

突破性抗擦墨技術杜絕假貨 Anti-Erasing (ATE) Ink for Anti-counterfeit of Consumer Products

防止竄改產品包裝信息碼

Protective nano-coating and anti-erasing ink can prevent tampering product information on packaging

近年，假冒偽劣產品充斥市場。轉售過期和沒有產品信息的奶製品、食品或其他消費品的事件頻頻發生。這不僅影響消費者的健康，還削弱了消費者的信心和損害企業品牌聲譽。

有鑒於此，香港理工大學應用生物及化學科技學系李蓓教授及其團隊自二零一一年起開始研發創新包裝標記打印的防偽技術來解決這迫切和關鍵的問題。經過近三年的努力，終於成功研發出一系列防偽「抗擦墨」產品，包括納米抗擦塗層、納米抗擦墨和雙層雙色納米抗擦墨。經打印後的信息具高耐磨性，可於塑料製的包裝上永久留存，不能被輕易塗改。這項突破性防偽技術解決了消費品可追溯性的難題，對杜絕假貨、過期食品及轉售貨品，規範銷售市場秩序發揮了關鍵作用。

Nano ATE Products Series 納米抗擦墨產品系列		
	Unique Features 獨特特點	Product Application 產品應用
Nano ATE ink series	ITP-D 雙層雙色納米抗擦墨	Double layer printing 雙層打印技術 Double layer double color 雙層雙色 Paper-based packaging 紙包飲料包裝 HDPE plastic bottles 高密度 PE 膠瓶
	IPD 食品包裝用納米抗擦墨	Compliance with GB9685 regulation 符合 GB9685 規定 Sausage 高連火腿腸
	IPB 印刷專用納米抗擦墨	Double layer printing 雙層打印技術 Double layer double color 雙層雙色 Aluminum Can 鋁罐
	IER 印刷專用納米抗擦墨	Double layer printing 雙層打印技術 Double layer double color 雙層雙色 Tin Can 錫罐
	IEC 電線專用納米抗擦墨	Double layer printing 雙層打印技術 Migration resistance 抗遷移 XLPE wire and cable 交聯 PE 電線和電纜
General ink products	IAR 抗酒精墨	Fast drying speed < 2 s 乾燥時間低於 2 秒 Alcohol resistance 抗酒精 Medical-based packaging 醫藥用包裝
	IBS 納米塗層	Fast drying speed < 2 s 乾燥時間低於 2 秒 Good adhesion to various plastic packaging 在不同材料包裝上有很高的附着力 Various types of packaging 各類包裝

抗擦墨系列產品: 包裝材質選擇指南
Anti-counterfeit ATE products: Guide for packaging material selection



雙層雙色納米抗擦墨經過溶劑擦拭後的防偽效果
Anti-counterfeit effect of ATE-ITP-D inks after solvent treatment

In recent years, there has been a surging increase in counterfeit consumer goods, thus posing a threat to public health, consumer confidence and brand values. The unethical act of tampering with or removal of packaging information such as expiry dates and where a product was made is a growing problem in sizable markets in the world. Therefore, there is an urgent need to develop advanced anti-counterfeiting technology.

Professor Li and her research team of the Department of Applied Biology and Chemical Technology have developed a breakthrough solution to tackle this urgent problem. After nearly three years of research and development, a series of anti-counterfeiting products has been developed, including protective nano-coatings and ATE Inks. Printing with ATE Ink can leave irremovable trace marks, thus allow consumers to identify tampered goods. This technology is pivotal in solving the problem of tracing product information and improves the traceability of products.

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特色與優點

- 快乾配方，適用於快速產品包裝生產線
- 高耐磨性，打印的信息碼不易被刮花
- 打印的信息碼可永久留存
- 可選擇不同顏色的防偽標記
- 適用於多種連續式噴碼機
- 適用於多種包裝材料

應用

中國蒙牛乳業已在使用此打印技術。現正在與內地和香港的龍頭企業，包括：乳品、飲品、食品、日用品、電纜、電訊、紡織和醫療等行業商討合作，為企業開發各種抗擦墨用於不同產品打印。



納米抗擦墨的應用範圍
Scope of application of anti-counterfeit ATE inks

Special Features and Advantages

- Fast drying formulation, applicable to rapid packaging production line
- High wear resistance
- Printed information leaves irremovable trace marks
- Mark of authenticity can be printed in different colors
- Compatible with various continuous inkjet printers
- Suitable for printing on various packaging materials

Applications

China Mengniu is the first company to implement the new printing technology. More than 10 mainland and Hong Kong companies, including big corporations in the daily, beverage, food processing, paper, cable, telephone, textile and medical industries, have shown interest in implementing the new printing technology for their products.



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