



Arab Youth Technical for Specialized Industries



AYT VPA®

Building # 276, King Abdallah II St., 8th Circle,
Amman-Jordan
Tel.: +962 6 5811544 - Fax: +962 6 5811577 P.O
Box: 840500 Amman11181 Jordan
E-mail: info@ayt-industrial.com
website: www.ayt-industrial.com

AYT^{VPA}, our revolutionary concrete additive reshaping construction. VPA enhances concrete performance, minimizes water needs, reduces segregation risk, and reduces heat of hydration. Crafted from volcanic rock ash, it aligns with sustainability, eliminating traditional burning processes. Compliant with ASTM C618-19 Class F, VPA combines innovation and environmental responsibility for a greener concrete future.

USES

Concrete Production

- Enhances concrete performance.
- Reduces water requirements.
- Minimizes the risk of segregation during mixing.
- Reduces heat of hydration.
- Massive concrete.

Sustainable Practices

- Supports environmentally friendly construction methods.

Infrastructure Projects

- Applied in various construction applications for bridges, roads, and other infrastructure projects.

Building Construction

- Utilized in the construction of buildings to enhance the durability and strength of concrete structures.

Mortar Production

- Incorporated into mortar formulations to improve overall performance.

Precast Concrete Manufacturing

- Used in the production of precast concrete elements for improved quality and durability.

Soil Stabilization

- Employed in soil stabilization projects for enhanced ground support.

Agricultural Applications:

- Used in certain agricultural practices for soil amendment.

Fire-resistant Materials

- Contributes to the development of fire-resistant building materials.

COMPLIANCE

Compliance with ASTM C618-19 Class F

Type of Test	Result	Acceptance Criteria
Sum(SiO ₂ , Al ₂ O ₃ , Fe ₂ O ₃)(%)	60%-75%	Min 50 %
CaO (%)	7%-15%	Max 18.0 %
SO ₃ (%)	0.05%-3%	Max 5%
Moisture Content (%)	0.5%-2%	Max 3%
Loss of Ignition (%)	1.5%-5%	Max 6%
Fines (%)	7%-20%	Max 34%

*Our product has been tested JSMO & RSS

PACKING

- Paper Bags (25 Kg)
- Jambo Bags (1.35MT)
- Bulk

SHELF LIFE

12 months from date of production, store in dry place away from sunlight and moisture

APPEARANCE



Gray Odorless Powder



Jordan Standards and Metrology Organization

cert / 670

Ref. No. 09 / 01 / 2024
Date

Conformity Certificate

Certificate No.: 2023 /9782023 /978/71/01/23/34627

Issuing Date: 9/ 01/2024

Company: ARAB YOUTH TECHNICAL FOR SPECIALIZED INDUSTRIES
Company Address: Amman-Jordan

We; The Jordan Standards and Metrology Organization; confirms that we are accredited from the German Accreditation Body, according to the certificate No. (D-ZE-14265-01-00)* issued on 26/04/2022

And we testify that the below mentioned products originated from Jordan, were tested and the results were in compliance with the reference mentioned below.

Tests	Results	Unit
Moisture content	1.8	%
Water requirement	100	%
Compressive strength at (7) day/test mix	22.1	N/mm ²
Compressive strength at (7) day/control mix	23.4	N/mm ²
Compressive strength at (28) day/test mix	33.2	N/mm ²
Compressive strength at (28) day/ control mix	35.2	N/mm ²
Compressive strength activity index at (7) day	94	%
Compressive strength activity index at (28) day	94	%
Percent retained on 45-μ m (No. 325)	12	%
Na ₂ O	2.23	%
K ₂ O	0.716	%
Al ₂ O ₃	7.41	%
SiO ₂	62.5	%
MgO	6.15	%
Fe ₂ O ₃	10.7	%
CaO	8.67	%
Loss on Ignition	2.30	%
Sulfate as SO ₃	Less than 0.01	%
SiO ₂ +Al ₂ O ₃ +Fe ₂ O ₃	80.59	%

Product Description	Trade Mark	Batch No.	Production Date	Reference for Evaluation	Type No.
VPA	AYT VPA	--	2023	ASTM C618-23	19

Director General

Eng. Abeer Barakat AL-Zhair

CC/Certification Department
CC/Head of Conformity Division
CC/Eng. Aseel Mattar
9/1/2024

CTqf-093-05, rev. f

Director of Certification Department
Eng. Barah Al-Hiary



***The scope of accreditation includes the sectors of paints & varnishes, detergents & soaps**

This certificate is valid for what is stated in it, it shall not be used in a way to show that all the company products are comply with the mentioned reference and it shall not be used for control purposes.

The Hashemite Kingdom Of Jordan

Tel: +962 6 5301225 Fax: +962 6 5301249 P.O.Box: 941287 Amman 11194 Jordan Website:www.jsmo.gov.jo



Jordan Standards and Metrology Organization

cert / 9805

Ref. No. 23 / 06 / 2024
Date

Conformity Certificate

Certificate No.: 2024/353/71/01/23/34627

Issuing Date: 23/ 06/2024

Company: ARAB YOUTH TECHNICAL FOR SPECIALIZED INDUSTRIES
Company Address: Amman-Jordan

We, The Jordan Standards and Metrology Organization, confirms that we are accredited from the German Accreditation Body, according to the certificate No. (D-ZE-14265-01-00)* issued on 26/04/2022

And we testify that the below mentioned products originated from Jordan, were tested and the results were in compliance with the reference mentioned below.

Tests	Results	Unit
Moisture content	1.8	%
Water requirement	100	%
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Compressive strength at (28) day/test mix	33.2	N/mm ²
Compressive strength at (28) day/ control mix	35.2	N/mm ²
Compressive strength activity index at (7) day	94	%
Compressive strength activity index at (28) day	94	%
Percent retained on 45-μ m (No. 325)	12	%
Na ₂ O	2.23	%
K ₂ O	0.716	%
Al ₂ O ₃	7.41	%
SiO ₂	62.5	%
MgO	6.15	%
Fe ₂ O ₃	10.7	%
CaO	8.67	%
Loss on Ignition	2.30	%
Sulfate as SO ₃	Less than 0.01	%
SiO ₂ +Al ₂ O ₃ +Fe ₂ O ₃	80.59	%

Product Description	Trade Mark	Batch No.	Production Date	Reference for Evaluation	Type No.
VPA	AYT VPA	--	2023	JS10030-1/2007	19

Director General

Barakat
Eng. Abeer Barakat AL-Zhair

Director of Certification Department
Eng. Barah Al-Hiary



CC/Certification Department
CC/Head of Conformity Division
CC/Eng. Ahmad Alhajaj
A.h/R.H.
23/06/2024
CTqf-093-05, rev. f

*The scope of accreditation includes the sectors of paints & varnishes, detergents & soaps

This certificate is valid for what is stated in it, it shall not be used in a way to show that all the company products are comply with the mentioned reference and it shall not be used for control purposes.

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الجمعية العلمية الملكية
Royal Scientific Society

Reference: (710101)236/55/1/675

Date: 07/01/2024

Custom Ref. No.:

Date:

Sample Designation No.: 71 / 01 / 23 / 34627

Total No. of Report Pages including this page: 6

Your reference: 21064 / ش م ط

Date: 04/12/2023

Construction Laboratories

Mr.: Jordan Standards and Metrology Organization (JSMO)/Certification Department/ شركة الشباب العربي
التقني للصناعات المتخصصة

Address: Jordan - Amman

Reference to your letter mentioned above, please find enclosed results of your test(s).

Please note the following:

- Results of tests by the Royal Scientific Society shall not be used for advertising or publicity purposes without prior written approval from the Royal Scientific Society.
- Test reports without signature and stamp or electronic stamp(QR) are not valid.
- Reports are delivered attached with the non-destructed samples in the same day otherwise the samples will be disposed within a maximum period of two weeks from the date of issuance of the report.
- Inquiries about the report (if any) will be studied only within two weeks from the date of issuance of the report.
- The procedure of the handling process for complaints will be submitted upon your request.
- The test results relate only to the items tested.

Yours sincerely,

Director of Engineering Sciences Laboratories
Eng. Mazen Suleiman Mumani

mazen.mumani@rss.jo

You can verify this document through:
<https://elabs.rss.jo>



ID:208738889128

For Jordan, since 1970

في خدمة الوطن منذ ١٩٧٠



الجمعية العلمية الملكية
Royal Scientific Society



JAS
Jordanian Accreditation System
نظام الاعتماد الأردني
Accreditation Unit

Test-003

Test Report

Department : Engineering Sciences Laboratories
Division : Construction Laboratories **Sample Designation No.** : 71 / 01 / 23 / 34627
Laboratory : Cement
Client : Jordan Standards and Metrology Organization (JSMO)/Certification Department/ شركة الشباب العربي التقني للصناعات المتخصصة
Address : Jordan - Amman
Our Reference No. : (710101)236/55/1/675 **Tests performed at** : RSS
Date : 07/01/2024 **Sample provided by** : By Customer
Your Reference No. : 21064 ش م ط / **Date of Receipt** : 05/12/2023
Date : 04/12/2023 **Date of end of test** : 07/01/2024
Type of sample : VPA

ASTM C618 - 22				
Type of Test	Results	Unit	Ranges	Test Method
**Moisture content	1.8	%	≤ 3.0	ASTM C618-2022
**Water Requirement	100	%	≤ 105	ASTM C311-2017
Compressive Strength At (7) days / Test Mix	22.1	N/mm²	---	**ASTM C618 - 2022 ASTM C109 - 2021
Compressive Strength At (7) days / Control Mix	23.4	N/mm²	---	
Compressive Strength At (28) days / Test Mix	33.2	N/mm²	---	
Compressive Strength At (28) days / Control Mix	35.2	N/mm²	---	
** Test is not accredited by JAS-AU				
Notes:				
- Tests were conducted upon your request.				
- Sample was received in good condition.				

Approved by: Lab Head
Eng. Abed Allah Mahmoud Alrashdan
on date 07/01/2024 13:36:42

Approved by: Deputy of Manager
Eng. Ibrahim Khaled Khalil
on date 07/01/2024 14:38:56



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الجمعية العلمية الملكية
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JAS
Jordanian Accreditation System
نظام الاعتماد الأردني
Accreditation Unit

Test-003

Test Report

Sample Designation No.: 71 / 01 / 23 / 34627

ASTM C618 - 22				
Type of Test	Results	Unit	Ranges	Test Method
**Compressive Strength Activity Index At (7) day	94	%	≥ 75	ASTM C618-2022
**Compressive Strength Activity Index At (28) day	94	%	≥ 75	
**Percent retained on 45- μ m (No. 325)	12	%	≤ 34	
**Na ₂ O	2.23	%	---	(SOP 71/02/02/01/04, Issue) X-Ray Fluorescence
**K ₂ O	0.716	%	---	
**Al ₂ O ₃	7.41	%	---	
**SiO ₂	62.5	%	---	
**MgO	6.15	%	---	
**Fe ₂ O ₃	10.7	%	---	
**CaO	8.67	%	≤ 18.00	
**Loss on Ignition	2.30	%	≤ 6.00	ISO 3262-1:2020
**sulfate as SO ₃	Less than 0.01	%	≤ 5.00	BS-EN 196-2:2013 -4.4.2
**SiO ₂ +Al ₂ O ₃ +Fe ₂ O ₃	80.59	%	≥ 50.00	Calculation
** Test is not accredited by JAS-AU				
Notes:				
- Tests were conducted upon your request.				
- Sample was received in good condition.				

Approved by: Lab Head
Eng. Abed Allah Mahmoud Alrashdan
on date 07/01/2024 13:36:42

Approved by: Deputy of Manager
Eng. Ibrahim Khaled Khalil
on date 07/01/2024 14:38:56



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الجمعية العلمية الملكية
Royal Scientific Society

Test Report

Sample Designation No.: 71 / 01 / 23 / 34627

Annex 1

- Type of sample as mentioned by the client .
- Compressive strength (Individual readings) N/mm² in page number 4.
- Water Requirements (Individual readings) N/mm² in page number 4.
- العلامة التجارية : AYTVA
- رمز العينة : CC.23.12.04/01.
- Ranges according to ASTM C 618-2022 .

Approved by: Lab Head
Eng. Abed Allah Mahmoud Alrashdan
on date 07/01/2024 13:36:42



Approved by: Deputy of Manager
Eng. Ibrahim Khaled Khalil
on date 07/01/2024 14:38:56



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الجمعية العلمية الملكية
Royal Scientific Society

Test Report

Sample Designation No.: 71 / 01 / 23 / 34627

Test Result

Compressive strength (Individual readings) N/mm²

Age	Control Mix			Test Mix		
	1	2	3	4	5	6
7 days	23.21	23.52	23.53	21.98	22.16	22.19
28 days	34.76	35.82	35.14	33.05	33.79	32.70

Water Requirements (Individual readings)

Water Requirements	Control Mix	Test Mix	Percentage of control
	242	242	100

Approved by: Lab Head
Eng. Abed Allah Mahmoud Alrashdan
on date 07/01/2024 13:36:42

Approved by: Deputy of Manager
Eng. Ibrahim Khaled Khalil
on date 07/01/2024 14:38:56



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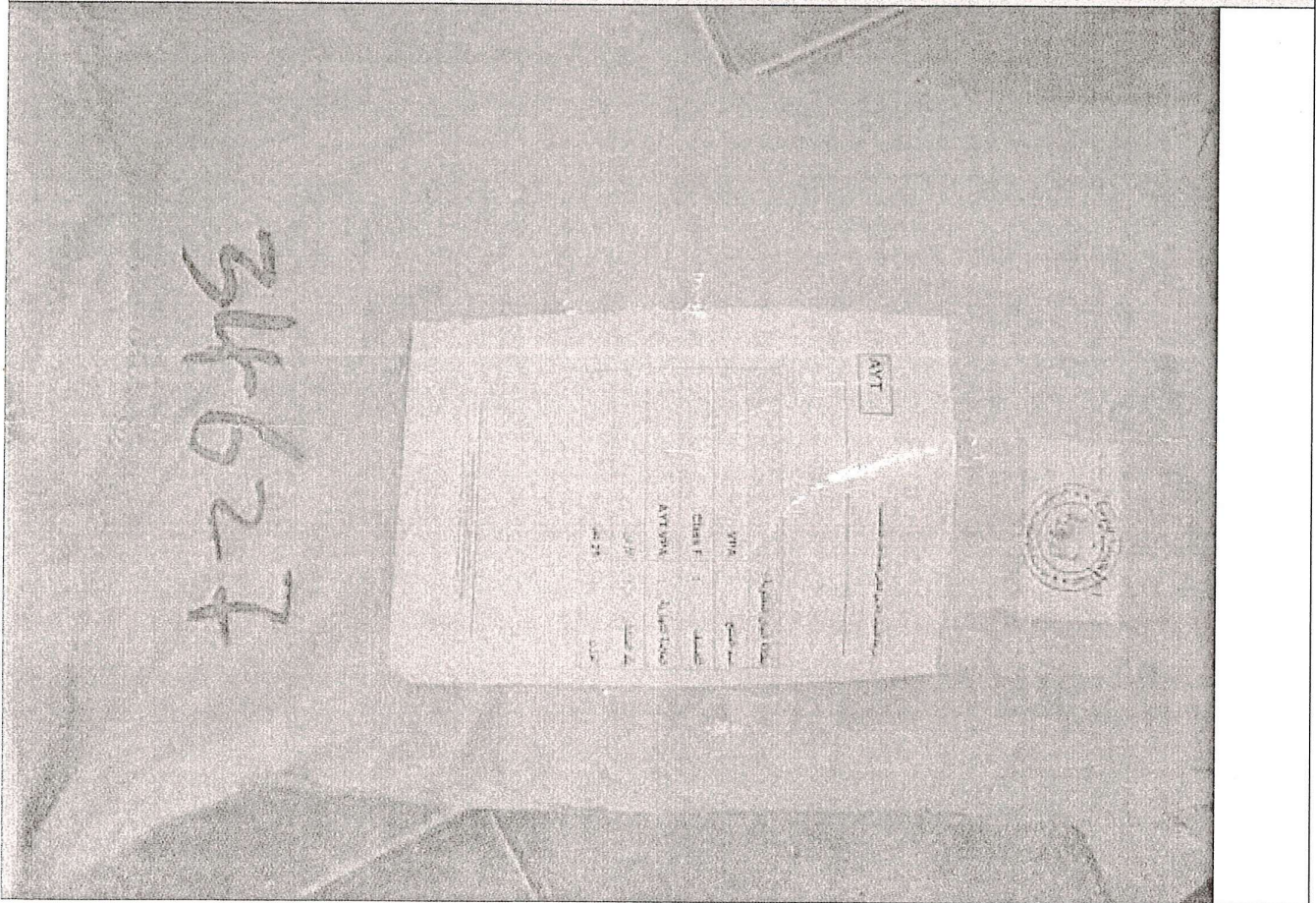


الجمعية العلمية الملكية
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Test Report

Sample Designation No.: 71 / 01 / 23 / 34627

Sample Image



Approved by: Lab Head
Eng. Abed Allah Mahmoud Alrashdan
on date 07/01/2024 13:36:42



Approved by: Deputy of Manager
Eng. Ibrahim Khaled Khalil
on date 07/01/2024 14:38:56



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Arab Center
For Engineering Studies

المركز العربي
للدراسات الهندسية

REPORT ON PHYSICAL PROPERTIES OF AYT_{VPA}

Page 1 of 1

ACES Client	ACES-Amman	Report No.	TMR23030070 Rev.1
Owner	Arab Youth Technical for Specialized Industries	Date Reported	07-12-23
PMC	N/A	Sample No.	TMS23015771
Project Client	N/A	Request No.	TMQ23010531
Consultant	N/A	Client Reference	Signed Quotation PT23004265 Rev.0
Contractor	N/A	Project No.	-
Project Name	Private		
Sample Description	AYT _{VPA}	Sample Located By	N/A
Sample Source / Supplier	N.P.	Sampled By	ACES AMMAN
Sample Location	N.P.	Sampling Date	14-11-23
Delivery Note No.	N.P.	Sample No.	N.P.
Sample Reference	Amman-23-134	Sampling Method	N.P.
HS Code	68109900	Sample Size	1 Sample (01 Bag)
Sample Preparation	-	Sample Brt. In By	ACES AMMAN
Test Method	As Below	Date Received	21-11-23
Test Method Var.	Nil	Date Tested	22-11-23
Remarks	Nil	Tested By	Michael
Testing Location	Main Lab St.41 Industrial Area	Testing Location Coordinate (QND)	E: 221671, N: 379307

Test Carried Out	Test Method	Results
Percent retained on 45µm (No.325), (%)	ASTM C311/C311M-22 (Cl.20)	29.32
Percent retained on 150µm (No.100), (%)	ASTM C136/C136M-19	0.80
Moisture Content, %	ASTM C311/C311M-22 (Cl.11&12)	1.03
Density, g/ cm ³	ASTM C188-17 (Reapproved 2023)	2.94

Remarks :- The test results related only to the specimen(s) tested

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:This report supersedes our report with ref. TMR23030070 dated 23-11-2023 which shall be considered as void.

:Revised report to add client details



0006182268.

ACES
Arab Center **المركز العربي**
For Engineering Studies **للدراسات الهندسية**

Noura

Eng. Ghaleb Al-Zubi

Deputy Branch Manager

NR

NS



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LABORATORY TEST REPORT

Page 1 of 1

ACES Client	ACES-Amman	Report No.	TER23014490 Rev.1
Owner	Arab Youth Technical for Specialized Industries	Date Reported	07-12-23
PMC	N.P.	Request No.	TEQ23004408
Project Client	N.P.	Sample No.	TES23012110
Consultant	N.P.	Client Reference	Signed Quotation PT23004265 Rev.0
Contractor	N.P.	Project No.	-
Project Name	Private		
Sample Description	AYT _{VPA}	Sample Located By	N.P.
Sample Location	N.P.	Sampled By	ACES AMMAN
Sample Location Coordinates (QND)	N.P.	Sampling Date	14-11-23
Grade	N.P.	Mill Certificate No.	N.P.
Sample Size	1 Bag	Date of Certificate	N.P.
WIR No.	N.P.	Sampling Method	N.P.
Heat No.	N.P.	Batch Mass	N.P.
Source / Supplier	N.P.	Marking	N.P.
Sample Brt. In By	DHL	Date Received	21-11-23
Test Method	See below table	Date Tested	22-11-23
Testing Location	Main Lab, Street No.41, Industrial Area	Tested By	Saleem
Remarks	-	Testing Location Coordinates (QND)	E:221671, N:379307

N.P. indicates information not provided by the Client.

Result of Analysis

Parameters	Analytical Method	Result (%)
Loss on Ignition (LOI)	ASTM C311/C311M-22	5.89
Sodium Oxide (Na ₂ O)	EDX-8000	3.55
Magnesium Oxide (MgO)	EDX-8000	9.15
Aluminum Oxide (Al ₂ O ₃)	EDX-8000	13.27
Silicon Oxide (SiO ₂)	EDX-8000	43.91
Sulfur Trioxide (SO ₃)	EDX-8000	0.18
Potassium Oxide (K ₂ O)	EDX-8000	1.00
Calcium Oxide (CaO)	EDX-8000	12.92
Iron Oxide (Fe ₂ O ₃)	EDX-8000	12.49
Sum (SiO ₂ +Al ₂ O ₃ +Fe ₂ O ₃)	Calculation	69.67
Sodium Oxide Equivalent (Na ₂ O+0.658K ₂ O)	Calculation	4.21

Remarks:-The test results relate only to the specimen(s) tested.

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:-This report supersedes our report with ref. TER23014490 dated 23-11-2023 which shall be considered as void.



0 0 0 6 1 8 2 2 6 3 .




Ahmed Bashir
Environmental Dept. Manager
M.C



CERTIFICATE OF ANALYSIS	DATE	: 11.12.2023
	REQ. NO.	: OTHQ-231204/1525
	SAMPLE NO.	: OTHS-231204/1
	REPORT NO.	: OTHR-231204/2315
ARAB YOUTH TECHNICAL FOR SPECIALIZED INDUSTRIES (AYT INDUSTRIAL)		
Amman, Jordan		

TEST METHOD : ASTM C 311 / BS EN 451-2:2017

PROJECT NAME : All Projects
 SUPPLIER : Arab Youth Technical for Specialized Industries (AYT-Industrial)
 MANUFACTURER : Arab Youth Technical for Specialized Industries (AYT-Industrial)
 SAMPLE DESCRIPTION : AYT - VPA (Volcanic Power Ash)
 SAMPLE ID : 32447865656
 SAMPLED BY : Client
 DATE RECEIVED : 04.12.2023
 DATE TESTED : 04.12.2023 - 11.12.2023

S. NO.	PARAMETER	UNIT	RESULTS	ASTM C618-19 CHEMICAL REQUIREMENTS		
				CLASS N	CLASS F	CLASS C
1	Oxides of Aluminium, Silicon & Iron (SiO ₂ +Al ₂ O ₃ +Fe ₂ O ₃)	%	68	Min. 70	Min. 50	Min. 50
2	Calcium Oxide (CaO)		10.6	-	Max. 18.0	> 18
3	Sulphur Trioxide (SO ₃)		0.06	Max. 4.0	Max. 5.0	Max. 5.0
4	Loss on Ignition @ 750 °C		3.0	Max. 10.0	Max. 6.0	Max. 6.0
5	Moisture Content		0.20	Max. 3.0	Max. 3.0	Max. 3.0
6	Residue on 45 micron Sieve		10.5	Max. 34	Max. 34	Max. 34


SAPPANI MUTHIAH

Manager - Chemistry & Microbiology


Checked by:  /ann

DISCLAIMER

The test reports / certificates issued by AAS are records of the actual test conducted on sample and the details submitted to us for testing and the results thereof.
 The results are applicable only to those sample/s, which have been tested and do not apply to other sample/s even though declared to be identical.
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 The results reported in the test report / certificates are valid only at the time of and under the stated conditions of the testing.
 Measurements are traceable to National/International Standards.