

CMI® BASE MORTAR

Updated September'23



DESCRIPTION

CMI® Base Mortar is a high-quality polymer modified water-resistant cement-based skim coat (base coat) for internal rendered, concrete walls or ceilings. It is also good for surface improvement works to block wall and concrete wall surfaces. It is certified with Singapore Green Label by Singapore Environment Council.

USES

- Interior Skim Coat (Base Coat) for undercoat on concrete surfaces and block walls, surface improvement on rendered surfaces.
- Highly recommended for project with QCLASSIC / CONQUAS / BQUAS requirement.
- IT SHOULD NOT BE USE ON PAINTED SURFACES.

ADVANTAGES

- Premixed with good and consistent quality.
- User friendly, just need to mix with water and apply.
- Pre-packed, complementing IBS construction to achieve good construction quality and less labour intensive.
- Good workability, water retentivity and good bonding strength, promoting good surface improvement prior to skim coat (top coat).
- Eco-friendly cementitious skim coat, certified with Singapore Green Label by Singapore Environment Council.

Product Type	Product Code	Pack Size	Finishing	Color	Substrate
Skim Coat (Base Coat)	381	25kg / 40kg	Semi-smooth	White	Brick, AAC block, concrete
	781	25kg / 40kg		Grey	

Technical Data

Appearance	White or Grey Powder
Bond Strength @ 28 days	≥ 0.5 N/mm ²
Wet Density	1800 – 1900 kg/m ³
Dry Density	1600 – 1700 kg/m ³
Pot Life @ 30°C	Approx. 2 hours
Recommended Thickness	2 – 3mm per coat
Mixing Ratio	Approx. 23% - 25% water on dry material

Recommended Total Coating & Construction System
INTERIOR WALL SYSTEM
(I) Brick Wall

TYPES	PRODUCT NAME	NOMINAL THICKNESS
Bricklaying	: CMI® Masonry Mortar 086	: 10mm
Plaster / Render	: CMI® Masonry Mortar 086	: 20mm
Skim Coat (Base Coat)	: CMI® Base Mortar 381 / 781	: 2-3mm
Skim Coat (Top Coat)	: CMI® Wallskim 281 / 681 / 488	: 1-2mm
Paint (Sealer/Primer)	: Nippon Paint Interior Sealer Range	: 1 coat
Paint (Finishing Coat)	: Nippon Paint Interior Finishing Range	: 2 coats

(II) Block Wall / Concrete Wall

TYPES	PRODUCT NAME	NOMINAL THICKNESS
Skim Coat (Base Coat)	: CMI® Base Mortar 381 / 781	: 2-3mm
Skim Coat (Top Coat)	: CMI® Wallskim 281 / 681 / 488	: 1-2mm
Paint (Sealer/Primer)	: Nippon Paint Interior Sealer Range	: 1 coat
Paint (Finishing Coat)	: Nippon Paint Interior Finishing Range	: 2 coats

INTERIOR CEILING SOFFIT SYSTEM
(III) Concrete Soffit

TYPES	PRODUCT NAME	NOMINAL THICKNESS
Skim Coat (Base Coat)	: CMI® Base Mortar 381	: 2-3mm
Skim Coat (Top Coat)	: CMI® Wallskim 281	: 1-2mm
Paint (Sealer/Primer)	: Nippon Paint Interior Sealer Range	: 1 coat
Paint (Finishing Coat)	: Nippon Paint Interior Finishing Range	: 2 coats

Note:

- Kindly refer to the respective technical datasheet for more information.
- For other areas not specified, please consult **Nippon Paint / CMI®** Technical Representatives for more information.

Surface Preparation

All surfaces must be sound, clean and free from dirt, dust, grease and other contaminants which will inhibit proper bonding. Use **CMI® Render** for patching of surface defects exceeding 5mm. Damp the substrate for dry or high absorbing substrates prior to application of **CMI® Base Mortar**.

Mixing

Mix 25 kg bag of **CMI® Base Mortar** with approximately 5.7 - 6.5 liters of clean water (OR) mix 40 kg of **CMI® Base Mortar** with approximately 9.2 - 10 liters of clean water (Do not add cement or lime into the mixture). Mix thoroughly for 3-5 minutes using mechanical mixer until the homogenous paste is achieved and lump-free. Allow mixture to stand for 5 minutes and re-stir before use. Re-mix if the mixture is left unattended for more than 30 minutes.

Application

Apply the mixture onto receiving surface using steel trowel. If more than one coat is required due to surface flatness, allow the underlying coat to achieve partial cure or touch dry before applying the subsequent coat.

Coverage

Approx. 1.3kg/ m²/ mm thick

Cleaning

Clean up equipment with water immediately after use.

Safety Precautions

- Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid inhaling dust during handling or mixing of products.
- Use only in well-ventilated area.
- In case of inadequate ventilation wear respiratory protection. In case inhaled, remove patient to fresh air and allow to rest.
- In case swallowed, do not induce vomiting. Rinse mouth clear with water and drink two glasses of water.
- In case contact with eye, immediately rinse with plenty of water and seek medical advice.
- Remove splashes from skin by using soap or water.
- Products must always be stored in a cool, dry and well-ventilated area.
- When transporting products, care must be taken. Always keep products dry and avoid generating or accumulating dusts during handling.
- Disposal of product should always comply with local and national regulations.

Shelf Life & Storage

Six (6) months when stored in cool and dry condition.

Note

The information provided on this datasheet is not intended to be complete and is provided as general advise only. It is the user's responsibility to ensure that the product is suitable for its intended purpose. As we have no control over the treatment of the product, the standard of surface preparation, or other factors, we are not responsible for any damages or injury, including but not limited to special or consequential damages which may result from the use of our products, which includes any damages or injury caused by any failure of performance. The information contained in this datasheet may be modified by us from time to time, without any notice arising from our continuous product development activities.



SIRIM QAS International Sdn. Bhd.
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TEST REPORT

REPORT NO : 2020CB0761	PAGE : 1 OF 7
This Test Report refers only to samples submitted by the applicant to SIRIM QAS International Sdn. Bhd. and tested by SIRIM QAS International Sdn. Bhd. This Test Report shall not be reproduced, except in full and shall not be used for any purpose by any means or forms (including but not limited to advertising purposes) without written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE), SIRIM QAS International Sdn. Bhd. Please refer to the last page of this Test Report for Conditions Relating to the Use of Test Report.	

THIS TEST REPORT IS ISSUED IN SECURED PDF SOFTCOPY

Applicant : CMI CONSTRUCTION MATERIAL INDUSTRY SDN. BHD.
No: 7, Jalan Sungai Jerluh 32/196,
Jalan Bukit Kemuning, Section 32,
40460 Shah Alam
Selangor.

Manufacturer : CMI CONSTRUCTION MATERIAL INDUSTRY SDN. BHD.

Product : CMI Base Mortar

Reference Standard / Method of Test : BS EN 998-1: 2016,
Specification for mortar for masonry. Part 1: Rendering and Plastering mortar
Clause 5.2: Characteristics of fresh mortars
Clause 5.3: Characteristics of hardened mortars

Description of sample : One (1) bag of 15 kg Base Mortar and and two (2) pieces of concrete slab coated with Base Mortar of size 410 mm x 305 mm x 50 mm were received for testing.
Brand: CMI
Model: Base Mortar

Date Received of Complete Application : 09 September 2020

Job No. : J20201430505

Description of Test Results : This test report covers only test clauses as requested by Applicant to SIRIM QAS International Sdn. Bhd. The test results for the submitted test samples as described in this test report complied with the requirements of the above reference standard at the respective clauses tested.

Issued Date : 15 December 2020

Approved Signatory;


.....
(HANON NAZIR BIN MOHD BASRI) Senior Testing Executive


.....
(R.A. HANAN) SIHA BINTI RAJA ABDUL HANAN)
Head
Civil & Construction Section
Testing Services Department



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TEST RESULTS:

Product : CMI Base Mortar
 Mix ratio : 28 % of water
 Method of test : 1) BS EN 998-1-2016,
 Specification for mortar for masonry. Part 1: Rendering and plastering mortar
 2) BS EN 1015-7: 1999,
 Methods of test for mortar for masonry – Part 7: Determination of air content of fresh mortar
 3) BS EN 1015-9: 1999,
 Methods of test for mortar for masonry – Part 9: Determination of workable life and correction time of fresh mortar
 4) BS EN 1015-3: 1999,
 Methods of test for mortar for masonry – Part 3: Determination of consistence of fresh mortar (by flow table)

CLAUSE	TEST METHOD/REQUIREMENT	TEST RESULTS	REMARK
5.2 5.2.1	Characteristics of fresh mortar Workable Life The workable life shall be declared by the manufacturer - Method A: Workable Life of General Purpose mortar The workable life shall be declared by the manufacturer and measured by time in minutes by which it reaches the limit of resistance to penetration. - Method B: Workable life of thin layer mortar The workable life shall be declared by the manufacturer and measured by the time in minutes which flow value of mortar differs by 30 mm.	<u>Workable life (Stiffening time)</u> more than 8 hours to stiff <u>Workable life by flow table</u> 90 minutes	Declared by manufacturer
5.2.2	Air Content The air content shall fall as declared by the manufacturer - Method A: Pressure Methods Declared range of value: 10% – 15%	<u>Air Content</u> 1) 13.0 % 2) 13.0 % Mean: 13.0 %	Pass

Note:

- 1) Testing period – 24th September 2020 to 13th November 2020
- 2) Simple acceptance rule is used for the conformity statement. The level of risk regarding the probability of false accept is up to 50%.

		
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TEST RESULTS:

Product : CMI Base Mortar
 Mix ratio : 28 % of water
 Method of test : 1) BS EN 998-1-2016,
 Specification for mortar for masonry. Part 1: Rendering and plastering mortar
 2) BS EN 1015-10: 1999,
 Methods of test for mortar for masonry – Part 10: Determination of dry bulk density of hardened mortar

CLAUSE	TEST METHOD/REQUIREMENT	TEST RESULTS	REMARK
5.3 5.3.1	Characteristics of hardened mortar General The properties relevant to the intended use and/or type of product shall be declared. GP: General purpose rendering/plastering mortar L1: Dry Bulk Density Declared range of value: 1200 kg/m ³ to 1500 kg/m ³ .	<u>Dry Bulk density</u> 1) 1420 kg/m ³ 2) 1420 kg/m ³ 3) 1400 kg/m ³ Mean: 1410 kg/m ³	Pass

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TEST RESULTS:

Product : CMI Base Mortar
 Mix ratio : 28 % of water
 Method of Test : 1) BS EN 998-1-2016,
 Specification for mortar for masonry. Part 1: Rendering and plastering mortar
 2) BS EN 1015-11: 1999,
 Methods of test for mortar for masonry – Part 11: Determination of flexural and compressive strength of hardened mortar

CLAUSE	TEST METHOD/REQUIREMENT	TEST RESULTS	REMARK
5.3 5.3.1	Characteristics of hardened mortar General Classification for hardened mortar properties. GP: General purpose rendering/plastering mortar L2: Compressive strength Range of Compressive strength at 28 days - Categories CS IV: $\geq 6.0 \text{ N/mm}^2$	<u>Flexural Strength</u> 1) 5.6 N/mm^2 2) 4.6 N/mm^2 3) 4.6 N/mm^2 Mean: 5.0 N/mm^2 <u>Compressive Strength</u> 1) 15.0 N/mm^2 2) 14.7 N/mm^2 3) 14.8 N/mm^2 4) 15.4 N/mm^2 5) 14.9 N/mm^2 6) 14.4 N/mm^2 Mean: 14.9 N/mm^2	Pass

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TEST RESULTS:

Product : CMI Base Mortar
 Mix ratio : 28 % of water
 Method of Test : 1) BS EN 998-1-2016,
 Specification for mortar for masonry. Part 1: Rendering and plastering mortar
 2) BS EN 1015-12: 2016,
 Methods of test for mortar for masonry – Part 12: Determination of adhesive strength of hardened rendering and plastering mortars on substrates

CLAUSE	TEST METHOD/REQUIREMENT	TEST RESULTS	REMARK
5.3 5.3.1	Properties of hardened mortar General The properties relevant to the intended use and/or type of product shall be declared. GP: General purpose rendering/plastering mortar L3: Adhesion Declared value: $\geq 1.0 \text{ N/mm}^2$	<u>Adhesion Strength</u> 1) 1.74 N/mm^2 2) 1.76 N/mm^2 3) 1.63 N/mm^2 4) 1.95 N/mm^2 5) 2.26 N/mm^2 Mean: 1.87 N/mm^2 <u>Fracture pattern</u> Fracture pattern b: Cohesion fracture – Fracture in the mortar itself.	Pass

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TEST RESULTS:

Product : CMI Base Mortar
 Mix ratio : 28 % of water
 Method of Test : 1) BS EN 998-1-2016,
 Specification for mortar for masonry. Part 1: Rendering and plastering mortar
 2) BS EN 1015-18: 2002,
 Methods of test for mortar for masonry – Part 18: Determination of water absorption coefficient due to capillary action of hardened mortar

CLAUSE	TEST METHOD/REQUIREMENT	TEST RESULTS	REMARK
5.3 5.3.1	<p>Properties of hardened mortar General The properties relevant to the intended use and/or type of product shall be declared.</p> <p>GP: General purpose rendering/plastering mortar</p> <p>- Categories W_c 0: not specified (for mortar intended to be used in the external elements)</p> <p>Coefficient of capillary water absorption. .</p>	<p><u>Capillary water absorption</u></p> <p>1) 0.39 kg/m².min^{0.5} 2) 0.40 kg/m².min^{0.5} 3) 0.44 kg/m².min^{0.5} 4) 0.46 kg/m².min^{0.5} 5) 0.38 kg/m².min^{0.5} 6) 0.38 kg/m².min^{0.5} Mean: 0.41 kg/m².min^{0.5}</p>	Pass

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CONDITIONS RELATING TO THE USE OF SIRIM QAS INTERNATIONAL TEST REPORT

1. A Test Report will be issued in respect of Testing Services conducted and shall relate only to the sample actually tested. SIRIM QAS International makes no warranty whatsoever and the Applicant shall not represent in any manner that any duplication or mass production of the Product is same as the sample actually tested or that SIRIM QAS International has tested any of the duplicated or mass-produced Product. Measurement uncertainty shall be included in the Test Report when there is no statement of conformity required. When a statement of conformity to a specification or standard is applied, the Simple Acceptance Rule is used. Unless otherwise stated, the Acceptance Rule with Guard Band is used.
2. The Test Report shall not be misused, amended, changed, varied or modified in any manner whatsoever by the Applicant or otherwise.
3. If the Test Report is to be furnished to any third party or to the public, each such Test Report shall be furnished in full, legible and in its entirety.
4. The Test Report shall not be reproduced and shall not in any event be used for any advertising purposes or whatsoever without written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International of No 1, Persiaran Dato' Menteri, Building 8, Section 2, P.O. Box 7035, 40700 Shah Alam, Selangor Darul Ehsan.
5. Customer (Applicant/Manufacture/Factory,etc.) is not permitted to use any SIRIM QAS International, SIRIM or other SIRIM's subsidiaries logo or words on packaging, sample's manual, technical specification, items and products.
6. Subject to consent and written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International, the customer (Applicant/Manufacture/Factory,etc.) may use SIRIM QAS International logo or word on the promotional materials and the Applicant shall only include the phrase, "A sample of this product has been tested by SIRIM QAS International ...(Test Report No) ...(dated) ...(for what test) ...(to which standard)" or such similar words which stress that only the sample was actually tested. This phrase shall only be used for the purpose of product advertisement or product promotion (eg; brochures/flyers/official website). For avoidance of doubt, the statement shall not be used on the sample, packaging of the sample, items and products.
7. In the event there is an investigation from a Government Regulatory Agency concerning the Applicant's Test Report, SIRIM QAS International may disclose the information pertaining to the Test Report for purposes of such investigation.
8. Further or in the alternative, it is strictly forbidden unless with prior written approval from the Chief Executive Officer of SIRIM QAS International, to represent in any manner whatsoever that SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries has endorsed, approved or validated the Product of the Applicant in any manner whatsoever.
9. In the event the Applicant is found in breach of this provision, SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries without prejudice to any other rights and remedies may take whatever action necessary including but not limited to:
 - a) Informing and placing a notice in the media;
 - b) Obtaining an injunction from Court (cost on a solicitor-client basis to be borne by the Applicant);
 - c) Refusing to accept any further Product for Testing Services from the Applicant or whosoever related to the Applicant, whether subsidiary or otherwise;
 - d) Instructing the Applicant to withdraw and recall the advertisement, statement or document in question and advertise a clarification and apology to SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries twice in a national publication of SIRIM QAS International's choice at the Applicant's sole cost; and
 - e) Informing or lodging a report pertaining the Applicant's Test Report with the relevant authorities.
10. SIRIM QAS International is committed in supporting an environmentally-friendly business practices by reducing paper consumption, therefore we do not issue any hard copy of Test Report to the Applicant. However, additional certified true copy(ies) or softcopy of the Test Report may be issued upon request by the Applicant upon payment of the relevant fee. The certified true copy(ies) or softcopy of test report shall only be given for test report issued not more than three (3) years from the date of issuance.
11. Issuance of Amendment Report due to the following reasons are chargeable to the Applicant :
 - a) Changes in details of the Applicant name and/or address;
 - b) Changes in details of the Manufacturer's name and/or address;
 - c) Changes in details of the Factory location name and/or address;
 - d) Changes in details of the model and/or type designation
12. However, issuance of Supplementary Report due to the following reasons are FOC :
 - a) Misprints and typo errors;
 - b) Missing technical information as agreed in PP1 form;
 - c) Test data not reported;
 - d) Mistake in reporting of test data
13. Corrections to report shall only be allowed if the date of issuance of the original report has not exceeded 6 months and shall be limited to a maximum 3 times, after either case whichever occurs earlier, an Amendment or a Supplementary Report shall not be issued.



The Singapore Environment Council hereby grant
CMI Construction Material Industry Sdn Bhd

No. 7 Jalan Sungai Jerluh 32/196, Bukit Kemuning, Seksyen 32, 40460 Shah Alam,
Selangor, Malaysia

the right to use the Singapore Green Label for

CMI BASE MORTAR
022-119-2645
Environmentally Preferred Cement & Concrete Products

(In accordance to SEC Green Label Category 22: Cement and Concrete Products)

Validity: 17 May 2024 to 16 May 2026

Cheang Kok Chung
Executive Director



Singapore
Environment
Council



1 Kay Siang Road #07-01
Singapore 248922