Electronic Supplementary Material (ESI) for RSC Advances.


**Supporting Information**

Table S1. Crystallization enthalpies and temperatures obtained for the EB-co-δ-HL copolymers at cooling rates in the 5 - 30 ºC $min^{-1}$ range.

| SAMPLE | 5 ºC $min^{-1}$ | | 10 ºC $min^{-1}$ | | 20 ºC $min^{-1}$ | | 30 ºC $min^{-1}$ | |
|---|---|---|---|---|---|---|---|---|
| | ΔH (J $g^{-1}$) | $T_c$ (ºC) | ΔH (J $g^{-1}$) | $T_c$ (ºC) | ΔH (J $g^{-1}$) | $T_c$ (ºC) | ΔH (J $g^{-1}$) | $T_c$ (ºC) |
| PEB | 91.1 | 52.1 | 86.5 | 49.2 | 84.8 | 44.7 | 83.5 | 40.9 |
| EB-HL 90 | 89.3 | 47.9 | 86.0 | 47.2 | 85.0 | 40.2 | 84.9 | 35.4 |
| EB-HL 83 | 76.0 | 41.2 | 75.2 | 36.8 | 71.6 | 29.0 | 69.1 | 21.5 |
| EB-HL 79 | 74.3 | 36.4 | 67.4 | 34.6 | 68.7 | 24.7 | 64.9 | 20.4 |
| EB-HL 70 | 63.4 | 28.3 | 62.1 | 25.0 | 60.0 | 19.9 | 60.0 | 16.0 |
| EB-HL 63 | 58.8 | 25.5 | 58.0 | 22.8 | 55.6 | 18.6 | 54.5 | 14.2 |
| EB-HL 49 | 40.6 | 16.4 | 35.6 | 13.8 | 35.1 | 9.3 | 33.3 | 6.1 |

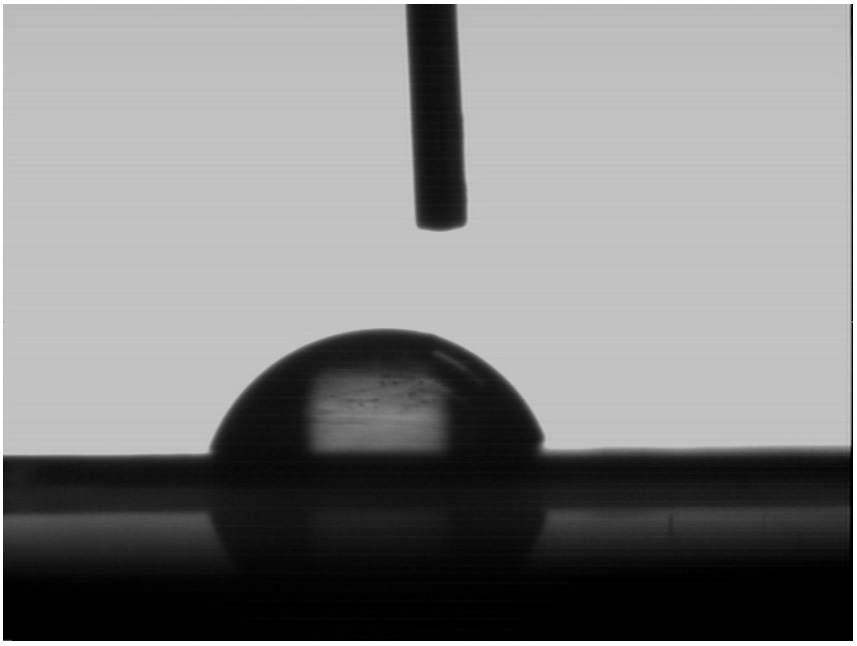

Figure S1. Example of Water Droplet on a film of the EB-co-δ-HL with 83% molar content of ethylene brassylate.

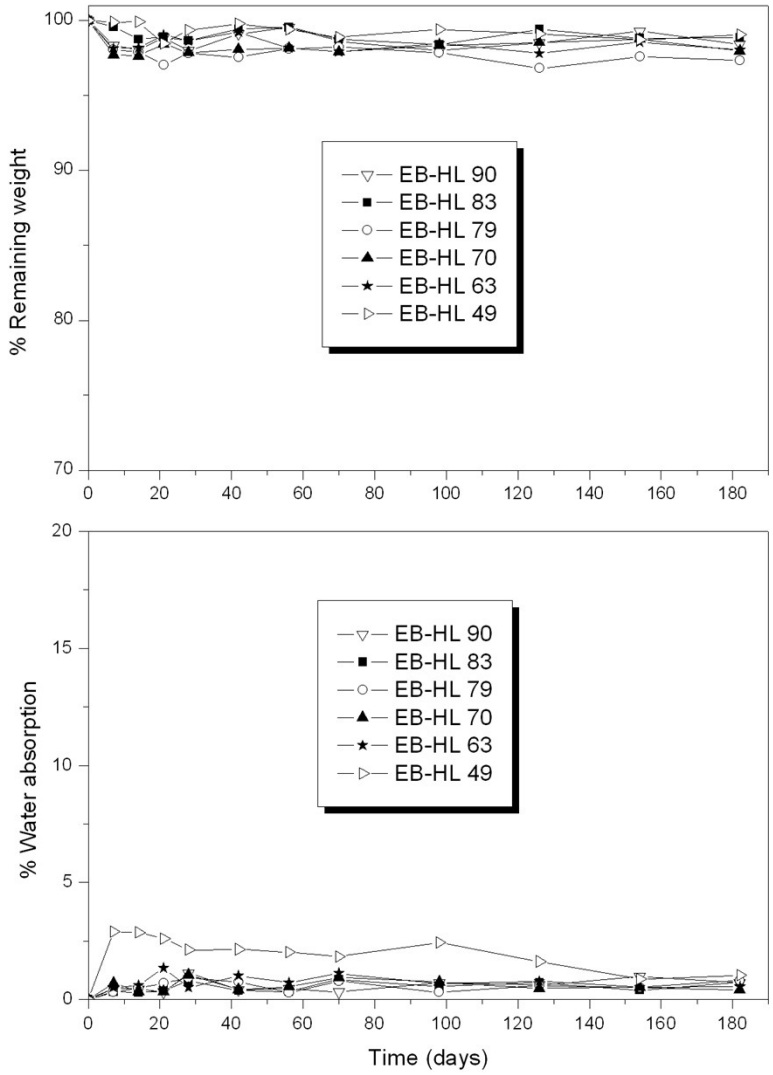


Figure S2**.** Evolution of the remaining weight and the water absorption of the poly(ethylene brassylate-co-δ-hexalactone)

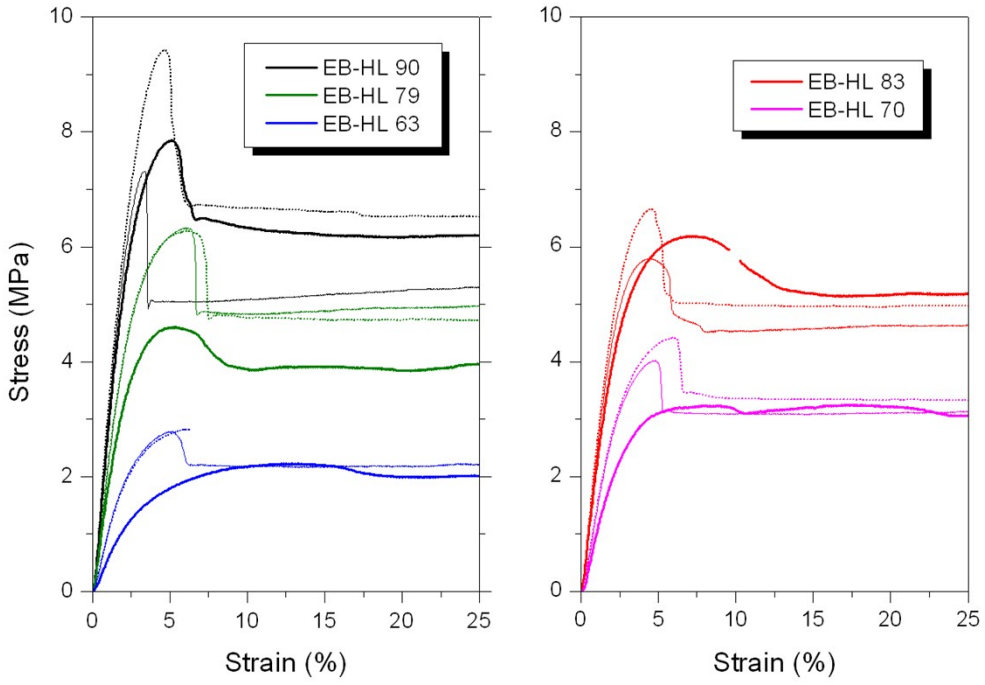


Figure S3. Tensile stress-strain curves until 25% of strain of the EB-co-δ-HL copolymers tested at 37ºC. The curves of the non-degraded samples are in bold and those on day 182 of degradation are dotted. The curves on day 70 of degradation are also shown.