



無雙酚 A 生質罐內漆

BPA-free Bio-based Can Coating

簡介 Introduction

工研院材化所開發的無雙酚 A 生質環氧樹脂，可作為金屬基材的保護漆，運用於食品包裝罐頭內的防銹內膜。

ITRI/MCL's BPA-free bio-based epoxy resin can be used as a protective layer for metal substrate, and applied to the food package such as can coating.

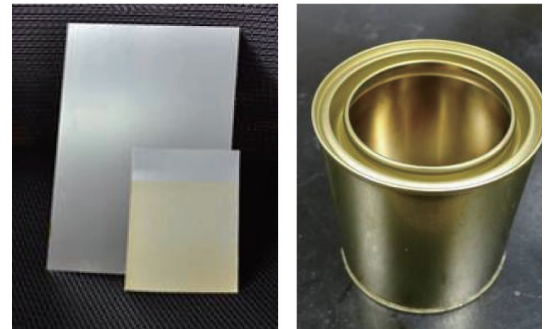
特色 Features

利用生質材料製造無雙酚 A 環氧樹脂，塗層具有優異機械物性，可耐溶劑、耐高溫蒸煮，並通過各國食品容器規範。

Biomaterial was used to synthesize BPA-free epoxy resin, and its coating performs excellent mechanical properties, solvent resistance and sterilization reliability, which are conform to the government codes for food containers.

成果 Accomplishments

- 通過各國食品容器規範 (台灣、中國、歐盟、美國)
Conform to government codes for food containers (TWN, CHN, EU, USA)
- 無 BPA、重金屬、危害性物質殘留
No BPA, heavy metal, and toxic residues
- R&D 100 award (2012): BPA-free can coating
- Cover story of Scientific American (May, 2013)



規格 Specification

	ITRI/MCL BPA-free epoxy	BPA-type epoxy	Polyester type
Major component	Lignin	Bisphenol A	Polyester
Resource	Bio-based	Petrochemical	Petrochemical
Bio content (%)	>30	0	0
BPA health concern	No	Yes	No
Hardness	2H	H~2H	H~2H
Solvent resistant	Pass	Pass	Pass
Mechanical performance	Good	Good	Good
Compatibility with acidic foods	Yes	Yes	No

應用 Applications

- 木質素環氧樹脂：塗佈、複合材料、建築、電子、接著劑…等
Lignin-based epoxy: coatings, composites, construction, electronics, adhesives, etc.
- 塗佈應用：金屬底漆、罐內漆、工業用保護塗層、交通工具、粉體塗佈…等
Coating applications: can coatings, industrial protective coatings, automotive coatings, powder coatings, etc.

