



Test Report

Report No.	MO1 2803 10 2023
Client	SCIB Chemicals S.A.E
Authority & date	Request Orders 16/10/2023
Items Tested	Apcoflor SL2
Results	The detailed test results are given on the following pages of this report (7 pages) .
Report Typist	* Mis. Naglaa Mohamed-Sara Abdel Reheam
Test carried by	* Noha Samir * Mis . Fatma El Zahraa Fikry * H.Eng. Ahmed Said * Chem. Amr El Shafey * Dr. Abou El Ftouh Abd El Hakem
Authorized by	Prof. Dr. Mostafa Zaki Mostafa * The Supervisor of ceramics, Polymer and Solid Matter Department. * Management Representative and Quality Assurance Manager.
Issue date	14/11/2023
Condition of Test & Issue	The test speciemen was conditioned at 23 °C with a humidity of 60 % and the needed calibrations as well as balancing of the all used machines were always done .



TO/ SCIB Chemicals S.A.E

Dear Sir.,

With correspondence to your request dated 16/10/2023 concerning the testing sample of Apcoflor SL2 , We would like to inform you that the all following needed tests were carried out which namely:

- 1- Tensile strength test after 7days according to ASTM D638
- 2- Flexural strength test after 7days according to ASTM C580
- 3- Abrasion resistance test according to ASTM D4060
- 4- Bond strength to concrete after 7days according to BS 1881-207
- 5- Hardness test Shore D after 7days according to ASTM D2240
- 6- Water Permeability test according to EN 12390-8
- 7- Compressive strength test after 7days according to ASTM D579
- 8- Water absorption according to ASTM C413
- 9- Impact resistance test according to ISO 6272
- 10- Crack bridging test after 7days according to ASTM C1305
- 11- Chemical resistance test at 23°C for 7 days according to ASTM D543

We would like to inform you that the needed test was carried out taking into consideration the following conditions :

- 1- In all mechanical properties GALDABINI – QUASAR 600 – Made In Italy Universal Testing Machine was used This type has a self calibration , zero adjusting and automatic balance , which are done daily before testing or during testing this testing instrument is accompanied by a highly reliable system for evaluating the mechanical properties .
- 2- Measuring drum of sensitivity $\pm 0.01mm$ was used for dimensions evaluation.
- 3- On heating a Memmert West Germany oven was used .
- 4- Taber Model 505 DUAL ABRASER Tester
- 5- Weighing Balance with tolerance + 0.0001 g was used in determining the weights .
- 6- Braive Instruments .
- 7- Water Permeability tester model 55CO24613 Controls made in Italy
- 8- All used Machineries and apparatuses were calibrated periodically.

The following tables give the obtained results representing the sample delivered from your company .





Test results on a sample of Apcoflor SL2

Delivered from SCIB Chemicals S.A.E

1- Tensile strength test after 7days according to ASTM D638

No.	Tensile strength (N/mm ²)	The mean value (N/mm ²)
1	20.73	19.39
2	18.55	
3	18.23	
4	19.49	
5	19.82	

2- Flexural strength test after 7days according to ASTM C580

No.	Results (N/mm ²)	The mean value (N/mm ²)
1	40.31	40.88
2	41.53	
3	42.77	
4	39.58	
5	40.19	

3- Abrasion resistance test according to ASTM D4060

No. of cycle	Weight (g)	Used wheel	Weight loss (mg)
1000	1000	CS 17	67.3





Test results on a sample of Apcoflor SL2

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4- Bond strength to concrete after 7days according to BS 1881-207

No.	Pull-off strength (N/mm ²)	Mean (N/mm ²)
1	1.94	2.07
2	2.11	
3	2.05	
4	2.14	
5	2.09	

* Failure in concrete

5- Hardness test Shore D after 7days according to ASTM D2240

No.	Shore D	The mean value
1	79	80
2	80	
3	81	
4	79	
5	80	

6- Water Permeability test according to EN 12390-8

Direction	Time (hrs)	Pressure (bar)	Thickness (mm)	Penetration (mm)
+ ve	72	5	2	No Penetration



Test results on a sample of Apcoflor SL2

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7- Compressive strength test after 7days according to ASTM D579

No.	Compressive strength (N/mm2)	The mean value (N/mm2)
1	67.37	67.56
2	68.24	
3	66.11	
4	68.87	
5	67.19	

8- Water absorption according to ASTM C413

No.	Water absorption (%)	The mean value (%)
1	1.073	1.02
2	0.997	
3	0.991	
4	1.008	
5	1.019	

9- Impact resistance test according to ISO 6272

Coat thickness (mm)	Substrate thickness (mm)	Punch diameter (mm)	Weight (Kg)	Height (Cm)	Observation
2	16	12.5	2	50	No cracks



Test results on a sample of Apcoflor SL2

Delivered from SCIB Chemicals S.A.E

10- Crack bridging test after 7days according to ASTM C1305

No.	No. of cycles	Maximum (mm) movement	Observation
1	10	0.5	No failure
2		0.5	
3		0.5	

* The sample resist the crack (0.5 mm) without any observable changed

11- Chemical resistance test at 23°C for 7 days

according to ASTM D543

No.	Chemicals	Results
1	Acetic acid 20%	No effect
2	Lactic acid 20%	No effect
3	Zinc sulphate 25%	No effect
4	Copper sulphate 25%	No effect
5	Tap water	No effect
6	Ground water	No effect
7	Diesel	No effect
8	Hydrochloric acid 10%	No effect





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Central Unit For Analysis And
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Material Test Lab.

المركز القومي للبحوث

الدقى . القاهرة . جمهورية مصر العربية
وحدة التحاليل والخدمات العلمية المركزية
معمل اختبار المواد



*This report was given to you representing only the results for the testing sample of Apcoflor SL2 , Delivered from SCIB Chemicals S.A.E , These results and conclusions were given to you without any responsibility on **THE CERAMICS, POLYMERS AND SOLID MATTER DEP. of THE MATERIAL TEST LAB in THE NATIONAL RESEARCH CENTRE** for pick up the samples to be tested .*

**Head of Director of The Board of Central Department
for Scientifical Analysis and Tests**
&

SUPERVISOR
OF CERAMICS, POLYMER AND
SOLID MATTER DEPARTMENT

PROF.DR. MOSTAFA ZAKI MOSTAFA

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