SILICA MIX

FOUNDATION TO FINISH

JUST ADD WATER !!!

READY-MIX

TECHNICAL DATA SHEET

We supply Ready-Mix Plaster of different variants in Waterproof bags!

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ADDITIONAL CONTENT:

GENERAL INFORMATION

Product Information

SilicaMix Plaster is grey cement plaster manufactured with triple wash plaster sand, 53 grade cement (1: 3 to 1:5) and additives that enable crack-free walls, and reduce curing need.

All ingredients are blended in a controlled environment to deliver consistent quality. Also, manufactured using Maximum Aggregate size of 2.2mm which is the best in the industry

Product Variants

1. Traditional – Wall & Ceiling Plaster

Factory Mixed in accurate proportion of cement, sand and binders

Benefits:

a) Ideal replacement for site mix
b) Easy to stock in garden/parking area
c) No need to purchase each material separately
d) Extremely useful in multi-floor apartment works
e) Rapid Construction with more mestri & fewer workers for shifting and mixing

2. Water-proof – Wall & Ceiling Plaster

Waterproof mix is ideal for kitchen and bathroom walls & ceiling

Benefits:

a) Suitable for waterproof plastering of walls
b) Durable, Affordable, Futuristic Plastering
c) Rapid construction with more Mestri and fewer workers for shifting and mixing
d) Waterproof speciality admixtures and chemicals added

3. Self-curing – Wall & Ceiling Plaster

Factory Mixed in accurate proportion of cement, sand and binders

Benefits:

1. Contains Curing agents
2. 2 days curing is sufficient
3. Extremely useful in multi-floor apartment works
4. Rapid construction with more Mestri and fewer workers for shifting and mixing

4. Polymer-Modified – Wall & Ceiling Plaster

Specially formulated to offer crack-free, water-retaining, flexible and durable wall plaster mix

Benefits:

a) Crack-free wall, Flexible to finish
b) Gives better coverage area
c) Easy to store and apply
d) Rapid construction with more Mestri and fewer workers for shifting and mixing

Availability

SilicaMix Readymix Plaster Bags are available in and around Bangalore

For more information:
+91 96061 38202, +91 96061 38303
sales@smminfra.in

SPECIFICATIONS

Application Area

For Internal masonry walls, External masonry walls and Internal Ceiling

Appearance

Single coated, premixed, free-flowing greyish granular powder ready-to-mix with clean water and apply instantly

Suitable substrates/where to use

1. Conventional Concrete Hollow Blocks
2. AAC Blocks
3. Cellular Concrete Blocks
4. Fly Ash Bricks
5. Red Clay Bricks
6. Cement Blocks and Bricks
7. Stone Walls

Plastering Coats and Application Thickness

Recommended thickness for 1st coat is 8-12mm.
Recommended thickness for 2nd coat is 6-8mm, upto a maximum total thickness of 18mm
After final coat, minimum 3 to 5 days curing must be done

Coverage

15 sq.ft. per bag of 40kg, with a thickness of 12mm for a reasonably even substrate

Water Demand W/W

6 liters per bag of 40kg, to be adjusted as per specific requirement

Ingredients

1. Graded Plaster-Sand of high quality
2. OPC 53 Grade Cement (Any specific requirement from customers in respect of Grade of Cement and Brand of Cement can be fulfilled)
3. Hydrated Lime
4. Construction Chemicals which improve qualities of plastering such as crack resistance, water retention, adhesion and curing
5. Performance additives that provide very good workability to the mix

Packaging

SilicaMix Ready-Mix Plaster is supplied in 40kg HDPE Laminated waterproof bags

Storage

1. Keep in a place that is dry, cool, free from moisture and water.
2. Do not keep the bags open and exposed to air
3. Do not use any piercing objects and drag the bags while unloading. Use sufficient labour and proper methods for unloading. Holes in the bags may expose the material to moisture in the air affecting the shelf life

Shelf Life

SilicaMix Ready-Mix Plaster carries a shelf life of 9 months from the date of originally sealed packaging, when stored in cool and dry place, which may vary depending on storing environment, humidity, temperature and other parameters.

TECHNICAL DATA

Technical Data – Applicable To the variant "Traditional – Wall & Ceiling Plaster"

1. Max. Aggregate Size	2.2mm
2. Pot Life	1 – 1.5 Hours under normal climatic conditions
3. Initial Setting Time	Min. 30 – 60 minutes
4. Final Setting Time	720 minutes
5. Water Retentivity	Min 95%
6. Compressive Strength	> 7 N/mm^2
7. Pull Off Adhesion Strength	> 0.3 MPa
8. Bulk Denstiy/ Dry Density	1600 -1700 kg/m^3
9. Wet Density	1900 kg/m^3
10. Water Requirement	15%
11. Silt Content in Sand	Nil
12. Rebound losses	Very minimal

Note

The above results are based on our inhouse laboratory testing. Any specific tests at the request of the customer, can be done. Specifications are subject to change without notification.

Referred Relevant Standards

EN 998, IS 2250 – 1981 code of practice for preparation and use of masonry mortars, IS 1542 – Sand for plaster

Technical Support & Initial Training/Demonstrations

Initial training/demonstrations will be provided by us with our labour teams and/or technical staff as may be deemed necessary

Technical Support:

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APPLICATION INSTRUCTIONS

Surface Preparation

1. Dry and clean	❖ The substrate should be visually dry and clean ❖ It should be free from dust, dirt particles, foreign particlers, oil, grease, dirt, loose plaster, loose particles and other such particles which may affect the bonding ❖ The surface should be well cleaned before application, using tools such as a wire brush, mop, water jet, etc. ❖ There should not be dampness, leakage, fungus, efflorescence, etc.
2. Roughness	❖ The surface should be rough, strong and not too absorbent. ❖ Roughness is essential for good adhesion of plaster ❖ If the surface seems absorbent or porous, wet/moisten/dampen the surface as required with clean and fresh water ❖ Weak bases in the surface which cannot sustain contraction of coating must be removed and restored before application
3. Evenness	❖ Surface should be levelled for uniform thickness of film ❖ Any cracks in the surface should be repaired before application
4. Chicken wiremesh or Fibre wire mesh	To create reinforcement and reduce chances of cracking, cover all concrete and block joints with a chicken mesh or fibre.
5. First layer of application before plastering	For better results, apply a thin layer of plaster before the actual plastering

Mixing

1. Apply a thin layer of the mix to the substrate before plastering.
   Normally an initial layer of cement and water is applied under Traditional method. Instead of cement and water layer, a thin layer of the same Ready-Mix Plaster can be applied to avoid purchasing, maintaining and monitoring cement separately

2. Take a clean bucket and fill it up with 6 liters of clean and good quality water.

3. Cut open the Ready-Mix Plaster bags carefully and take out the material in as much quantity as may be required for a plastering work of around 45 min to 60 min.
   Avoid mixing large quantities at once as it may affect the plasticity of unused mix and reusing of already mixed plaster is not advisable

4. Slowly pour the Ready-mix powder into the bucket filled with water
   A sturdy, good quality bucket is recommended as it will be used many times for mixing. And if an electric operated mixer is used instead of hand mixing, a good quality bucket is a must.

5. Do not pour the powder into the bucket before water. Pouring powder first and then adding water would create lumps.

6. Mix the composition nicely for 5 minutes. Hand mixing would be sufficient, however if you want a better homogenous mixing, you can go for an electric operated hand mortar mixer.

7. Check for presence of any lumps or uneven mixing and remix for another 2 minutes. This will provide a good lumpfree, consistent and homogenous plaster

Application & Curing

1. Decide the level of thickness required.
   Based on that, pick the mixture and throw it on to the surface forcibly and uniformly, using a good trowel.

2. After this level the plaster to obtain desired finishing, using appropriate tools. For recommended tools please refer the relevant section provided later in this document

3. In case a 2nd coat is required, the surface with 1st coat should be roughened for the 2nd coat to bind to.
   Give enough time between 1st and 2nd coats depending on your specifications, requirements and practice.
   Recommended thickness for 1st coat is 8-12mm; and recommended thickness for 2nd coat is 6-8mm, upto a maximum total thickness of 18mm

4. After completing both the coats, carry out proper levelling to get a good finish as required, using appropriate tools. Again, there are different tools available for different kinds of finishing preferred. You can refer to our 'Recommended Tools' section for more information
   Do not forget to clean all the tools thoroughly after use.

5. A 40kg bag of Ready-Mix plaster with 6 liters of water would approximately cover an area of 15 sq.ft. with a thickness of 12mm for a reasonably even substrate

6. After final coat, spray water 2 to 3 times a day for 3 to 5 days for curing. In case you are opting for Self-curing Ready-Mix Plaster curing can be reduced to 3 days.

GUIDELINES FOR IDEAL RESULTS

1. Read carefully all the instructions mentioned under "Application instructions". Follow the instructions mentioned in all 4 sections of the instructions namely **Surface Preparation, Mixing, Application & Curing**

2. Make proper batches. Ideal batches would be of an approximate duration of 45 minutes each. Take only as much material as needed for the particular batch; mix and use. Batches can be decided depending on specific requirements. However, do not mix all at once which may affect the bonding since the material starts its plasticity once it is mixed with water.
   Try to mix and use as instantly as possible for best results

3. Walls should neither be too dry to absorb the water from the mix, nor be too moist. To avoid this, use the steps mentioned before under "Application Instructions"

4. Do not reuse the mixture by adding water again.

5. Once the mix has set, do not add additional water. Decide the thickness needed before mixing, apply water accordingly and mix. Do not try to alter or redo.

6. Do not mix material from 2 different batches as the plasticity of each batch would be different

7. Apply the plaster mix with force so as to make it stick to the surface when thrown

8. Avoid plastering during extreme weather conditions in terms of cold, rains, winds and summer. In case of such extreme weather conditions, protect finished works until they are completely cured

9. It is common practice under Traditional Method to throw dry plaster powder on to the surface of plastering done believing it would provide smooth finishing.
   Avoid doing this. Throwing powder on top of plastering might result in hairline cracks

10. Maintain a good speed of mixing. The speed should not be very less if it is manual; and should not be very high if it is done using electric mixers

SAFETY & PRECAUTIONS

No special precautions are required to be taken in respect of Ready-Mix Plaster. However the main ingredients are Crusher manufactured Silica Sand and Portland Cement. Hence regular safety precautions which are to be followed in the usage of day to day Construction products shall be applicable.

Normal Construction field safety precautions that are required to be followed include the following:

1. Use safety accessories required to be used, would include:
   a) Safety gloves
   b) Safety goggles
   c) Dust mask and nose mask
   d) Helmet
   e) Nose mask
2. Avoid contact with eyes; inhaling or taking internally
3. Keep the area as dust free as possible
4. After work, wash hands with soap or handwash
5. In case of accidental contact with eyes of either dry or wet mix, immediately wash your hands; make sure your hands are clean and then wash your eyes with clean water and if required, seek medical assistance

WARRANTY

SMM Infra extends warranty for its products against defects in manufacturing and quality of raw materials used for a period of 9 months from the date of original manufacture, subject to following of all instructions and guidelines prescribed in terms of usage, storing and other relevant aspects.

DISCLAIMER

All the results and facts mentioned in this document are applicable under normal conditions and when the product is used as per the instructions provided and the guidelines are followed. The company does not assume any responsibility or liability for deviations and dissatisfactions attributable to environmental, climatic, temperature, humidity aspects, etc. and to the methods of usage followed by the customer.

RECOMMENDED TOOLS

Tool	Purpose	Recommended Specifications
1. Buckets	For mixing	❖ Good Quality and Sturdy ❖ Around 20 liters capacity
2. Utility knife	To cut open the bags	We recommend using a good utility knife instead of tearing the bags open
3. Wire brush or Paint brush	To clean the surface	
4. Trowel	To throw the Plaster on to the substrate and provide good finish	❖ Good Quality ❖ Stainless Steel ❖ With a comfortable, evenly weighted handle. ❖ 14” Trowel is recommended
5. Bucket Trowel	To scoop the Plaster with	❖ Good Quality ❖ Stainless Steel
6. Hawk/ Hand Board	To hold the Plaster for the Trowel to scoop from	❖ Lightweight
7. Mixer (If machine mixing is spreferred)	For consistent and complete mixing	❖ Electrical operated hand mortar mixer/
8. Water brush	On final coat of plastering for good finishing	❖ 6” Water brushes
9. Hand brush	To clean buckets and tools	
10. Floats	To provide finishing	1. Wooden Float – For Rough finishing 2. Steel Float – For Smooth finishing
11. Plumb Bob	To check the level of plastering	

All the tools are to be spotlessly cleaned after using

PRACTICAL BENEFITS OF USING READY-MIX PLASTER

Cost Saving

1. Approximate Saving in cost is Rs. 5 per sq. ft. of Plastering
2. It helps in reduction of wastage occuring due to unloading of Sand on the ground
3. It helps in reduction of wastage due to moisture content in Sand purchased separately
4. It helps in reduction of the cost involved in in moving the materials inside/between the premises/towers. Material can be stored in respective Towers and in respective Floors instead of moving from the common storage space everytime plastering is planned
5. To get best rates, Cement has to be purchased in bulk which involves dead working capital even when requirement is less. With Readymix Bags there is no need for this working capital funding since material can be purchased even in small quantities as and when required

Quality & Benefits

1. With Readymix Bags, there is consistent mixing of Sand and Cement in right proportions, thereby providing same. There is no need to worry about what ratio Mestri is using
2. Also there is no need to track and monitor the quantity of Cement being used
3. It contains Construction chemicals that improve qualities of plastering such as crack resistance, water retention, adhesion and curing

Ease of use

1. No need to fill Sand in sacks. Easy to store and monitor
2. No need of shifting and storing Sand and Cement separately
3. No need of providing Cement separately for applying initial layer, thereby saving the time and efforts involved in purchasing and keeping track of usage of Cement
4. Material can be purchased as and when required for any specific part of the building/tower/project instead of buying both Sand and Cement in bulk and storing in a common place even when plastering is planned for only some of the towers or floors
5. Helps in completing the projects with reduced labour thereby reducing the undue dependancy on labourers
6. Being a labour intensive work, Plastering comes with responsibilities of managing many labourers, responsibilities of facilities, accomodation, safety, security involved towards those labourers.
   By bringing down the labour requirement, the time, efforts and hassles involved in this management and overheads can be drastically reduced

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SILICA MINES & MINERALS

CONSTRUCTION MATERIALS - FOUNDATION TO FINISH

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