

# PVP/LDPE blends with graphene oxide for water soluble polymer pouch application

Jooheon Kim

School of Chemical Engineering & Materials Science, Chung-Ang University, Seoul 156-756, Republic of Korea.

[jooheonkim@cau.ac.kr](mailto:jooheonkim@cau.ac.kr)

Water soluble PVP/LDPE blend polymer was fabricated for sink-hole restoration polymer pouch.<sup>1-3</sup> The mechanical property and water solubility were important factor for polymer pouch application, which were measured according to various PVP/LDPE blend ratios. Tensile strength, elongation, and storage modulus were increased while water solubility were decrease according to blend with LDPE.<sup>4</sup> In order to enhance the mechanical properties, moreover, exfoliated graphene oxide (GO) via Hummer's was used to filler. As a results, the mechanical property was enhanced while water solubility was almost not influenced on GO<sup>5</sup>.

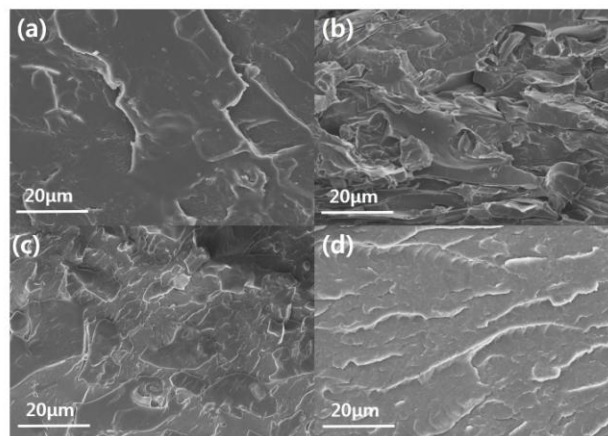
## References

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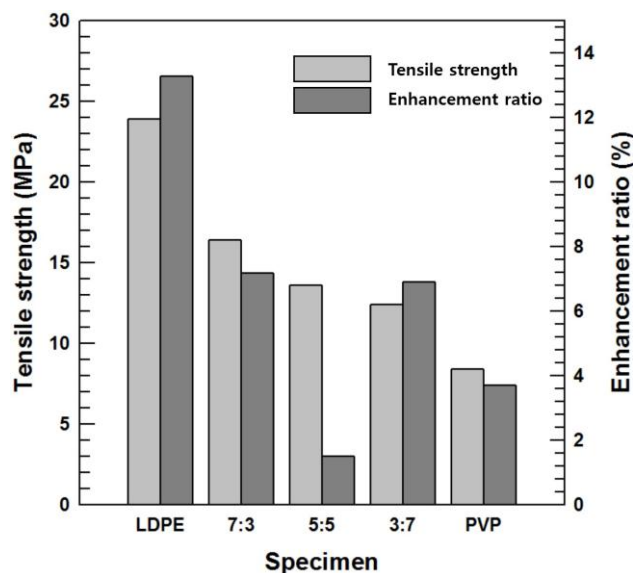
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## Figures



**Figure 1:** Cross-sectional SEM image of PVP/LDPE blend with various ratios, (a) raw PVP, (b) PVP/LDPE=7:3, (c) PVP/LDPE=3:7, (d) raw LDPE



**Figure 2:** Tensile strength of 5 wt% GO containing PVP/LDPE and enhancement ratios.