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# LAMPIRAN

## LAMPIRAN 1

TABEL DAN GRAFIK HASIL PENGUJIAN

**Tabel A. 1**
Hasil Pengujian Tarik (*Tensile)* EVA – STJ

| Variasi (%) | Max Force (N) | Panjang (mm) | Lebar (mm) | Tegangan Maks (Mpa) | Rata-rata (Mpa) | Standar Deviasi |
|---|---|---|---|---|---|---|
| 0 | 156,65 | 50 | 13,64 | 0,2296 | 0,2231 | 0,0066 |
| | 149,16 | 50 | 13,35 | 0,2234 | | |
| | 151,32 | 50 | 13,96 | 0,2163 | | |
| 5 | 71,56 | 50 | 13,28 | 0,1077 | 0,1053 | 0,0037 |
| | 69,49 | 50 | 13,75 | 0,1010 | | |
| | 73,88 | 50 | 13,78 | 0,1072 | | |
| 10 | 78,34 | 50 | 13,51 | 0,1159 | 0,1166 | 0,0018 |
| | 79,23 | 50 | 13,76 | 0,1151 | | |
| | 80,79 | 50 | 13,61 | 0,1187 | | |
| 15 | 89,67 | 50 | 13,56 | 0,1322 | 0,1247 | 0,0067 |
| | 82,11 | 50 | 13,79 | 0,1190 | | |
| | 82,03 | 50 | 13,36 | 0,1227 | | |
| 20 | 86,76 | 50 | 13,59 | 0,1276 | 0,1261 | 0,0013 |
| | 83,31 | 50 | 13,33 | 0,1249 | | |
| | 85,1 | 50 | 13,52 | 0,1258 | | |

# METALURGI FISIK

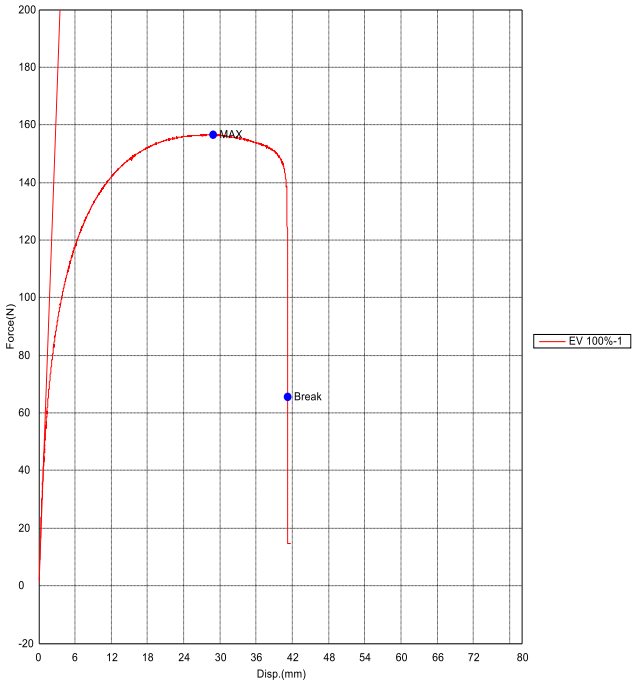
# TENSILE KOMPOSIT TONGKOL JAGUNG

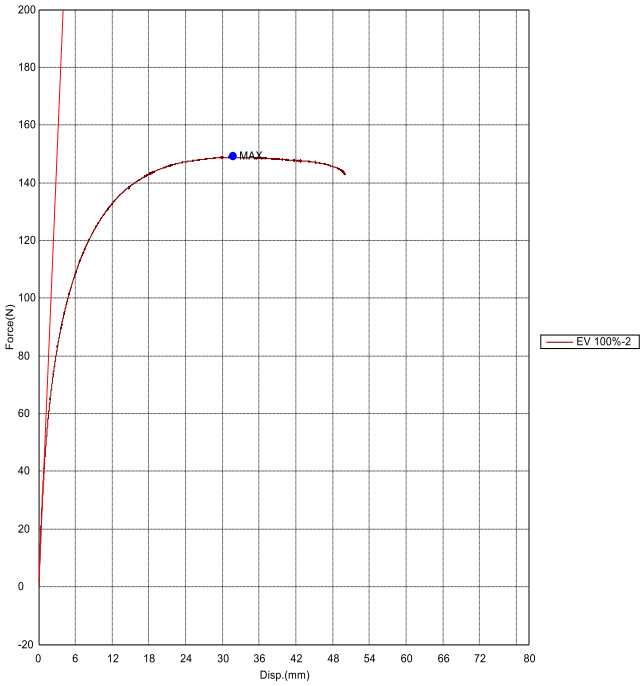
| **Key Word** | EVA+STJ | **Product Name** | EVA + STJ(0%) | |
|---|---|---|---|---|
| **Test File Name** | EVA+STJ (0)%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Report Date** | 26/04/22 | **Test Date** | 31/03/22 | |
| **Test Type** | Tensile | **Speed** | 5mm/min | |
| **Shape** | Plate | **No of Batches:** | 1 | |
| **Qty/Batch:** | 3 | | | |

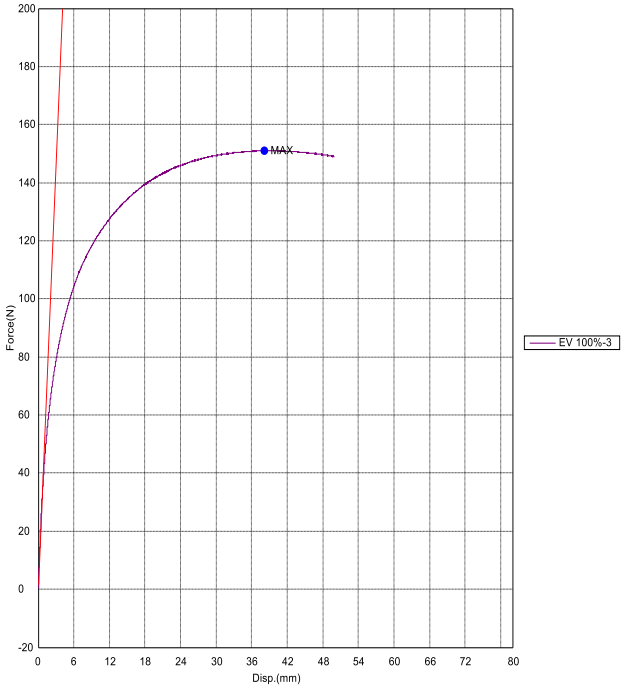
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** | |
| EVA - STJ 0%-1 | 5,9300 | 13,6400 | 50,0000 | |
| EVA - STJ 0%-2 | 6,0900 | 13,3500 | 50,0000 | |
| EVA - STJ 0%-3 | 5,4100 | 13,9600 | 50,0000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 0%-1 | 35,5699 | 156,654 | 28,9037 | 65,6859 |
| EVA - STJ 0%-2 | 31,0276 | 149,167 | 31,7104 | -.- |
| EVA - STJ 0%-3 | 32,5046 | 151,008 | 38,1844 | -.- |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **mm** |
| EVA - STJ 0%-1 | 41,23 |
| EVA - STJ 0%-2 | 50,13 |
| EVA - STJ 0%-3 | 51,61 |


MAX
Break
Force(N)
Disp.(mm)
EV 100%-1


MAX
Force(N)
Disp.(mm)
EV 100%-2


MAX
Force(N)
Disp.(mm)
EV 100%-3

# METALURGI FISIK

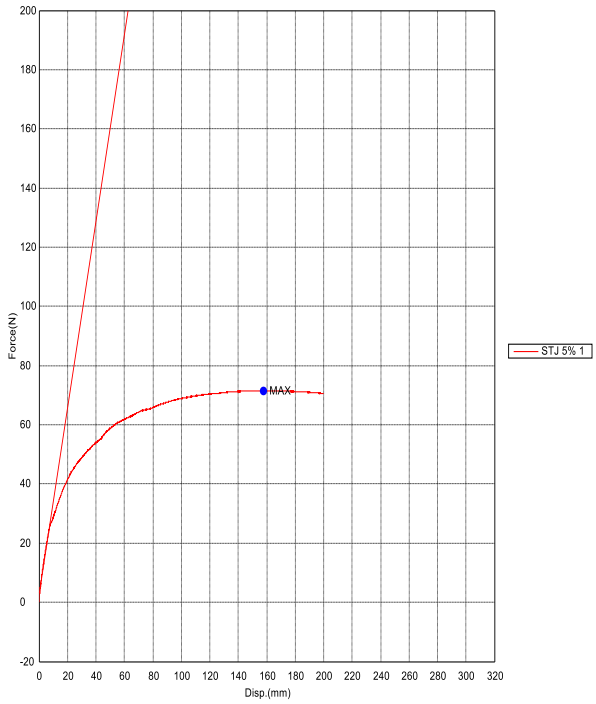
# TENSILE KOMPOSIT TONGKOL JAGUNG

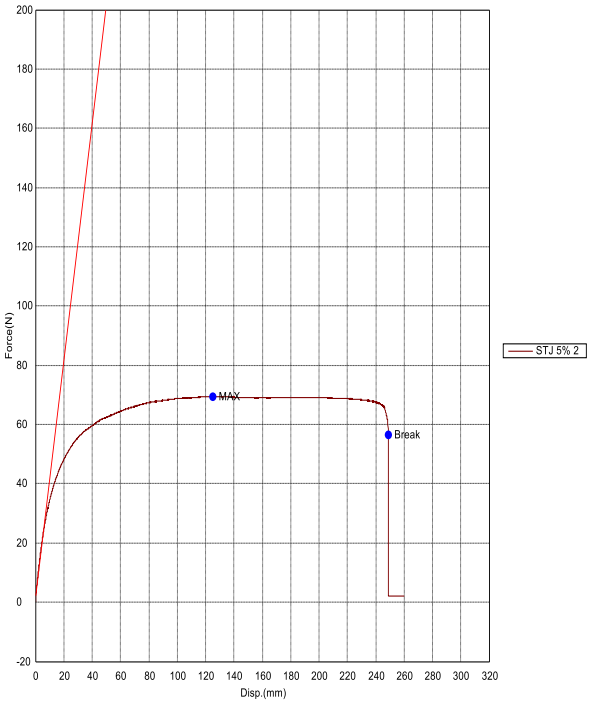
| **Key Word** | EVA + STJ | **Product Name** | EVA + STJ 5% | |
|---|---|---|---|---|
| **Test File Name** | EVA + STJ 5%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Report Date** | 26/04/22 | **Test Date** | 20/04/22 | |
| **Test Type** | Tensile | **Speed** | 15mm/min | |
| **Shape** | Plate | **No of Batches:** | 1 | |
| **Qty/Batch:** | 3 | | | |

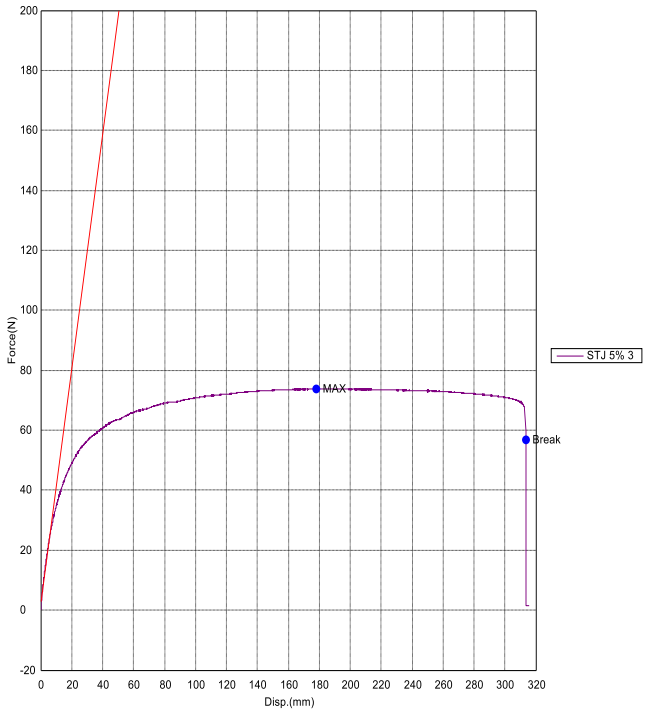
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** | |
| EVA - STJ 5% 1 | 6,6200 | 14,2800 | 50,0000 | |
| EVA - STJ 5% 2 | 6,1000 | 13,7500 | 50,0000 | |
| EVA - STJ 5% 3 | 6,4900 | 13,7800 | 50,0000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 5% 1 | 1,66982 | 71,5605 | 157,532 | -.- |
| EVA - STJ 5% 2 | 2,38850 | 69,4911 | 124,985 | 56,4535 |
| EVA - STJ 5% 3 | 2,18987 | 73,8875 | 177,908 | 56,9224 |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **Mm** |
| EVA - STJ 5% 1 | 200,321 |
| EVA - STJ 5% 2 | 283,812 |
| EVA - STJ 5% 3 | 313,465 |


Force(N)
Disp.(mm)
MAX
STJ 5% 1


Force(N)
Disp.(mm)
MAX
Break
STJ 5% 2


Force(N)
Disp.(mm)
MAX
Break
STJ 5% 3

# METALURGI FISIK

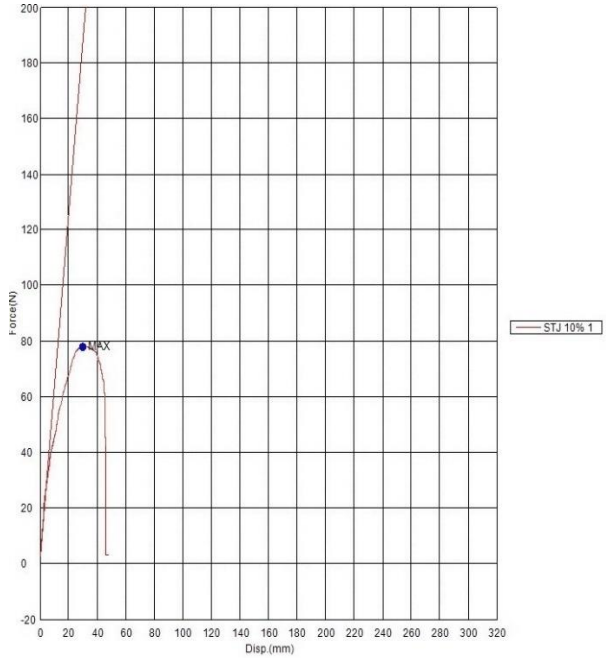
# TENSILE KOMPOSIT TONGKOL JAGUNG

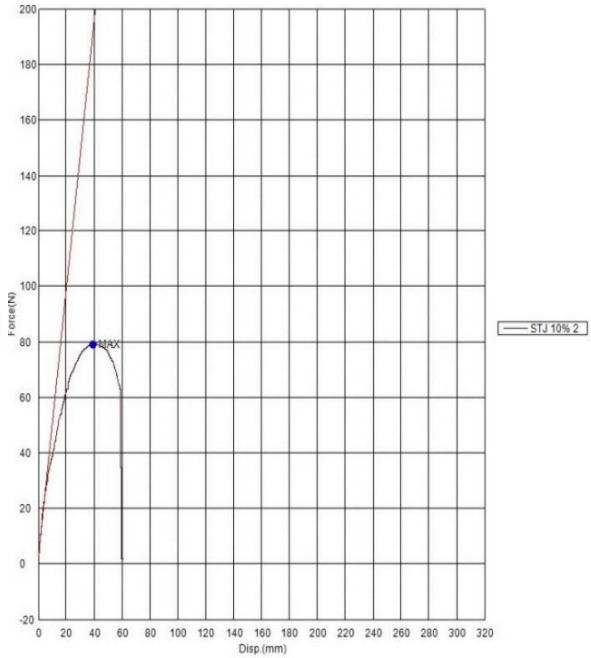
| | | | | |
|---|---|---|---|---|
| **Key Word** | EVA - STJ | **Product Name** | EVA – STJ 10% | |
| **Test File Name** | EVA - STJ 10%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Report Date** | 26/04/22 | **Test Date** | 20/04/22 | |
| **Test Type** | Tensile | **Speed** | 15mm/min | |
| **Shape** | Plate | **No of Batches:** | 1 | |
| **Qty/Batch:** | 3 | | | |

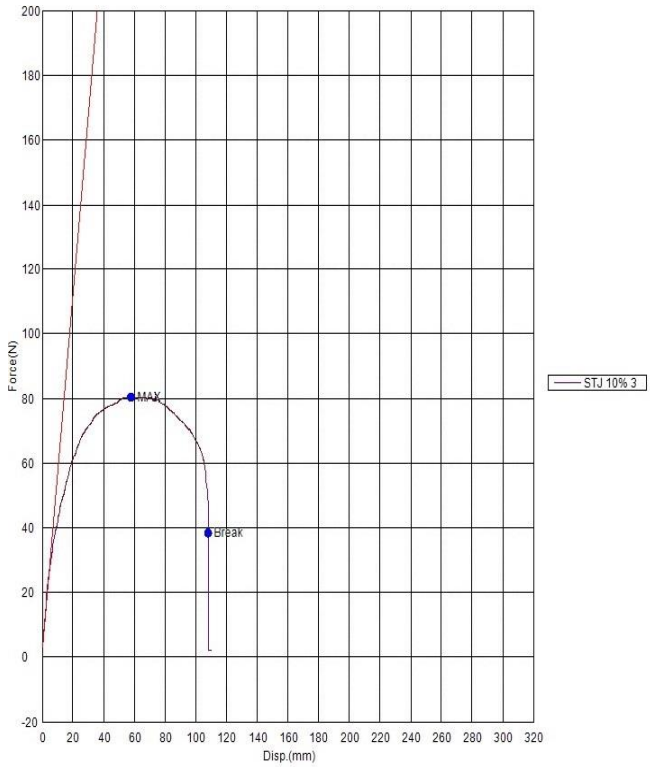
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** | |
| EVA - STJ 10% 1 | 6,5300 | 14,5100 | 50,0000 | |
| EVA - STJ 10% 2 | 6,1300 | 13,7600 | 50,0000 | |
| EVA - STJ 10% 3 | 6,0700 | 14,6100 | 50,0000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 10% 1 | 3,28621 | 78,3415 | 28,1304 | -.- |
| EVA - STJ 10% 2 | 2,86777 | 79,2090 | 46,5204 | -.- |
| EVA - STJ 10% 3 | 3,12277 | 80,7906 | 64,3979 | 38,3019 |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **Mm** |
| EVA - STJ 10% 1 | 48,31 |
| EVA - STJ 10% 2 | 60,18 |
| EVA - STJ 10% 3 | 108,208 |


Force(N)
Disp.(mm)
MAX
STJ 10% 1


Force(N)
Disp.(mm)
MAX
STJ 10% 2


Force(N)
Disp.(mm)
MAX
Break
STJ 10% 3

# METALURGI FISIK

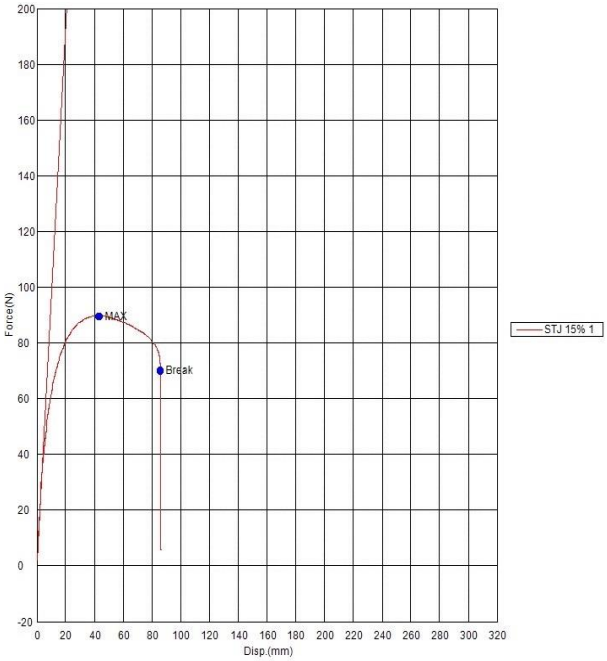
# TENSILE KOMPOSIT TONGKOL JAGUNG

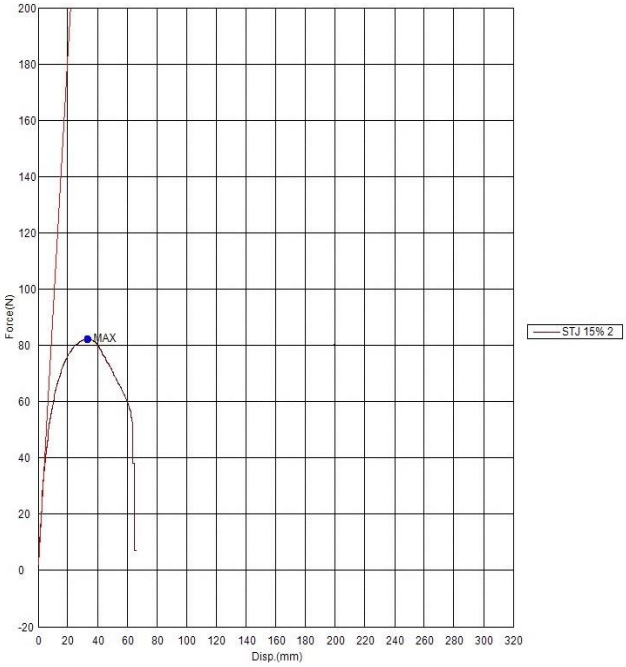
| **Key Word** | EVA - STJ | **Product Name** | EVA – STJ 15% | |
|---|---|---|---|---|
| **Test File Name** | EVA - STJ 15%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Report Date** | 26/04/22 | **Test Date** | 20/04/22 | |
| **Test Type** | Tensile | **Speed** | 15mm/min | |
| **Shape** | Plate | **No of Batches:** | 1 | |
| **Qty/Batch:** | 3 | | | |

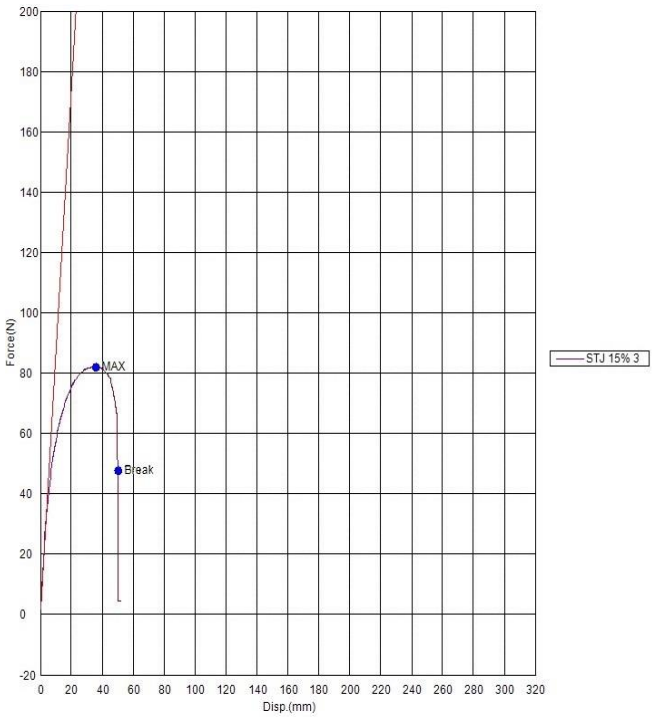
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** | |
| EVA - STJ 15% 1 | 6,6100 | 14,5600 | 50,0000 | |
| EVA - STJ 15% 2 | 6,4000 | 14,7900 | 50,0000 | |
| EVA - STJ 15% 3 | 6,3100 | 15,3600 | 50,0000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 15% 1 | 5,03985 | 89,6780 | 43,0929 | 66,7270 |
| EVA - STJ 15% 2 | 4,85904 | 82,1185 | 33,1179 | -.- |
| EVA - STJ 15% 3 | 4,50132 | 82,0390 | 36,0954 | 38,7756 |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **mm** |
| EVA - STJ 15% 1 | 83,17 |
| EVA - STJ 15% 2 | 63,86 |
| EVA - STJ 15% 3 | 55,26 |


Force(N)
Disp.(mm)
MAX
Break
STJ 15% 1


Force(N)
Disp.(mm)
MAX
STJ 15% 2


Force(N)
Disp.(mm)
MAX
Break
STJ 15% 3

# METALURGI FISIK

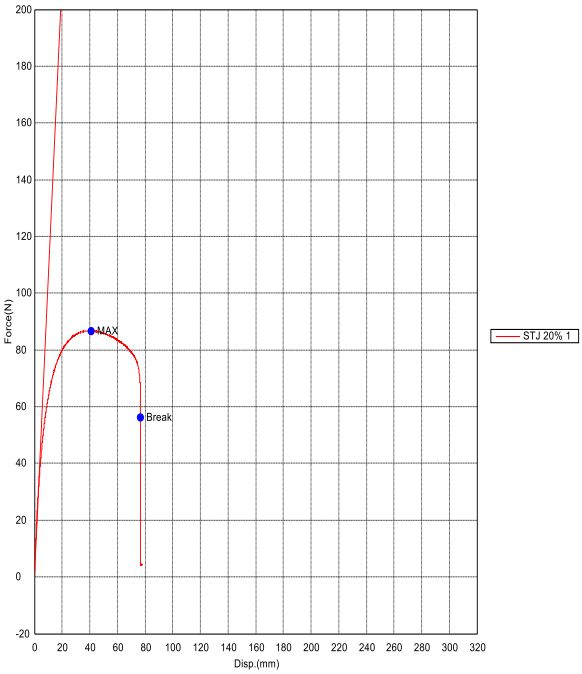
# TENSILE KOMPOSIT TONGKOL JAGUNG

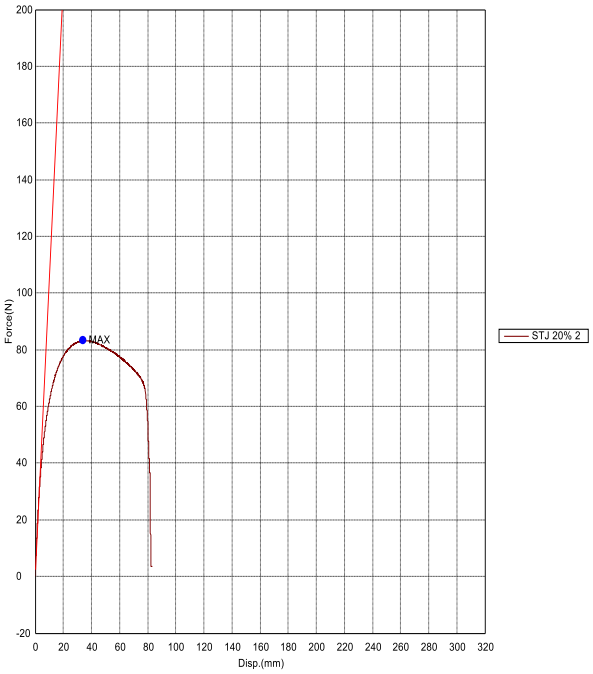
| **Key Word** | EVA - STJ | **Product Name** | EVA – STJ 20% | |
|---|---|---|---|---|
| **Test File Name** | EVA - STJ 20%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Report Date** | 26/04/22 | **Test Date** | 20/04/22 | |
| **Test Type** | Tensile | **Speed** | 15mm/min | |
| **Shape** | Plate | **No of Batches:** | 1 | |
| **Qty/Batch:** | 3 | | | |

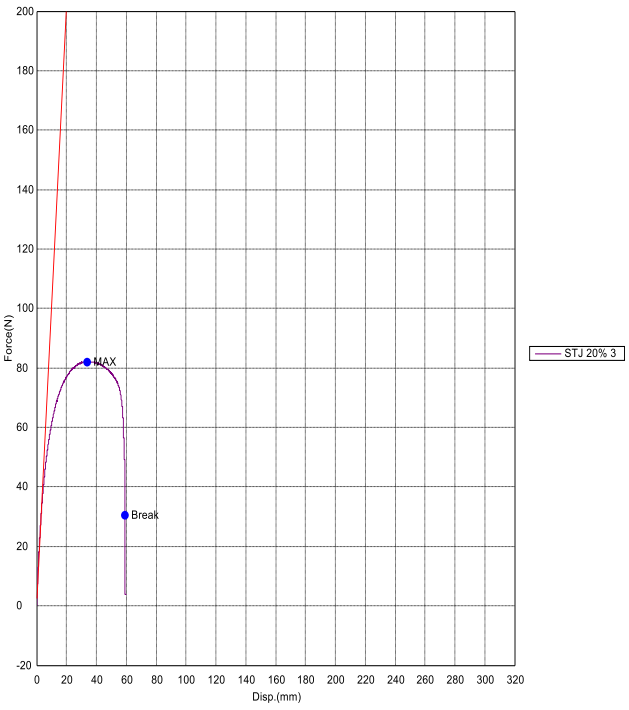
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **Mm** | **mm** | **mm** | |
| EVA - STJ 20% 1 | 6,7100 | 15,5900 | 50,0000 | |
| EVA - STJ 20% 2 | 6,3500 | 15,3300 | 50,0000 | |
| EVA - STJ 20% 3 | 6,3000 | 15,5200 | 50,0000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 20% 1 | 5,04671 | 86,7677 | 41,0354 | 56,2898 |
| EVA - STJ 20% 2 | 5,37903 | 83,3122 | 33,9029 | -.- |
| EVA - STJ 20% 3 | 5,15566 | 85,1002 | 33,6154 | 30,4953 |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **mm** |
| EVA - STJ 20% 1 | 76,77 |
| EVA - STJ 20% 2 | 81,23 |
| EVA - STJ 20% 3 | 59,17 |


Force(N)
Disp.(mm)
MAX
Break
STJ 20% 1


Force(N)
Disp.(mm)
MAX
STJ 20% 2


Force(N)
Disp.(mm)
MAX
Break
STJ 20% 3

**Tabel A. 2**

Hasil Pengujian Tekuk (*Bending*) EVA – STJ

| Variasi (%) | Max Force (N) | Jarak Tumpuan (mm) | Lebar (mm) | Tebal (mm) | Kekuatan Bending (MPa) | Rata-Rata (MPa) | Standar Deviasi |
|---|---|---|---|---|---|---|---|
| 0 | 14,52 | 34 | 11,6 | 3,2 | 6,2341 | 5,0632 | 1,0355 |
| | 12,48 | 34 | 12,9 | 3,4 | 4,2681 | | |
| | 14,77 | 34 | 12,4 | 3,6 | 4,6873 | | |
| 5 | 3,31 | 34 | 13,3 | 3,6 | 0,9793 | 1,0649 | 0,0956 |
| | 3,76 | 34 | 13,4 | 3,5 | 1,1681 | | |
| | 3,38 | 34 | 12,7 | 3,6 | 1,0473 | | |
| 10 | 3,96 | 34 | 12,7 | 3,4 | 1,3756 | 1,2847 | 0,1445 |
| | 3,58 | 34 | 12,6 | 3,6 | 1,1180 | | |
| | 4,46 | 34 | 12,9 | 3,6 | 1,3605 | | |
| 15 | 4,48 | 34 | 12,3 | 3,5 | 1,4892 | 1,8639 | 0,4826 |
| | 4,63 | 34 | 12,8 | 3,3 | 1,6939 | | |
| | 8,62 | 34 | 12 | 3,9 | 2,4086 | | |
| 20 | 5,92 | 34 | 13,1 | 3,4 | 1,9937 | 1,9854 | 0,0413 |
| | 6,72 | 34 | 12,9 | 3,7 | 1,9406 | | |
| | 5,57 | 34 | 12,9 | 3,3 | 2,0221 | | |

# METALURGI FISIK

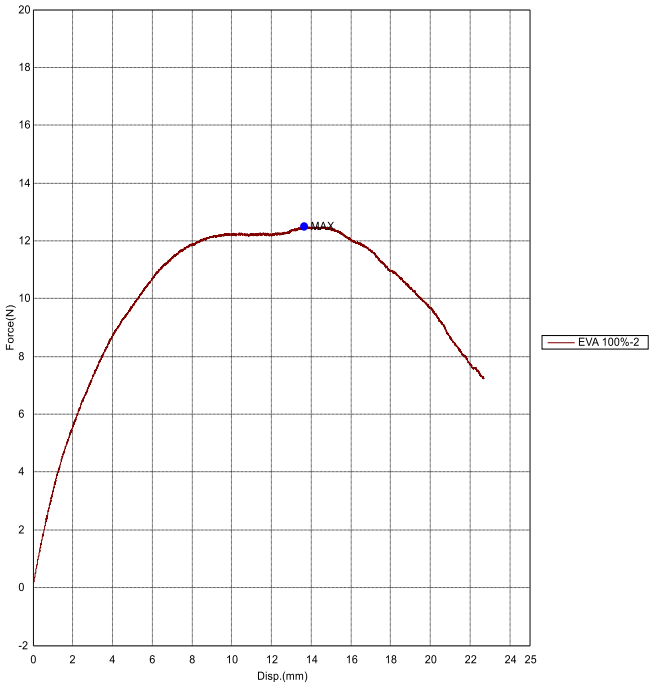
# BENDING KOMPOSIT

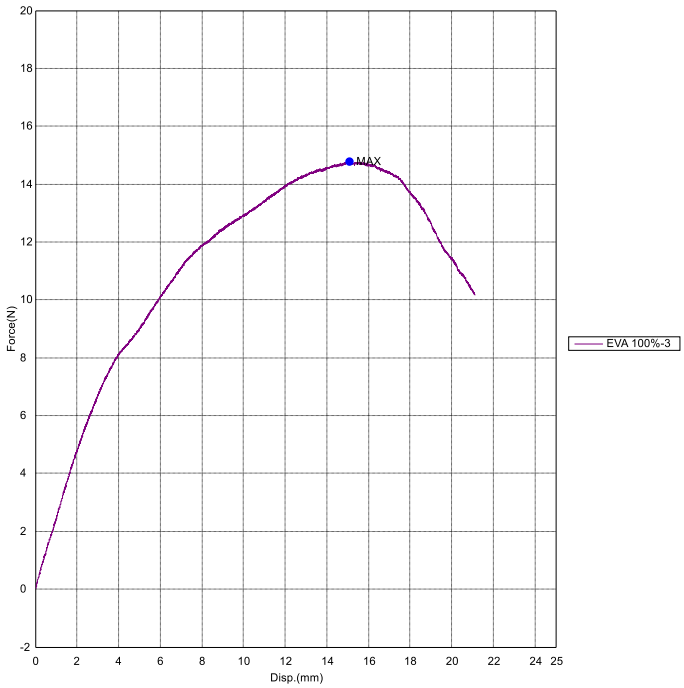
| **Product Name** | EVA – STJ 0% | **Method File Name** | |
|---|---|---|---|
| **Report Date** | 28/04/22 | **Test Date** | 27/04/22 |
| **Speed** | 5mm/min | | |

| **Name** | **Thickness** | **Width** | **Lower_Support** |
|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** |
| EVA – STJ 0% 1 | 3,2000 | 11,6000 | 34,0000 |
| EVA - STJ 0% 2 | 3,4000 | 12,9000 | 34,0000 |
| EVA - STJ 0% 3 | 3,6000 | 12,4000 | 34,0000 |

| **Name** | **Max_Force** | **Max_Disp.** | **Break_Force** | **Break_Disp.** |
|---|---|---|---|---|
| **Parameters** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** | **Sensitivity 10** |
| **Unit** | **N** | **mm** | **N** | **mm** |
| EVA - STJ 0% 1 | 14,5237 | 13,7671 | -.- | -.- |
| EVA - STJ 0% 2 | 12,4860 | 13,6361 | -.- | -.- |
| EVA - STJ 0% 3 | 14,7700 | 15,0928 | -.- | -.- |


MAX
Force(N)
Disp.(mm)
EVA 100%-1


MAX
Force(N)
Disp.(mm)
EVA 100%-2


MAX
Force(N)
Disp.(mm)
EVA 100%-3

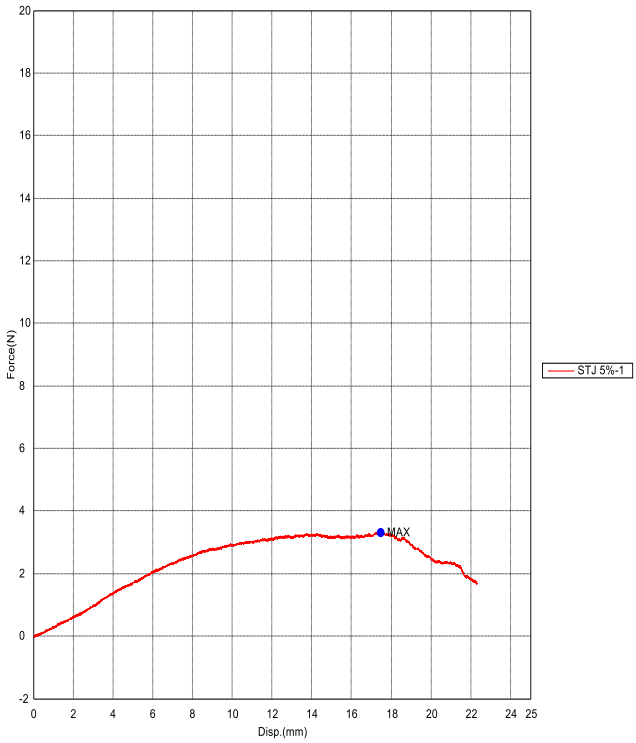
# METALURGI FISIK

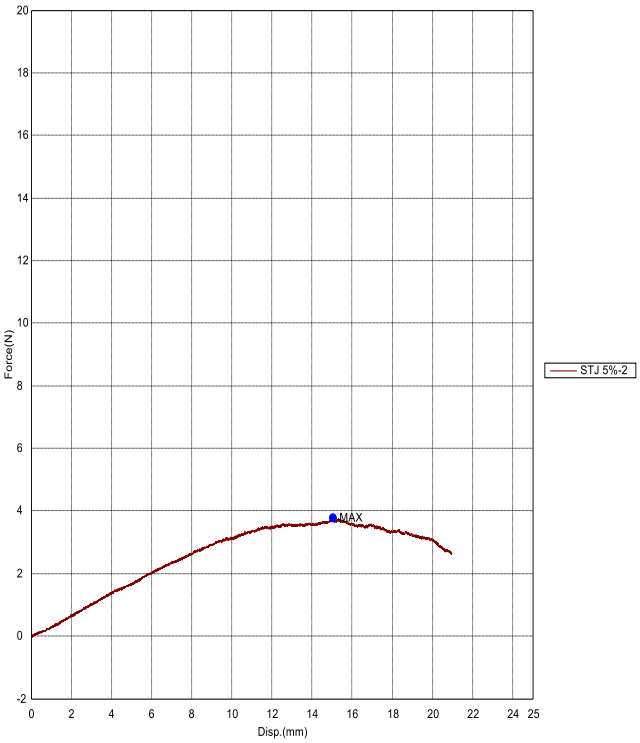
# BENDING KOMPOSIT

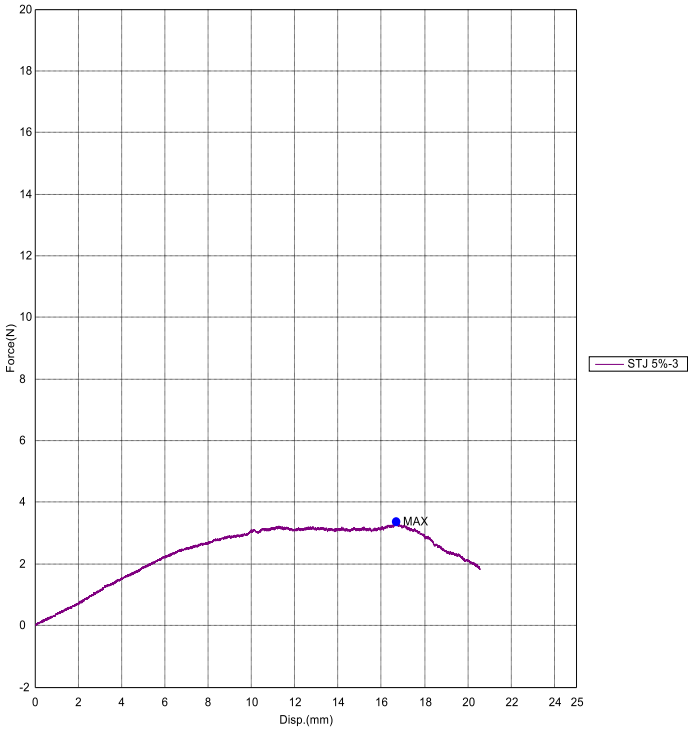
| **Product Name** | EVA – STJ 5% | **Method File Name** | |
|---|---|---|---|
| **Report Date** | 28/04/22 | **Test Date** | 27/04/22 |
| **Speed** | 5mm/min | | |

| **Name** | **Thickness** | **Width** | **Lower_Support** |
|---|---|---|---|
| **Unit** | **mm** | **mm** | **Mm** |
| EVA - STJ 5% 1 | 3,6000 | 13,3000 | 34,000 |
| EVA - STJ 5% 2 | 3,5000 | 13,4000 | 34,000 |
| EVA - STJ 5% 3 | 3,6000 | 12,7000 | 34,000 |

| **Name** | **Max_Force** | **Max_Disp.** | **Break_Force** | **Break_Disp.** |
|---|---|---|---|---|
| **Parameters** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** | **Sensitivity 10** |
| **Unit** | **N** | **mm** | **N** | **mm** |
| EVA - STJ 5% 1 | 3,31958 | 17,4819 | -.- | -.- |
| EVA - STJ 5% 2 | 3,76781 | 15,0595 | -.- | -.- |
| EVA - STJ 5% 3 | 3,38237 | 16,6836 | -.- | -.- |


Force(N)
Disp.(mm)
MAX
STJ 5%-1


Force(N)
Disp.(mm)
MAX
STJ 5%-2


Force(N)
Disp.(mm)
MAX
STJ 5%-3

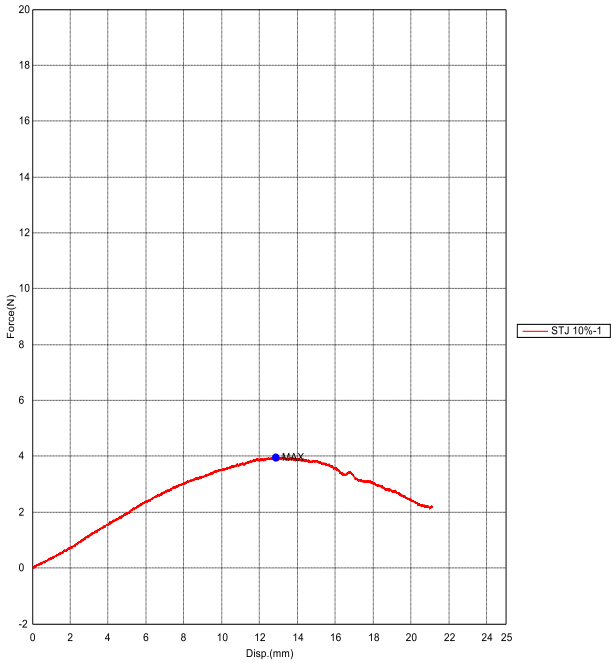
# METALURGI FISIK

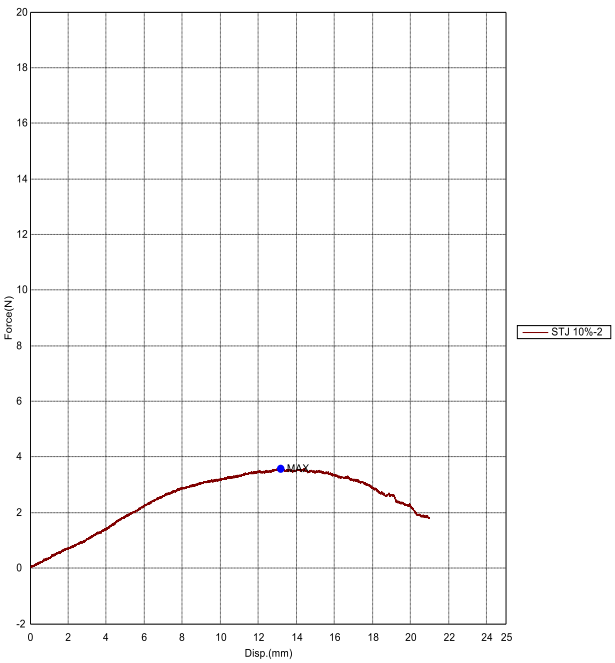
# BENDING KOMPOSIT

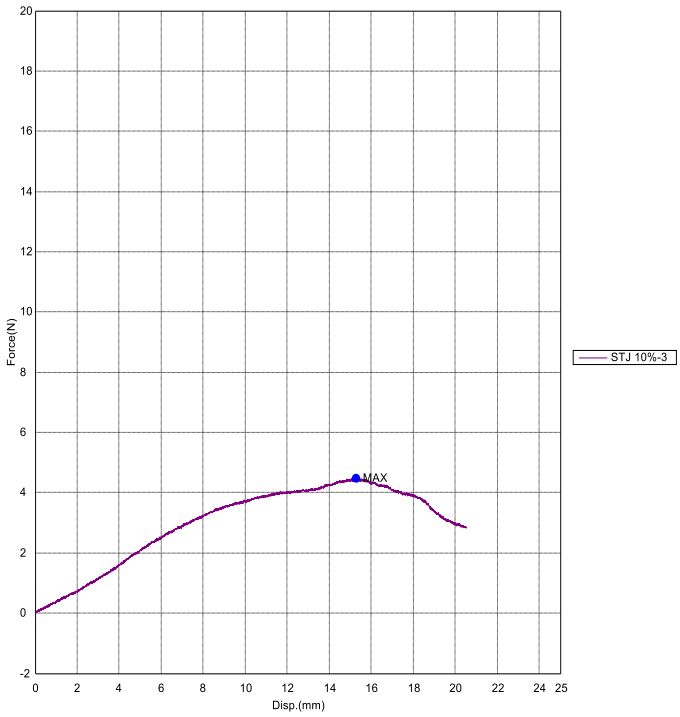
| **Product Name** | EVA – STJ 10% | **Method File Name** | |
|---|---|---|---|
| **Operator** | Edi iskandar | **Report Date** | 28/04/22 |
| **Test Date** | 27/04/22 | **Speed** | 5mm/min |

| **Name** | **Thickness** | **Width** | **Lower_Support** |
|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** |
| EVA - STJ 10% 1 | 3,4000 | 12,7000 | 34,000 |
| EVA - STJ 10% 2 | 3,6000 | 12,6000 | 34,000 |
| EVA - STJ 10% 3 | 3,6000 | 12,9000 | 34,000 |

| **Name** | **Max_Force** | **Max_Disp.** | **Break_Force.** | **Break_Disp.** |
|---|---|---|---|---|
| **Parameters** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** | **Sensitivity 10** |
| **Unit** | **N** | **mm** | **N** | **mm** |
| EVA - STJ 10% 1 | 3,96172 | 12,8678 | -.- | -.- |
| EVA - STJ 10% 2 | 3,58661 | 13,1603 | -.- | -.- |
| EVA - STJ 10% 3 | 4,46955 | 15,2811 | -.- | -.- |


Force(N)
Disp.(mm)
MAX
STJ 10%-1


Force(N)
Disp.(mm)
MAX
STJ 10%-2


Force(N)
Disp.(mm)
MAX
STJ 10%-3

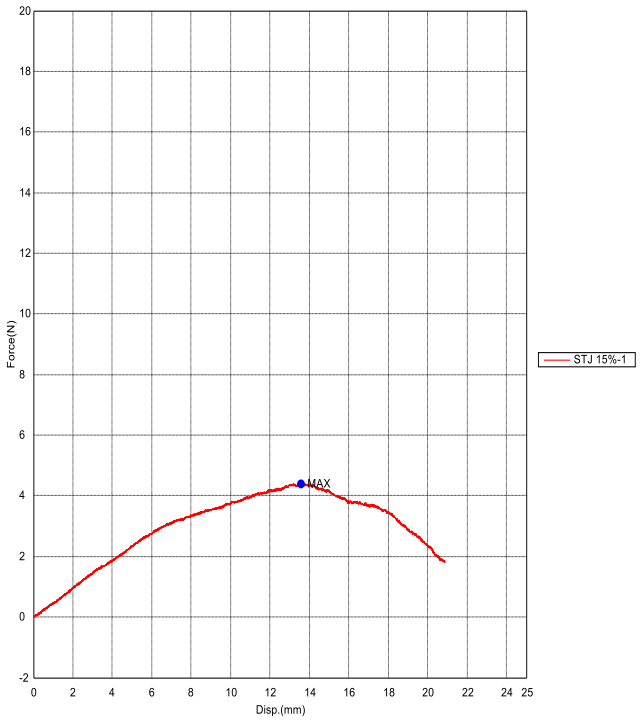
# METALURGI FISIK

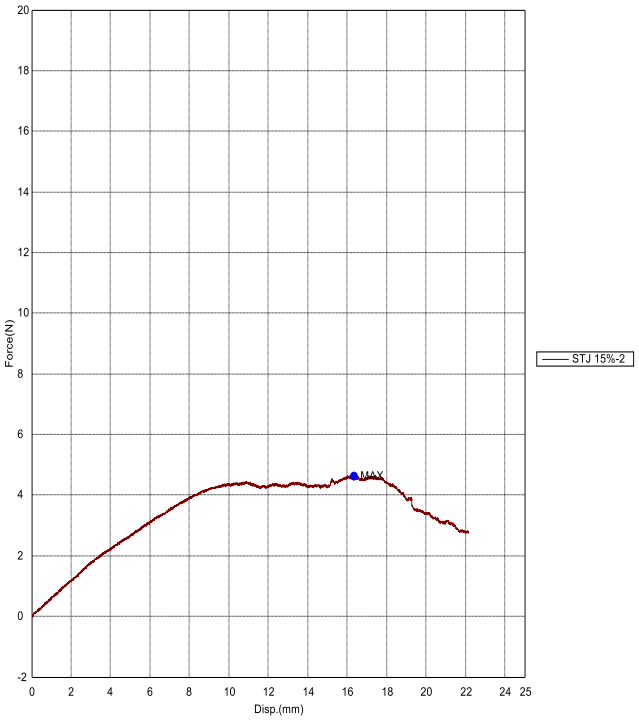
# BENDING KOMPOSIT

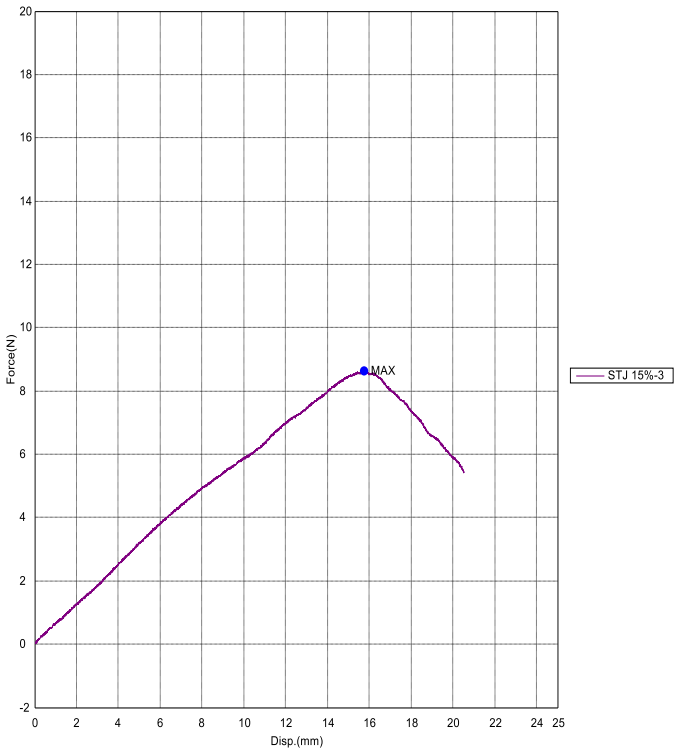
| **Product Name** | EVA – STJ 15% | **Method File Name** | |
|---|---|---|---|
| **Operator** | Edi iskandar | **Report Date** | 28/04/22 |
| **Test Date** | 27/04/22 | **Speed** | 5mm/min |

| **Name** | **Thickness** | **Width** | **Lower_Support** |
|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** |
| EVA - STJ 15%-1 | 3,5000 | 12,3000 | 34,0000 |
| EVA - STJ 15%-2 | 3,3000 | 12,8000 | 34,0000 |
| EVA - STJ 15%-3 | 3,9000 | 12,0000 | 34,0000 |

| **Name** | **Max_Force** | **Max_Disp.** | **Break_Force** | **Break_Disp.** |
|---|---|---|---|---|
| **Parameters** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** | **Sensitivity 10** |
| **Unit** | **N** | **mm** | **N** | **mm** |
| EVA - STJ 15%-1 | 4,40598 | 13,5878 | -.- | -.- |
| EVA - STJ 15%-2 | 4,63883 | 16,3369 | -.- | -.- |
| EVA - STJ 15%-3 | 8,62678 | 15,7661 | -.- | -.- |


Force(N)
Disp.(mm)
MAX
STJ 15%-1


Force(N)
Disp.(mm)
MAX
STJ 15%-2


Force(N)
Disp.(mm)
MAX
STJ 15%-3

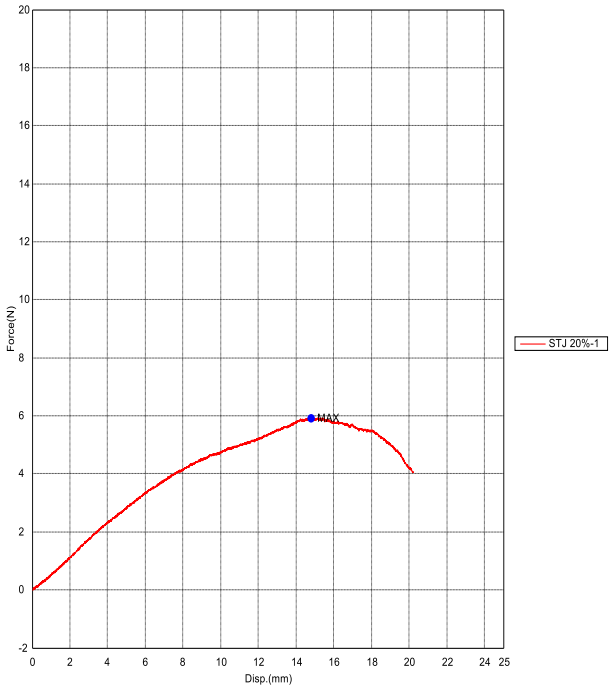
# METALURGI FISIK

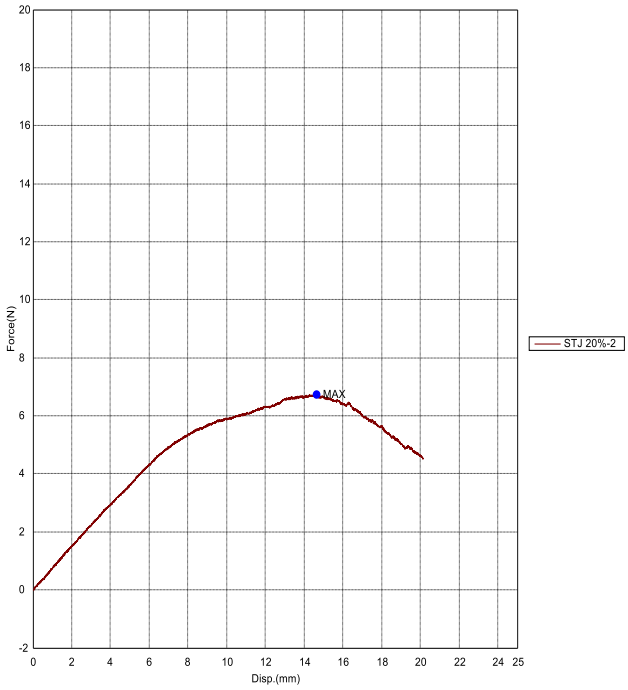
# BENDING KOMPOSIT

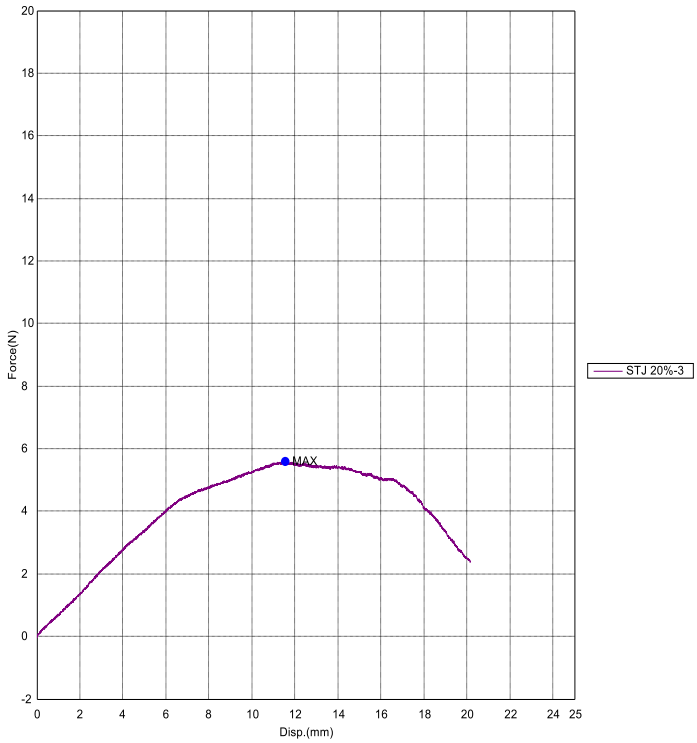
| **Product Name** | EVA – STJ 20% | **Method File Name** | |
|---|---|---|---|
| **Operator** | Edi iskandar | **Report Date** | 28/04/22 |
| **Test Date** | 27/04/22 | **Speed** | 5mm/min |

| **Name** | **Thickness** | **Width** | **Lower_Support** |
|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** |
| EVA - STJ 20% 1 | 3,4000 | 13,1000 | 34,0000 |
| EVA - STJ 20% 2 | 3,7000 | 12,9000 | 34,0000 |
| EVA - STJ 20% 3 | 3,3000 | 12,9000 | 34,0000 |

| **Name** | **Max_Force** | **Max_Disp.** | **Break_Force** | **Break_Disp.** |
|---|---|---|---|---|
| **Parameters** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** | **Sensitivity 10** |
| **Unit** | **N** | **mm** | **N** | **mm** |
| EVA - STJ 20% 1 | 5,92788 | 14,8119 | -.- | -.- |
| EVA - STJ 20% 2 | 6,72340 | 14,6328 | -.- | -.- |
| EVA - STJ 20% 3 | 5,57900 | 11,5411 | -.- | -.- |


Force(N)
Disp.(mm)
MAX
STJ 20%-1


Force(N)
Disp.(mm)
MAX
STJ 20%-2


Force(N)
Disp.(mm)
MAX
STJ 20%-3

**Tabel A. 3**

Hasil Pengujian Rekat (*Adhesive*) EVA – STJ

| Variasi (%) | Max force (N) | Panjang (mm) | lebar (mm) | Tegangan Maks. (MPa) | Rata-rata (MPa) | Standar Deviasi |
|---|---|---|---|---|---|---|
| 0 | 565,01 | 25 | 13 | 1,7384 | 1,4568 | 0,3711 |
| | 336,86 | 25 | 13 | 1,0364 | | |
| | 558,52 | 25 | 14 | 1,5957 | | |
| 5 | 445,55 | 25 | 13 | 1,3709 | 1,3049 | 0,1237 |
| | 465,72 | 26 | 13 | 1,3778 | | |
| | 424,42 | 26 | 14 | 1,1659 | | |
| 10 | 410,48 | 25 | 14 | 1,1728 | 1.0867 | 0,2085 |
| | 275,91 | 25 | 13 | 0,8489 | | |
| | 402,49 | 25 | 13 | 1,2384 | | |
| 15 | 406,36 | 25 | 13 | 1,2503 | 1,0706 | 0,2789 |
| | 262,23 | 25 | 14 | 0,7492 | | |
| | 394,03 | 25 | 13 | 1,2123 | | |
| 20 | 354,85 | 25 | 14 | 1,0138 | 0.8625 | 0,1937 |
| | 302,12 | 25 | 13 | 0,9296 | | |
| | 217,71 | 26 | 13 | 0,6441 | | |

# METALURGI FISIK

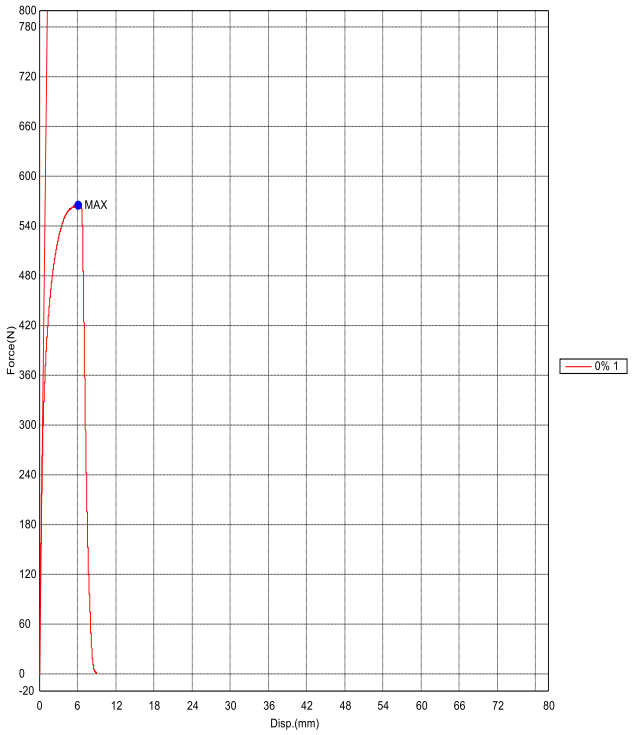
# TENSILE ADHESIVE TONGKOL JAGUNG

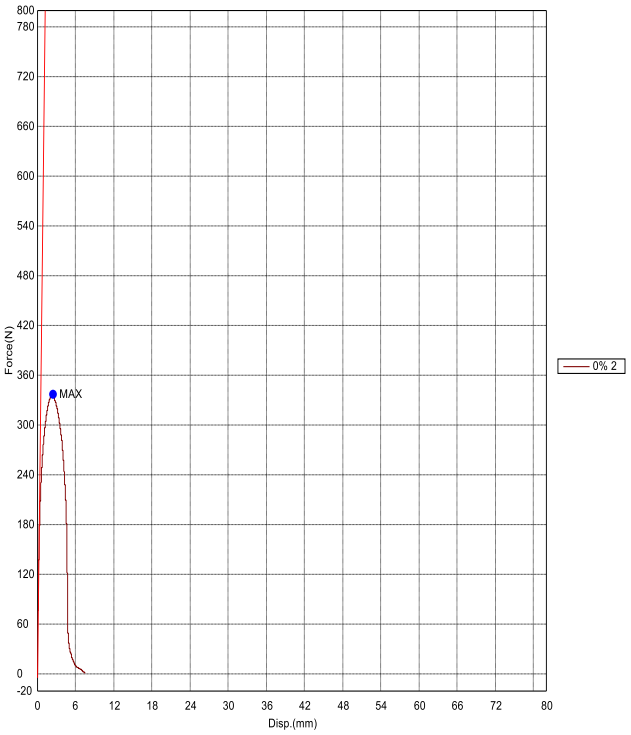
| **Key Word** | EVA – STJ 0% | **Product Name** | EVA - STJ | |
|---|---|---|---|---|
| **Test File Name** | 0%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Operator** | Edi Iskandar | **Report Date** | 18/05/22 | |
| **Test Date** | 17/05/22 | **Test Type** | Tensile | |
| **Speed** | 5mm/min | **Shape** | Plate | |
| **No of Batches:** | **1** | **Qty/Batch:** | 3 | |

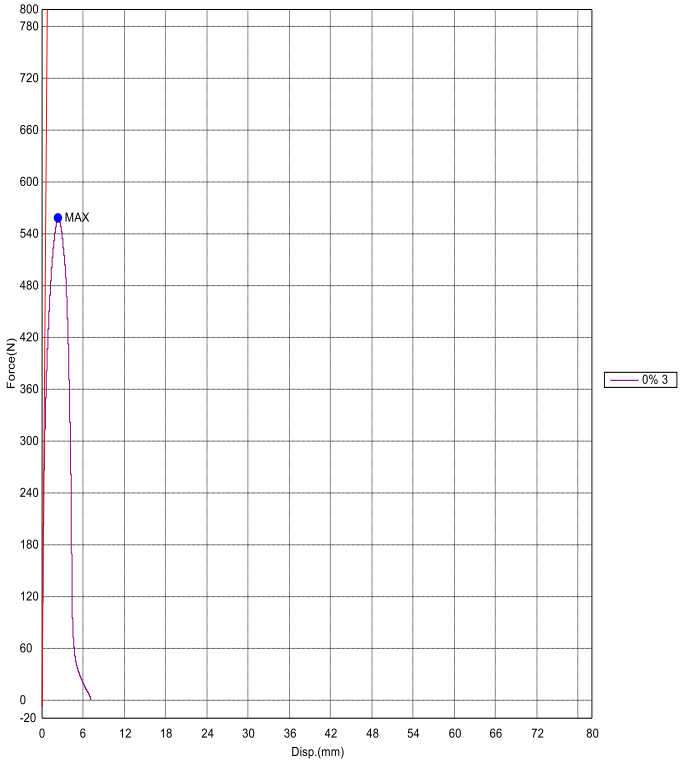
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** | |
| EVA – STJ 0% 1 | 2,1000 | 27,0000 | 14,0000 | |
| EVA - STJ 0% 2 | 2,0600 | 25,0000 | 14,0000 | |
| EVA - STJ 0% 3 | 1,9700 | 25,0000 | 14,0000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 0% 1 | 163,854 | 565,016 | 6,18110 | -.- |
| EVA - STJ 0% 2 | 182,425 | 336,864 | 2,43277 | -.- |
| EVA - STJ 0% 3 | 303,464 | 558,501 | 2,41027 | -.- |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **mm** |
| EVA 100%-1 | -.- |
| EVA 100%-2 | -.- |
| EVA 100%-3 | -.- |


Force(N)
Disp.(mm)
MAX
0% 1


Force(N)
Disp.(mm)
MAX
0% 2


Force(N)
Disp.(mm)
MAX
0% 3

# METALURGI FISIK

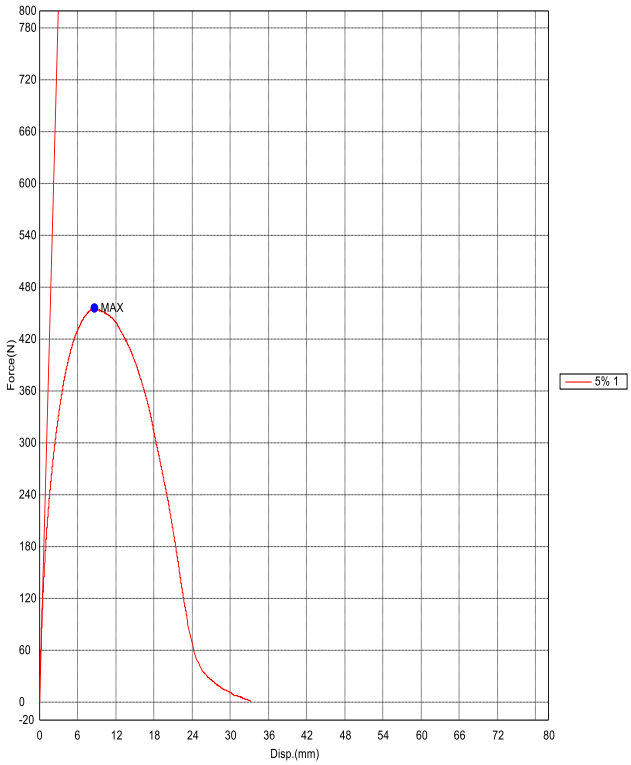
# TENSILE ADHESIVE TONGKOL JAGUNG

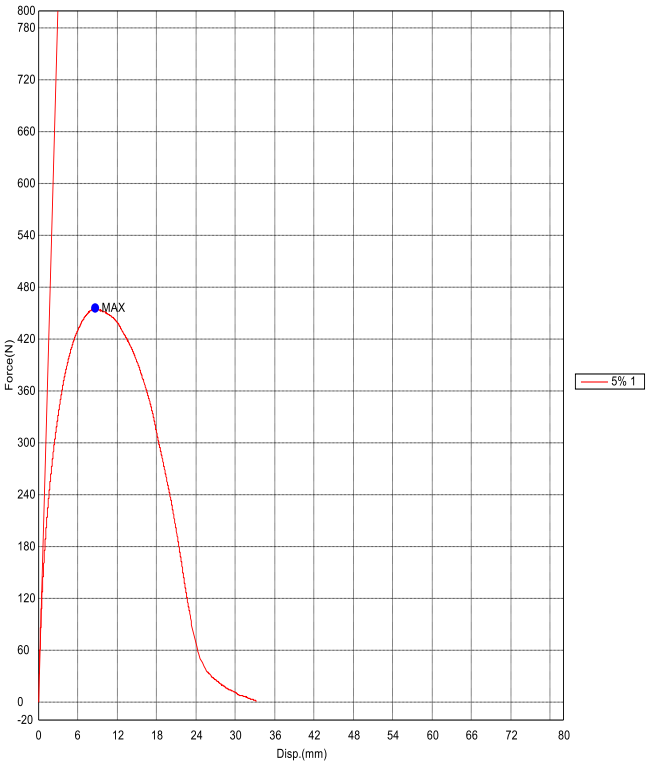
| **Key Word** | KR-T | **Product Name** | Tongkol jagung | |
|---|---|---|---|---|
| **Test File Name** | 5%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Operator** | Edi Iskandar | **Report Date** | 18/05/22 | |
| **Test Date** | 17/05/22 | **Test Type** | Tensile | |
| **Speed** | 5mm/min | **Shape** | Plate | |
| **No of Batches:** | 1 | **Qty/Batch:** | 3 | |

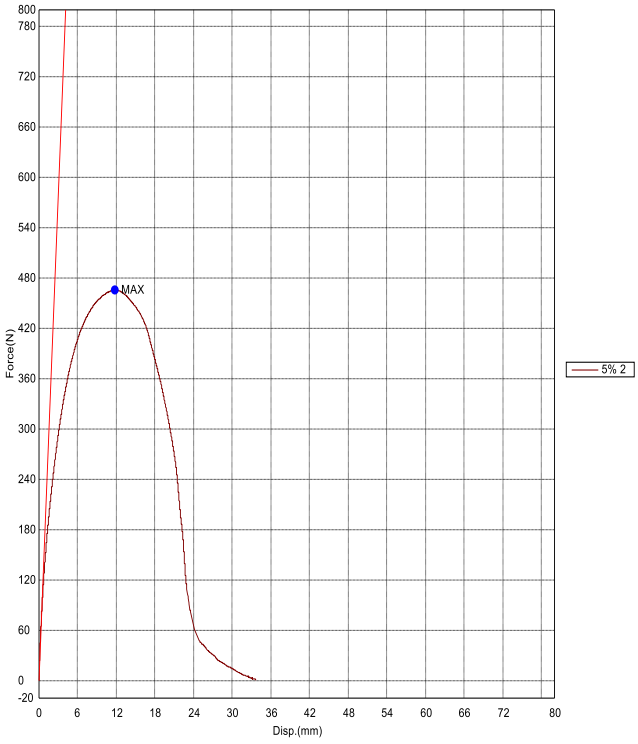
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** | |
| EVA - STJ 5%-1 | 1,8600 | 27,0000 | 14,000 | |
| EVA - STJ 5%-2 | 2,1000 | 27,0000 | 14,000 | |
| EVA - STJ 5%-3 | 2,2500 | 27,0000 | 14,000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 5%-1 | 76,1799 | 455,553 | 8,6577 | -.- |
| EVA - STJ 5%-2 | 47,7371 | 465,727 | 11,7886 | -.- |
| EVA - STJ 5%-3 | 53,8705 | 424,422 | 10,1519 | -.- |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **mm** |
| EVA - STJ 5%-1 | -.- |
| EVA - STJ 5%-2 | -.- |
| EVA - STJ 5%-3 | -.- |


MAX
Force(N)
Disp.(mm)
5% 1


MAX
Force(N)
Disp.(mm)
5% 1


MAX
Force(N)
Disp.(mm)
5% 2

# METALURGI FISIK

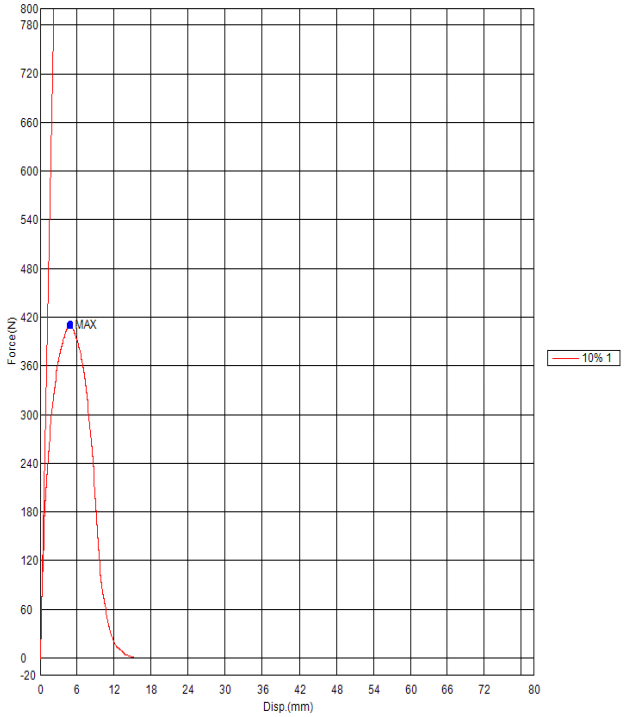
# TENSILE ADHESIVE TONGKOL JAGUNG

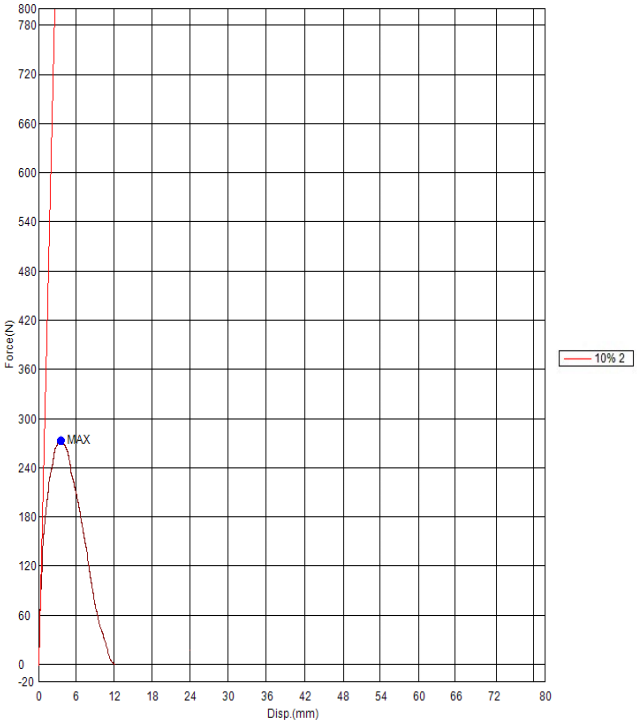
| | | | | |
|---|---|---|---|---|
| **Key Word** | EVA - STJ | **Product Name** | Tongkol Jagung | |
| **Test File Name** | EVA – STJ 10%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Operator** | Edi Iskandar | **Report Date** | 18/05/22 | |
| **Test Date** | 18/05/22 | **Test Type** | Tensile | |
| **Speed** | 5mm/min | **Shape** | Plate | |
| **No of Batches :** | **1** | **Qty/Batch:** | 3 | |

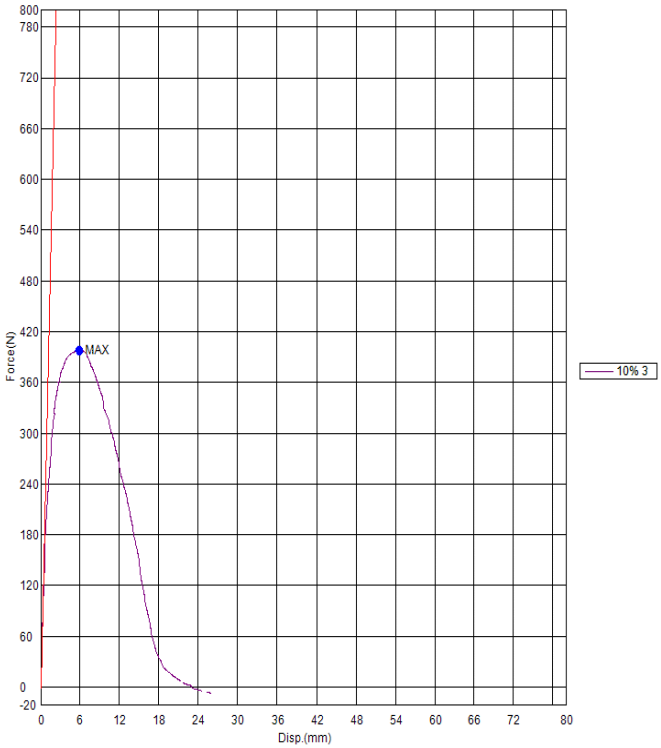
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **mm** | **mm** | **Mm** | |
| EVA - STJ 10%-1 | 1,8000 | 27,0000 | 14,0000 | |
| EVA - STJ 10%-2 | 2,2000 | 27,0000 | 14,0000 | |
| EVA - STJ 10%-3 | 2,3000 | 28,0000 | 14,0000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 10%-1 | 114,853 | 410,482 | 4,83530 | -.- |
| EVA - STJ 10%-2 | 44,6293 | 275,912 | 4,89523 | -.- |
| EVA - STJ 10%- 3 | 46,0712 | 402,490 | 5,55527 | -.- |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **mm** |
| EVA - STJ 10%-1 | -.- |
| EVA - STJ 10%-2 | -.- |
| EVA - STJ 10%-3 | -.- |


Force(N)
Disp.(mm)
MAX
10% 1


Force(N)
Disp.(mm)
MAX
10% 2


Force(N)
Disp.(mm)
MAX
10% 3

# METALURGI FISIK

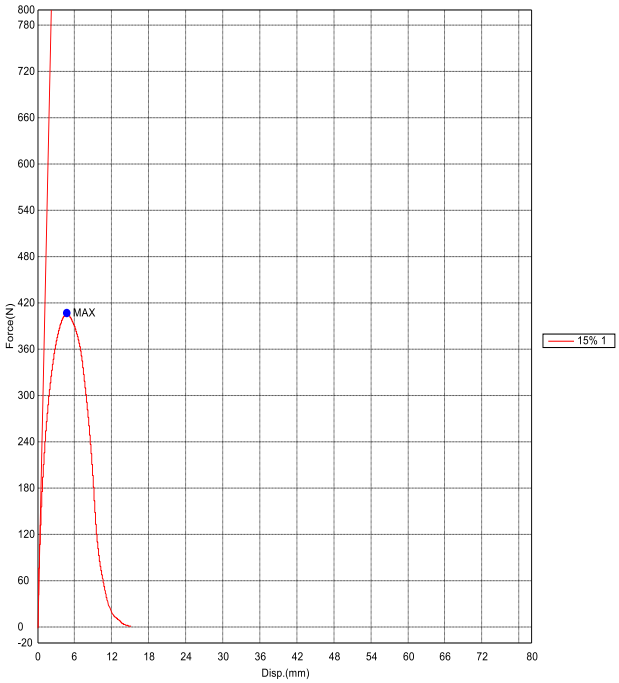
# TENSILE ADHESIVE TONGKOL JAGUNG

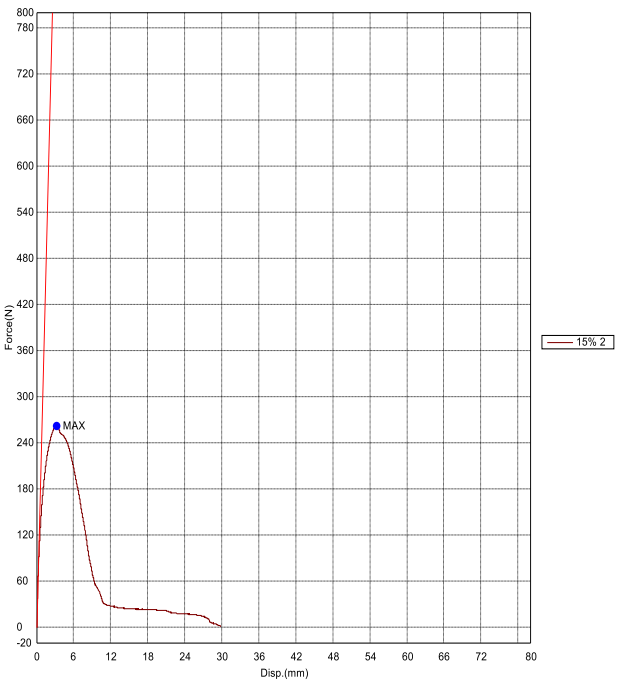
| **Key Word** | KR-T | **Product Name** | Tongkol Jagung | |
|---|---|---|---|---|
| **Test File Name** | EVA - STJ 15%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Operator** | Edi Iskandar | **Report Date** | 18/05/22 | |
| **Test Date** | 18/05/22 | **Test type** | Tensile | |
| **Speed** | 5mm/min | **Shape** | Plate | |
| **No of Bathces** | 1 | **Qty/Batch** | 3 | |

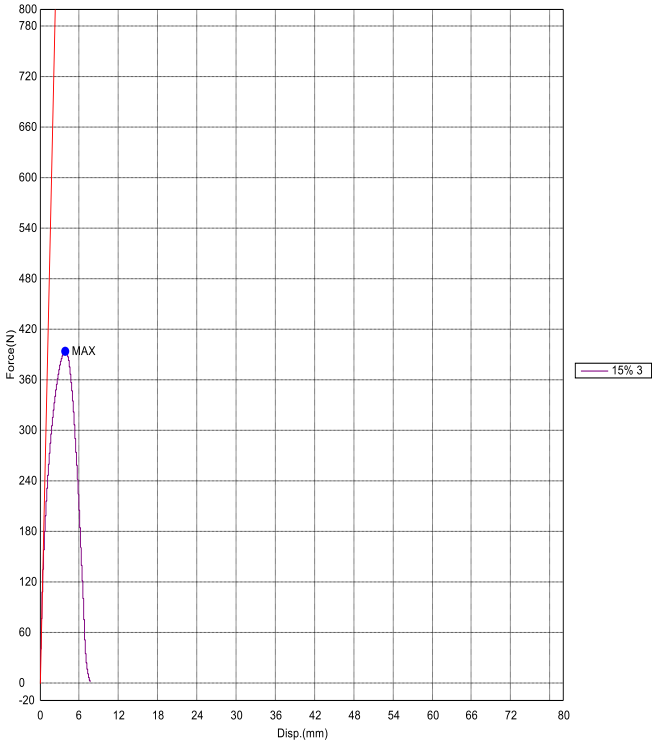
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** | |
| EVA - STJ 15%-1 | 2,0600 | 26,0000 | 15,0000 | |
| EVA - STJ 15%-2 | 1,8000 | 25,0000 | 14,0000 | |
| EVA - STJ 15% 3 | 2,2100 | 27,0000 | 15,0000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 15%-1 | 10,3860 | 406,361 | 4,73777 | -.- |
| EVA - STJ 15%-2 | 99,1965 | 262,238 | 3,24443 | -.- |
| EVA - STJ 15%-3 | 88,2723 | 394,060 | 3,89773 | -.- |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **mm** |
| EVA - STJ 15%-1 | -.- |
| EVA - STJ 15%-2 | -.- |
| EVA - STJ 15%-3 | -.- |


Force(N)
Disp.(mm)
MAX
15% 1


Force(N)
Disp.(mm)
MAX
15% 2


Force(N)
Disp.(mm)
MAX
15% 3

# METALURGI FISIK

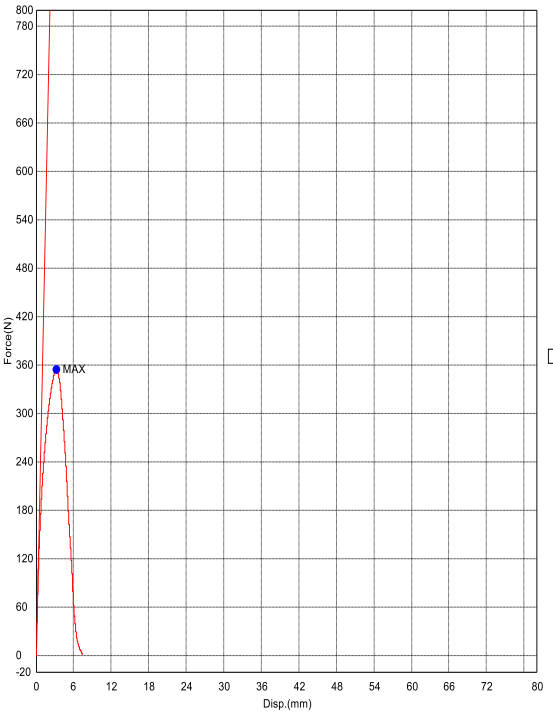
# TENSILE ADHESIVE TONGKOL JAGUNG

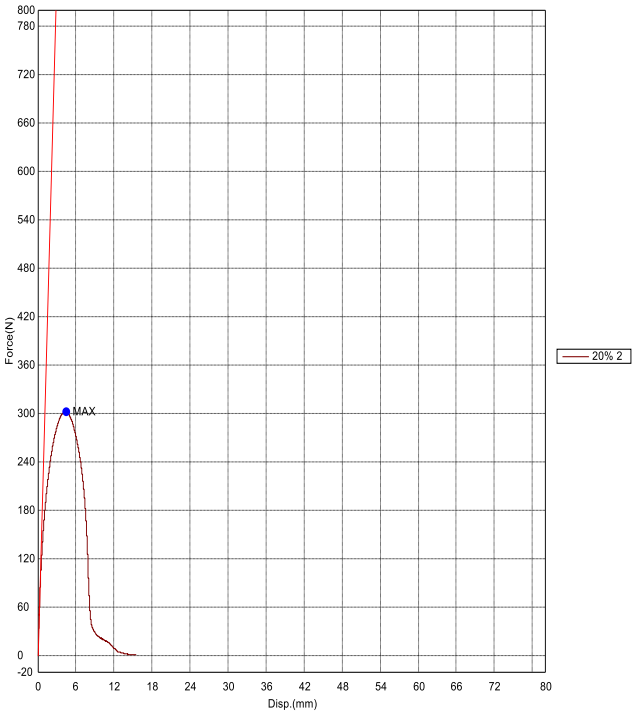
| **Key Word** | EVA – STJ | **Product Name** | Tongkol Jangung | |
|---|---|---|---|---|
| **Test File Name** | EVA – STJ 20%.ltax | **Method File Name** | TENSILE KOMPOSIT.lma | |
| **Operator** | Edi Iskandar | **Report Date** | 18/05/22 | |
| **Test Date** | 18/05/22 | **Test Type** | Tensile | |
| **Speed** | 5mm/min | **Shape** | Plate | |
| **No of Batches:** | 1 | **Qty/Batch:** | 3 | |

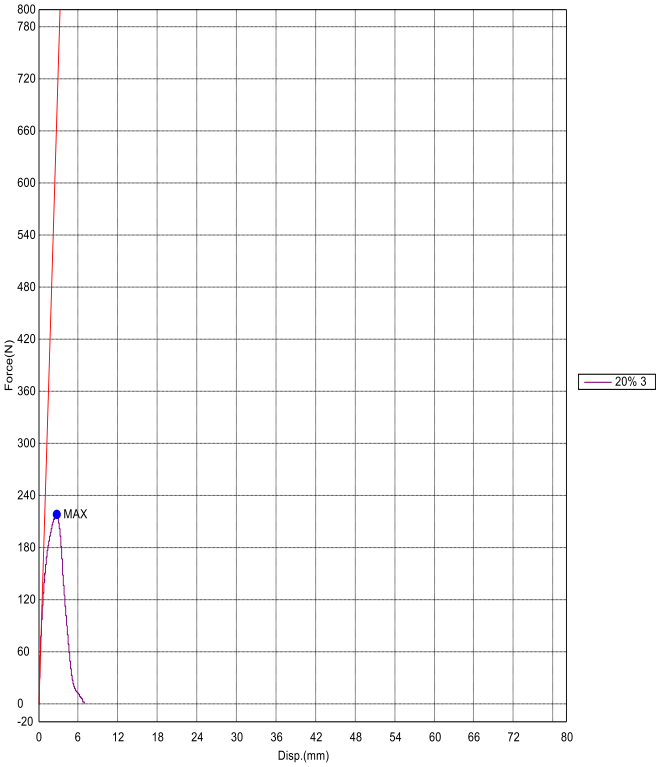
| **Name** | **Thickness** | **Width** | **Gauge_Length** | |
|---|---|---|---|---|
| **Unit** | **mm** | **mm** | **mm** | |
| EVA - STJ 20%-1 | 2,2000 | 25,0000 | 15,0000 | |
| EVA - STJ 20%-2 | 2,3000 | 25,0000 | 14,0000 | |
| EVA - STJ 20%-3 | 2,2100 | 26,0000 | 14,0000 | |

| **Name** | **Elastic** | **Max_Force** | **Max_Disp.** | **Break_Force** |
|---|---|---|---|---|
| **Parameters** | **Force 10 - 20 N** | **Calc. at Entire Area** | **Calc. at Entire Area** | **Sensitivity 10** |
| **Unit** | **N/mm2** | **N** | **mm** | **N** |
| EVA - STJ 20%-1 | 101,588 | 354,856 | 3,21273 | -.- |
| EVA - STJ 20%-2 | 69,6299 | 302,129 | 4,44360 | -.- |
| EVA - STJ 20%-3 | 61,0835 | 217,718 | 2,76193 | -.- |

| **Name** | **Break_Disp.** |
|---|---|
| **Parameters** | **Sensitivity 10** |
| **Unit** | **mm** |
| EVA - STJ 20%-1 | -.- |
| EVA - STJ 20%-2 | -.- |
| EVA - STJ 20%-3 | -.- |


Force(N)
Disp.(mm)
MAX
20% 1


Force(N)
Disp.(mm)
MAX
20% 2


Force(N)
Disp.(mm)
MAX
20% 3

# LAMPIRAN 2

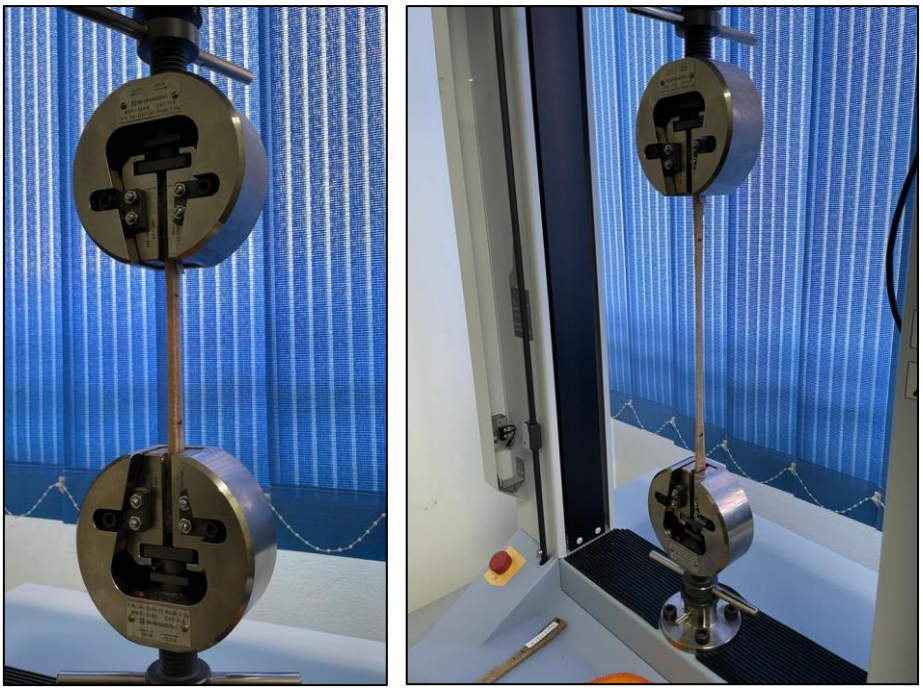
DOKUMENTASI PENELITIAN

**Gambar B. 1**

Proses Pencampuran *Ethylene-Vinyl Acetate* – Serbuk Tongkol Jagung

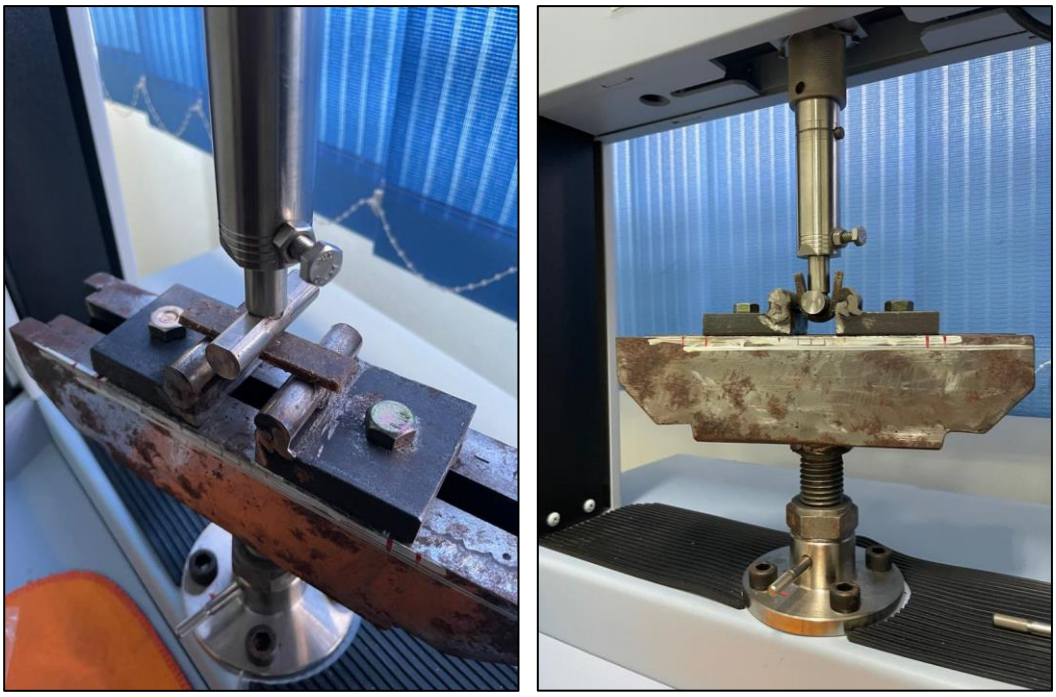
**Gambar B. 2**

Pengujian Tarik (*Tensile*)



**Gambar B. 3**

Pengujian Tekuk (*Bending*)



**Gambar B. 4**

Pengujian Rekat (*Adhesive*)