



SIRIM QAS International Sdn. Bhd.
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TEST REPORT

REPORT NO : 2024CB0629	PAGE : 1 OF 5
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 : VIVO RAISER SDN. BHD.
No: 9 & 10, Jalan PKNK 3/7,
Kawasan Perusahaan Sungai Petani,
08000 Sungai Petani,
Kedah, Malaysia.

Manufacturer : Same as above

Product : TPS 215 Non-Shrink Grout

Reference Standard / Method of Test : 1) ASTM C348-14, Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars
2) ASTM C349-18, Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using Portions of Prism Broken in Flexure)
3) ASTM C940-16, Standard Test Method for Expansion and Bleeding of Freshly Mixed Grout for Preplaced-Aggregate Concrete in the Laboratory

Description of sample : One (1) bag of 8 kg TPS 215 Non-Shrink Grout was received for testing.
Brand: TPS
Model: TPS 215 with mix ratio 12 %
Product Description: Pumpable Shrinkage Compensated Cementitious Grout

Date Received of Complete Application : 06 May 2024

Job No. : J20241430303

Description of Test Results : The test results of the submitted test sample are described in Page 2, 3, & 4 of this test report.

Issued Date : 29 August 2024

Approved Signatory;

(HANON NAZIR BIN MOHD BASRI)
Senior Testing Executive



(RAJANOR SIHA BINTI RAJA ABDUL HANAN)
Head
Civil & Construction Section
Testing Services Department

TEST RESULTS:

Product : TPS 215 Non-Shrink Grout

Mix ratio : 12 % of water

Method of test : ASTM C348-14,
Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars.

NO.	TYPE OF TEST METHODS	TEST RESULT
1.	Determination of Flexural Strength	<div>28 days</div> <div>1) 19.1 N/mm²</div> <div>2) 16.6 N/mm²</div> <div>3) 18.2 N/mm²</div> <div>4) 18.0 N/mm²</div> <div>5) 18.5 N/mm²</div> <div>Mean: (18.0 ± 0.073*) N/mm²</div>

Note:

1) Testing period – 22nd July 2024 to 19th August 2024.

2) The sample was cured in curing tank under temperature, (20 ± 2) °C

3) Where the reported uncertainty is calculated using a coverage factor k=2, which gives a level of confidence of approximately 95%.

4) *Denotes measurement uncertainty

(The remainder of this page is intentionally left blank)

TEST RESULTS:

Product : TPS 215 Non-Shrink Grout

Mix ratio : 12 % of water

Method of test : ASTM C349-08,
Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using Portions of Prism Broken in Flexure)

NO.	TYPE OF TEST METHODS	TEST RESULT
1.	Determination of Compressive Strength	<div>28 days</div> <div>1) 74.6 N/mm²</div> <div>2) 88.2 N/mm²</div> <div>3) 69.6 N/mm²</div> <div>4) 69.0 N/mm²</div> <div>5) 84.9 N/mm²</div> <div>6) 87.4 N/mm²</div> <div>Mean: (79.0 ± 0.23*) N/mm²</div>

Note:

1) Testing period – 22nd July 2024 to 19th August 2024.

2) The sample was cured in curing tank under temperature, (20 ± 2) °C

3) Where the reported uncertainty is calculated using a coverage factor k=2, which gives a level of confidence of approximately 95%.

4) *Denotes measurement uncertainty

(The remainder of this page is intentionally left blank)

TEST RESULTS:

Product : TPS 215 Non-Shrink Grout

Mix ratio : 12 % of water

Method of test : ASTM C940-16

Standard test Method for Expansion and Bleeding of Freshly Mixed Grout for Preplaced-Aggregate Concrete in the Laboratory

NO.	TYPE OF TEST METHODS	TEST RESULT
1.	Determination of bleeding and expansion of freshly mixed grout	<div>a) Bleeding</div> <div>i. After 30 minutes: 0 %</div> <div>ii. After 60 minutes: 0 %</div> <div>iii. After 45 minutes: 0 %</div> <div>iv. After 60 minutes: 0 %</div> <div>v. After 2 hours: 0 %</div> <div>vi. After 3 hours: 0 %</div> <div>b) Expansion</div> <div>i. After 30 minutes: 0 %</div> <div>ii. After 60 minutes: 0 %</div> <div>iii. After 45 minutes: 0 %</div> <div>iv. After 60 minutes: 0 %</div> <div>v. After 2 hours: 0 %</div> <div>vi. After 3 hours: 0 %</div>

Note:

1) Testing period – 22nd July 2024 to 19th August 2024.

3) Where the reported uncertainty is calculated using a coverage factor k=2, which gives a level of confidence of approximately 95%.

4) *Denotes measurement uncertainty

(The remainder of this page is intentionally left blank)

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.

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. For quantitative test results (with values), when a statement of conformity to a specification or standard is applied, the Simple Acceptance Rule shall be used. Unless otherwise stated, the Acceptance Rule with Guard Band is used, and additional charge will be incurred accordingly.
3. For qualitative test results (visual observation), when requested by applicant, a statement of conformity in the Test Report shall be reported. Should there is no request by applicant, a statement of conformity in the Test Report can be reported based on our discretion.
4. The Test Report shall not be misused, amended, changed, varied or modified in any manner whatsoever by the Applicant or otherwise.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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
13. 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
14. 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.



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TEST REPORT

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Unless otherwise stated, the results shown in this Test Report shall be valid exclusively for the specific sample either provided by the Applicant or sampled by the qualified officer and tested by SIRIM QAS International Sdn. Bhd. In deriving the results of this Test Report, SIRIM QAS International Sdn. Bhd. has relied solely on the sample and data information provided by the Applicant, in accordance with the applicable standards requested by the Applicant in the Application Form. This Test Report shall not be reproduced, except in full, without written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International Sdn. Bhd. Kindly refer to the last page of this Test Report for the 'Conditions Relating to the Use of SIRIM QAS International Test Report'.

Applicant : VIVO RAISER SDN. BHD.
No: 9 & 10, Jalan PKNK 3/7,
Kawasan Perusahaan Sungai Petani,
08000 Sungai Petani,
Kedah, Malaysia.

Manufacturer : Same as above

Product : TPS 215 Non-Shrink Grout

Reference Standard / Method of Test : 1) ASTM C348-14,
Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars
2) ASTM C349-18,
Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using Portions of Prism Broken in Flexure)
3) ASTM C940-16,
Standard Test Method for Expansion and Bleeding of Freshly Mixed Grout for Preplaced-Aggregate Concrete in the Laboratory

Description of sample/ Description of Test Specimen : One (1) bag of 5 kg TPS 215 Non-Shrink Grout was received for testing.
Brand: TPS
Model: TPS 215 with mix ratio 16 %
Product Description: Pumpable Shrinkage Compensated Cementitious Grout

Disclaimer: All the information stated above has been provided/agreed by the Applicant. SIRIM QAS International Sdn. Bhd. shall not be held responsible for the accuracy, completeness, or validity of the information provided by the Applicant which may affect the validity of the test results. The accuracy and reliability of the test results are contingent upon the integrity and accuracy of the information provided by the Applicant.

Date Received of Complete Application : 21 November 2024

Job No. : J20241430925

Description of Test Results/ Overall Test Result : The test results of the submitted test sample are described in Page 2, 3 & 4 of this test report.

Issued Date : 18 February 2025

Approved Signatory;

(HANON NAZIR BIN MOHD BASIR)
Senior Testing Executive



(FAIZ BIN MOHD YUSUF)
Principal Testing Executive
Civil & Construction Section
Testing Services Department

Unless otherwise stated, the results shown in this Test Report shall be valid exclusively for the specific sample either provided by the Applicant or sampled by the qualified officer and tested by SIRIM QAS International Sdn. Bhd. In deriving the results of this Test Report, SIRIM QAS International Sdn. Bhd. has relied solely on the sample and data information provided by the Applicant, in accordance with the applicable standards requested by the Applicant in the Application Form. This Test Report shall not be reproduced, except in full, without written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International Sdn. Bhd. Kindly refer to the last page of this Test Report for the 'Conditions Relating to the Use of SIRIM QAS International Test Report'.

TEST RESULTS:

Product : TPS 215 Non-Shrink Grout
Mix ratio : 16 % of water
Method of test : ASTM C348-14,
Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars.

NO.	TYPE OF TEST METHODS	TEST RESULT
1.	Determination of Flexural Strength	<u>28 days</u> 1) 10.7 N/mm ² 2) 11.2 N/mm ² 3) 11.7 N/mm ² 4) 9.5 N/mm ² 5) 9.6 N/mm ² Mean: (10.5 ± 0.07*) N/mm ²

Note:

- 1) Testing period – 23rd December 2024 to 20th January 2025.
- 2) The sample was cured in curing tank under temperature, (20 ± 2) °C
- 3) Where the reported uncertainty is calculated using a coverage factor $k=2$, which gives a level of confidence of approximately 95%.
- 4) *Denotes measurement uncertainty

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Unless otherwise stated, the results shown in this Test Report shall be valid exclusively for the specific sample either provided by the Applicant or sampled by the qualified officer and tested by SIRIM QAS International Sdn. Bhd. In deriving the results of this Test Report, SIRIM QAS International Sdn. Bhd. has relied solely on the sample and data information provided by the Applicant, in accordance with the applicable standards requested by the Applicant in the Application Form. This Test Report shall not be reproduced, except in full, without written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International Sdn. Bhd. Kindly refer to the last page of this Test Report for the 'Conditions Relating to the Use of SIRIM QAS International Test Report'.

TEST RESULTS:

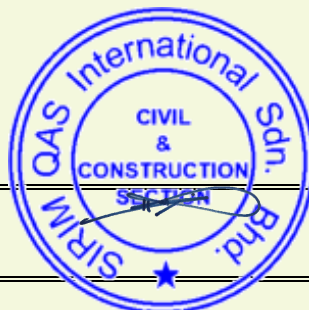
Product : TPS 215 Non-Shrink Grout
Mix ratio : 16 % of water
Method of test : ASTM C349-18,
Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using Portions of Prism Broken in Flexure)

NO.	TYPE OF TEST METHODS	TEST RESULT
1.	Determination of Compressive Strength	<u>28 days</u> 1) 51.4 N/mm ² 2) 51.2 N/mm ² 3) 54.2 N/mm ² 4) 44.0 N/mm ² 5) 49.8 N/mm ² 6) 50.8 N/mm ² Mean: (50.2 ± 0.23*) N/mm ²

Note:

- 1) Testing period – 23rd December 2024 to 20th January 2025.
- 2) The sample was cured in curing tank under temperature, (20 ± 2) °C
- 3) Where the reported uncertainty is calculated using a coverage factor k=2, which gives a level of confidence of approximately 95%.
- 4) *Denotes measurement uncertainty

(The remainder of this page is intentionally left blank)



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TEST RESULTS:

Product : TPS 215 Non-Shrink Grout
Mix ratio : 16 % of water
Method of test : ASTM C940-16
Standard test Method for Expansion and Bleeding of Freshly Mixed Grout for Preplaced-Aggregate Concrete in the Laboratory

NO.	TYPE OF TEST METHODS	TEST RESULT
1.	Determination of bleeding and expansion of freshly mixed grout	<p>a) Bleeding</p> <p>i. After 30 minutes: 0 %</p> <p>ii. After 60 minutes: 0 %</p> <p>iii. After 45 minutes: 0 %</p> <p>iv. After 60 minutes: 0 %</p> <p>v. After 2 hours: 0 %</p> <p>vi. After 3 hours: 0 %</p> <p>b) Expansion</p> <p>i. After 30 minutes: 0 %</p> <p>ii. After 60 minutes: 0 %</p> <p>iii. After 45 minutes: 0 %</p> <p>iv. After 60 minutes: 0 %</p> <p>v. After 2 hours: 0 %</p> <p>vi. After 3 hours: 0 %</p>

Note:

1) Testing period – 23rd December 2024 to 20th January 2025.

3) Where the reported uncertainty is calculated using a coverage factor $k=2$, which gives a level of confidence of approximately 95%.

4) *Denotes measurement uncertainty

(The remainder of this page is intentionally left blank)



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CONDITIONS RELATING TO THE USE OF SIRIM QAS INTERNATIONAL TEST REPORT

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2. For quantitative test results (with values), when a statement of conformity to a specification or standard is applied, the Simple Acceptance Rule shall be used. Unless otherwise stated, the Acceptance Rule with Guard Band will be applied, and an additional charge will be incurred accordingly.
3. For qualitative test results (visual observation), when requested by the applicant, a statement of conformity shall be included in the Test Report. If there is no request by the Applicant, a statement of conformity can be included in the Test Report based on SIRIM QAS International Sdn. Bhd.'s discretion.
4. The Applicant shall not at any time misrepresent the content of any Test Report provided by SIRIM QAS International Sdn. Bhd., nor shall the Test Report be misused, amended, changed, varied, or modified in any manner whatsoever by the Applicant or otherwise.
5. The Test Report shall not be reproduced, except in full, without the written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International of No. 1, Block 8, Persiaran Dato' Menteri, Section 2, P.O. Box 7035, 40700 Shah Alam, Selangor Darul Ehsan.
6. The Applicant is not permitted to use any SIRIM QAS International Sdn. Bhd., SIRIM Berhad or other SIRIM subsidiaries logos or words on packaging, sample manuals, technical specifications, items and products.
7. Subject to consent and written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International Sdn. Bhd., the Applicant may use the SIRIM QAS International Sdn. Bhd. logo or word on promotional materials. The Applicant shall only include the phrase, "A sample of this product has been tested by SIRIM QAS International Sdn. Bhd. (Test Report No) ... (dated) ... (for what test) ... (to which standard)", or similar words emphasizing that only the sample was tested. This phrase shall only be used for product advertisements or promotions (e.g.: brochures, flyers, official website). For clarity, the statement shall not be used on the sample, packaging, items or products.
8. In the event there is an investigation from a Government Regulatory Agency concerning the Applicant's Test Report, SIRIM QAS International Sdn. Bhd. may disclose the information pertaining to the Test Report for the purposes of such investigation.
9. In the event that the Applicant is found in breach of this provision, SIRIM QAS International Sdn. Bhd., SIRIM Berhad and/or other SIRIM subsidiaries may, without prejudice to any other rights and remedies, take whatever actions are necessary including but not limited to:
 - a) Informing and placing a notice in the media;
 - b) Obtaining an injunction from the Court (costs on a solicitor-client basis to be borne by the Applicant);
 - c) Refusing to accept any further Products 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 to publish a clarification and apology to SIRIM QAS International, SIRIM and/or other SIRIM 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 to the Applicant's Test Report with the relevant authorities.
10. SIRIM QAS International is committed to supporting environmentally friendly business practices by reducing paper consumption. Therefore, we do not issue any hard copies of the Test Report to the Applicant. However, additional certified true copies or softcopies of the Test Report may be issued upon request by the Applicant, subject to payment of the relevant fee. Certified true copies or softcopies of the Test Report shall only be provided for Test Reports issued not more than **three (3) years** from the date of issuance.
11. The Issuance of an Amendment Report due to the following reasons is chargeable to the Applicant:
 - a) Typo or change¹ in details of the Applicant's name and/or address; or
 - b) Typo or change¹ in details of the Manufacturer's name and/or address; or
 - c) Typo or change¹ in details of the Factory location name and/or address; or
 - d) Typo or change¹ in details of the brand, size, model and/or type designation; or
 - e) Typo in details of the description of sample.

Note: ¹Applicable only for electrical and electronic products based on IECCE OD-2020.
12. Any corrections and/or changes to the Report requested by the Applicant shall only be allowed if the date of issuance of the original Test Report has not exceeded six (6) months and shall be limited to a maximum of three (3) times. After either of these conditions is met, no further amendments to the Test Report shall be issued.
13. However, the issuance of a Supplementary Report due to the following reasons is free of charge (FOC):
 - a) Misprints and typographical errors;
 - b) Missing technical information as agreed in the PP1 form;
 - c) Test data not reported; or
 - d) Mistakes in the reporting of test data.