THE SCIENTIFIC AND TECHNOLOGICAL RESEARCH COUNCIL OF TURKEY
MARMARA RESEARCH CENTER
MATERIAL INSTITUTE

P.O. Box 21, 41470 GEBZE – KOCAELİ / TURKEY
T +90 262 677 20 00 F +90 262 641 23 09
http://mam.tubitak.gov.tr

TEST REPORT

(Industrial Services)

Report no : **20684700-125.05**

Subject : **"ALBOND 7000 FR-PE ALBOND 9000 FR-PE ve ALBOND 9000 A2" numunelerinde 3 Nokta Eğme Deneyi**

The results in this report are valid only for the analyzed samples.

Approved by

Dr. Özgür DUYGULU
Materials Institute Tests and Analysis

TÜBİTAK
MAM

Report no	: 20684700-125.05
Requested by	: ALBOND ALÜMİNYUM SANAYİ ve Tic. A.Ş.
Address	: Hatip Mahallesi Ali Osman Çelebi Bulvarı No: 140 59860 Çorlu

Sample	: Composite	**Expiry date**	: -
Number of samples	: 5 groups	**Institute sample register no:**	20/199/1-30
Sample received by	: Cargo	**Reception date and time**	: 13/05/2020
Condition of sample at reception	: Suitable	**Date of the analysis**	: 20/05/2020

Information on retention samples:
( ) Sample returned to the customer ( ) Retention sample available (x) Retention sample is not taken

"3 Point Bending Tests" study was performed on the samples provided and named as "ALBOND 7000 FR, ALBOND 7000 PE, ALBOND 9000 FR, ALBOND 9000 PE and ALBOND 9000 A2" by ALBOND ALÜMİNYUM SANAYİ ve Tic. A.Ş. with the application form having Marmara Research Center registration number 1975 and dated 13/05/2020.

Bending Test: Test samples were prepared by the customer according to the dimensions specified in the standard "EN ISO 178: Plastics-Determination of flexural properties". ZWICK Z250 Universal Test Machine was used for this test.

Regarding to the customer's request, tests were carried out according to the method specified in EN ISO 178 Plastics-Determination of flexural properties standard.

The results are given below.

Sample: ALBOND 7000 FR

	Flexural Elastic Modulus (MPa)	Flexural Strength (MPa)
1	19661	109.6
2	18730	108.6
3	19198	111.0
4	21583	111.2
5	20537	110.2
6	21337	110.4
Mean Value :	**20174 MPa**	**110.2 MPa**
Std dev. :	**1164 MPa**	**0.9 MPa**

Notes: Test speed: 5mm/min

Authorized Signatures:

ID No: 52764

P.O. Box 21, 41470 GEBZE – KOCAELİ / TURKEY
T +90 262 677 20 00 F +90 262 641 23 09
http://mam.tubitak.gov.tr

Sample: ALBOND 7000 PE

	Flexural Elastic Modulus (MPa)	Flexural Strength (MPa)
1	13996	102.9
2	14627	103.4
3	13470	102.1
4	13014	100.6
5	14339	103.6
6	13940	102.5
Mean Value:	**13898 MPa**	**102.5 MPa**
Std dev. :	**583 MPa**	**1.1 MPa**

Sample: ALBOND 9000 FR

	Flexural Elastic Modulus (MPa)	Flexural Strength (MPa)
1	22303	126.2
2	22218	125.0
3	21755	126.6
4	21807	123.4
5	21714	125.0
6	21419	124.1
Mean Value:	**21869 MPa**	**125.1 MPa**
Std. dev. :	**333 MPa**	**1.2 MPa**

Notes: Test speed: 5mm/min

Authorized Signatures:

ID No: 52764

P.O. Box 21, 41470 GEBZE – KOCAELİ / TURKEY
T +90 262 677 20 00 F +90 262 641 23 09
http://mam.tubitak.gov.tr

TÜBİTAK
MAM

Rapor no : 20684700-125.05

Sample: ALBOND 9000 PE

	Flexural Elastic Modulus (MPa)	Flexural Strength (MPa)
1	16794	113.8
2	14297	114.0
3	16600	114.4
4	15846	112.9
5	13433	108.6
6	15882	112.6
Mean Value:	**15475 MPa**	**112.7 MPa**
Std. dev. :	**1332 MPa**	**2.1 MPa**

Sample: ALBOND 9000 A2

	Flexural Elastic Modulus (MPa)	Flexural Strength (MPa)
1	8341	104.4
2	8236	102.8
3	8610	100.1
4	8875	101.7
5	7940	100.8
6	8963	101.3
Mean Value:	**8494 MPa**	**101.9 MPa**
Std. dev. :	**394 MPa**	**1.5 MPa**

Notes: Test speed: 5mm/min

Authorized Signatures:

ID No: 52764

P.K.21, 41470 GEBZE – KOCAELİ
T 0 262 677 20 00 F 0 262 641 23 09
http://www.mam.tubitak. gov.tr