

TECHNICAL DATASHEET

ASCOFIX TBM



PRODUCT INTRODUCTION

Ascofix TBM is a semi premix high quality self-curing thin bed mortar for jointing of AAC Blocks (Autoclaved Aerated Concrete Blocks). Ascofix TBM is a semi premix consisting of OPC 53 Grade Cement, Dry graded sand of size 1 mm down and specialized polymers which combine to give superior compressive strength, excellent water retention with self-curing property and stability. It replaces the conventional method of jointing mortar which requires a 10-12 mm jointing thickness with a revolutionary thin bed of 2-3 mm thickness. Ascofix TBM only require addition of water before application to prepare the product for use, reducing the hassle of measuring and maintaining various individual elements to create a conventional mortar.

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TECHNICAL PROPERTIES

PARAMETER	VALUE
Splitting Tensile Strength (to measure the adhesion between two blocks of ASCOLITE when tested as per ASTM – C-1660-09)	≥ 0.60 N/mm ²
Compressive Strength of Mortar @ 28 days as per IS-2250/ASTM C-109	≥ 8 N/mm ²
Particle Size (using 850 Micron Standard Sieve)	1 mm down
Sand Gradation	Retention on: 1 mm = 0-2 % 600 Micron = 2-20 % 300 Micron = 40-75 % 150 Micron = 55 -65 % 90 Micron = 65-70 %
Workability using standard flow table using cone of 100 mm base (Ref: IS-2250)	170-180 mm with 28% water at 27°C
Silt Content in Sand	NIL
Bulk Density	1550 ±50 Kg/m ³
Pull Off Adhesion Strength in N/mm ² on hard concrete slab	≥ 0.70 N/mm ² @ 28 days
Water Retentivity on AAC	95-100 %

Note: Tests are performed at Water 25 ±5 %

PRODUCT STANDARD CODES & REFERENCE:

- i. IS-2250 (Code of Practice for preparation and use of Masonry Mortars)
- ii. ASTM C-109 (Standard Test Method for Compressive Strength of Hydraulic Cement Mortars using 50 mm cube specimens)
- iii. ASTM C 1660-09 (Standard Specification for Thin Bed Mortar for Autoclaved Aerated Concrete (AAC) Masonry.
- iv. IS-4031 (Method for Physical Tests for Hydraulic Cements).

PRODUCT CHARACTERISTICS:

PARAMETERS	VALUES
Physical Nature	Free Flowing Powder and Grey in Color
Water demand for ease in Application	25 ± 5 %
Ease in Spread on Surface	Excellent (In Comparison to conventional mortar due to the consistency in texture and smoothness in application)
Hard Dry	Approx. 24 hours (further depending in the temperature and humidity conditions)
Pot Life	Approximately 60 Minutes.
Mortar required for jointing of two blocks of length 650 mm and thickness 150 mm.	500-600 gm of ASCOLITE's Mortar is sufficient with a bond thickness of 2-3 mm
Jointing Surface Area Covered by 40 Kg Bag.	170 Sqft. (considering joint thickness of 2-3 mm)
Source of Sand Used	Natural River Sand

COMPARISON WITH CONVENTIONAL METHOD OF BLOCK JOINTING

PARAMETERS	ASCOFIX TBMs	CONVENTIONAL JOINTING MORTAR
Saving of Time-Labor Cost	Fast Application as only water needs to be added. No Extra labor is required for sand gradation and cement mixing at site	Time Saving. Not Possible as screening of sand and mixing of individual components is required. For this purpose large number of labor is required
Quality Consistency	Consistency Quality due to PLC Controlled Process, Uniform Weights of individual raw materials from Batch to Batch	Unconventional Method, Quantity of RM and Mixing time varies so Quality consistency not possible
Handling and Storage	Easy Handling and Storage is possible at construction site. Bags can be easily counted, so stock figures can be properly maintained	With Conventional Method, Sand Storage and its Stock is difficult to Maintain
Technical Support	ASCOLITE provides complete support in terms of Free Mockup, testing at site like Pull of adhesion strength with detailed test Report. ASCOLITE Provide Mobile Testing Services	No Support from Sand and Cement & other material Supplier is expected
Sand Quality	Only Dry and well graded sand is used. Sand is free from Silt and other deleterious materials	Drying of sand and proper gradation is not possible at site. Sand comes with high silt

RAW MATERIAL SPECIFICATION/TESTING PROCEDURE REFERENCE:

Reference: Sand: IS-1542 & Internal Standard

OPC 53 Grade Cement: IS-12269

Performance Additives: As per Internal Standard

FEATURE-ADVANTAGE-BENEFIT

FEATURE	ADVANTAGE	BENEFITS
Thin Joints	<ul style="list-style-type: none"> ◆ Reduces overall jointing Material Requirement. ◆ Reduces Storage requirement. ◆ Thin joints Reduces seepage in comparison to conventional method. 	<ul style="list-style-type: none"> ◆ Cost is reduced. ◆ Results in savings on site storage space handling. ◆ Better water-tight wall structure.
Semi premix	<ul style="list-style-type: none"> ◆ Only Water needs to be added before application. ◆ Easy Application using Bucket trowel. 	<ul style="list-style-type: none"> ◆ No need to procure different materials. ◆ No need to maintain ratio of entire mix.
Self – Curing Properties	Water Curing is not required after application	<ul style="list-style-type: none"> ◆ Saves Water. ◆ Saves Time ◆ Saves labor cost.
Slow initial setting mortar.	<p>More Time for block leveling due to high pot life of mix.</p> <p>Low initial heat of hydration.</p>	Better workmanship possible.
Strength designed to suit Flyash Blocks (Aerated Autoclaved)	Provides higher compressive and Tensile Adhesion Strength.	Better wall strength and long term durability is possible.
Higher Coverage in comparison to conventional mortar.	Reduces overall material requirement. Increased work output.	Cost and time saving.
Technical Assistance	Our technical representative provide you with services like sampling and testing.	Higher Construction efficiency.
Consist of Materials that are non-hazardous.	Health Safety for masons	Resulting in hygiene and healthy environment.

ASCOFIX TBM COVERAGE:

Size (mm) L X H X W	Jointing Surface Area of 1 Block (Sq ft)	Mortar required in Kg/ Block (170 Sqft/40 Kg)	Blocks Required for 100 Sqft	Jointing Mortar in Kg required for 100 Sqft.
650 x250 x 75	1.45	0.34	57.17	19.56
650 x250 x 100	1.94	0.46	57.17	26.06
650 x250 x 125	2.42	0.57	57.17	32.58
650 x250 x 150	2.91	0.68	57.17	39.09
650 x250 x 200	3.88	0.91	57.17	52.13
650 x250 x 225	4.36	1.03	57.17	58.64
650 x250 x 250	4.84	1.14	57.17	65.16
650 x250 x 300	5.81	1.37	57.17	78.19
650 x200x100	1.83	0.43	71.46	30.77
650 x200x150	2.74	0.65	71.46	46.15
650 x200x225	4.12	0.97	71.46	69.23
600 x 200 x 100	1.72	0.41	71.46	31.37
600 x 200 x 150	2.58	0.61	71.46	47.06
600 x 200 x 225	3.88	0.91	71.46	70.59

- i. All results are rounded off to 2 decimal places.
- ii. The quantity ascertained is without the consideration of wastage and coping.
- iii. Thickness of mortar considered is approx. 2.5 mm in above calculation.
- iv. Calculation of only standard sizes are given. For the rest of the sizes kindly view our website or contact our company executive.
- v. The result of 170 square feet per 40 Kg of Mortar was derived after a demo wall built at our laboratory. This area is total jointing surface area and not the plastering surface area.

PREPARATION & APPLICATION GUIDELINES:

- 1) **Mortar Mixing:** In a Clean Bucket, mix ASCOLITE TBM in 25-30 % of water by weight.
- 2) **Mixing by Mixer or Tool:** Initially mix for 5-10 Minutes by electric mixer to mix homogeneously.
- 3) **Reaction Time:** Then Allow mortar to stand for 5 Minutes.
- 4) **Mortar Remixing:** Mix Again for 2-3 Minutes. Now thin bed mortar is ready to use.
- 5) **Clean Surface:** Before application clean the surface of blocks using suitable tools like brush so that any foreign material is not held on the blocks.
- 6) **Wet Surface:** Wet the surface of blocks before applying mortar.
- 7) **Mortar Spread:** Mortar should be spread on all sides of block in such a way to maintain the bond thickness 2-3 mm.
- 8) **First Course of AAC Blocks and Column Jointing:** In laying of First Course of AAC Blocks, Conventional Sand – Cement Mortar of 1:6 must be used with joint thickness 10-12 mm due to possible undulation on slab floor. Also joints of Column and AAC, must be filled with conventional mortar of joint thickness 10-12mm. (Refer our ASCOLITE Video Demo at our website & TDS of our AAC Blocks).
- (a). **Ingredients & Composition:** Dry Graded Sand, OPC 53 Grade Cement, Performance Additives.
- (b). **Dry Graded Sand 1 mm down = 69 % by weight.** OPC 53 Grade Cement = 30 % by weight.
- (c). **Performance Additives = 1 % by weight.**
- 9) **Packaging:** 40 Kg PP Bags.
- 10) **Storage:** Keep in Dry Place free from moisture and water. Do not leave the Bag/Bags open.
- 11) **Shelf Life:** Six Months from the date of Manufacture in the originally sealed packaging and with recommended storage conditions.

DISCLAIMER:

While the technical details & recommendations contained in this document and the related details given by the representatives of the company correspond to the best of our knowledge & experience, all the above information must in any case be considered as merely indicative and subject to confirmation. Users are recommended to conduct a product suitability test before it is used at full scale. In any case, the consumer alone is entirely liable for any consequences resulting from using the product. For the most up-to-date TDS, please visit our website at www.ascolite.in. Our company policy is one of ongoing R&D; therefore, we reserve the right to update this information without prior notice at any time. As the correct identification of the problems, the quality of other materials used, on-site environmental conditions and the workmanship on-site are factors beyond our control, there is no express or implied guarantee/warranty as to the results achieved. The company assumes no liability or consequential damage arising from the use of our products for unsatisfactory results. Site visits are not a supervisory responsibility wherever provided. Suggestions made either verbally or in writing by the company may be followed, modified or rejected by the owner, engineer or contractor, since they are solely responsible for carrying out procedures appropriate to a specific application.