held at a 45 degree angle. Place a sufficient amount of ATLAS VTF SETTING BED to provide a continuous bond coat to the specified thickness. Do not apply more material than can be covered in 20 to 30 minutes at 75°F (24°C) or before the mortar begins to set. Refer to the "Typical Working & Setting Times" chart.

Grouting can proceed after the ATLAS VTF SETTING BED can support foot traffic.

ESTIMATING - BACK BUTTERING GROOVED TILE

For 3/32" thickness setting bed: No. of units estimated x 0.4 = No. of additional units for back buttering.

TYPICAL WORKING & SETTING TIMES OF THE ATLAS VTF SETTING BED

Temperature	Working Time	Support Foot Traffic
60°F (16°C)	45 min.	12 hours
75°F (24°C)	35 min.	10 hours
85°F (29°C)	15 min.	8 hours

CLEANING OF TOOLS AND EQUIPMENT

Steel wool, soap and warm water will remove the materials referred to in this Data Sheet from mixing tools and equipment if cleaning is done immediately after use. Solvents, such as methyl ethyl ketone, toluene or xylene, will have to be used after the material has begun to harden. Fully hardened material will have to be removed by mechanical means.

Dispose of residues and wastes in accordance with the directions in the Material Safety Data Sheets and government regulations.

STORAGE AND SHELF LIFE

Store all materials in a cool, dry environment. Keep all materials out of direct sunlight. Ideal storage temperature is 75°F (24°C). Protect from freezing. In unopened original containers, the materials referred to in this Data Sheet have a shelf life of approximately one year.

PRODUCT SPECIFICATION

The system shall be ATLAS VTF SETTING BED as manufactured by Atlas Minerals & Chemicals, Inc.

PRECAUTIONS

The materials referred to in this Data Sheet are for Industrial Use Only. They contain materials that present handling and potential health hazards. Consult Material Safety Data Sheets and the container labels for complete precautionary information.

TECHNICAL SERVICES

ATLAS maintains a staff of Technical Service Representatives who are available to assist you with the use of ATLAS products. In the event of difficulties with the application of ATLAS materials, the installation should be stopped immediately and ATLAS' Technical Service Department consulted for assistance.

WARRANTY

ATLAS warrants that its products will be free from defects in workmanship and materials under normal use for a period of one (1) year from the date of shipment by ATLAS (provided the products are installed before the expiration of the shelf life). THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR THE PURPOSE FOR THIS PRODUCT WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. ATLAS'

LIABILITY FOR ALLEGED BREACH OF THIS WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT (BUT NOT INCLUDING REMOVAL OF THE DEFECTIVE PRODUCT OR INSTALLATION OF REPLACEMENT PRODUCTS). ATLAS SHALL NOT BE LIABLE FOR ANY