

# NEWS RELEASE



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## **Yokohama Rubber Develops HR370 Series Hard Coating with High Wettability and Superior Anti-Blocking Properties**

Tokyo – The Yokohama Rubber Co., Ltd., announced today that has developed the HR370 series of hard coating materials, specially designed for the latest touch panel technology. In addition to superior anti-blocking properties, the HR370 series features outstanding optical properties and high wettability that makes it highly suitable for use in printing and adhesive processes. HR370 prevents the “blocking” that occurs when film is rolled up and when stored rolls come into contact with each other by using fine particles to create a rough surface that enhances the coating’s anti-blocking properties. In general, higher degrees of surface wettability lower a film’s anti-blocking capability. Yokohama Rubber’s proprietary particle compounding technique enabled the development of a film coating with both high wettability and superior anti-blocking properties.

Small LCD touch panels used in smartphones and similar devices have a multilayer construction that includes a liquid crystal unit comprised of an LCD cell and polarizing plates, and a touch sensor unit consisting of an optical clear adhesive (OCA) tape and a transparent conductive film. Hard coating materials are used to coat the film in the touch sensor unit. To improve visibility, most touch panels now use a direct bonding method that employs an optical clear resin (OCR) to replace the air gap between the liquid crystal unit and the touch sensor unit. This new construction requires a hard coating material with superior optical properties as well as OCA and OCR materials with superior adhesiveness. HR370 is already being supplied to a number of functional-film makers.



*Conventional coating*



*HR370*

***Evaluation of the surface wettability of a conventional film coating and Yokohama Rubber’s HR370 featuring high wettability using a Dyne pen (38 mN/m). Ink adheres smoothly onto the HR370 coated surface, without pulling back into small droplets. High surface energy levels are desirable with OCA, OCR and transparent electrode processing, and the HR370 series has achieved surface energy above 38 mN/m.***