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ZincSecure™ breaches the coin-banknote boundary

May 22nd 2018 was an important milestone for Jarden Zinc Products' new coin technology, ZincSecure™. The National Bank of Ukraine (NBU) made a public announcement during the Banknote conference in Dallas, USA that it will be first customer to use ZincSecure™ for high volume circulation coins. By replacing two banknotes with ZincSecure™ coins, they breached their coin-banknote boundary.

Advantage over banknotes

ZincSecure™, the non-magnetic zinc-based coin technology, is the latest offering by Jarden Zinc Products as an alternative to plated steel, high cost alloys and low denomination banknotes. One major driving factor for the NBU to replace two of their lower denomination banknotes, the 5 and 10 Ukrainian Hryvnia (UAH 5\$0.19 USD and UAH 10, \$0.38USD)* is the cost effectiveness of ZincSecure™ coins. Considering purchasing power (based on Big Mac Index**), UAH5 would be valued at \$0.56 and UAH10 at \$1.12. Coins have a life of more than 20 years compared to 1 - 1.5 years for banknotes. The longer lifespan of coins translates to substantially lower replacement costs. Essentially the central bank would need to produce one ZincSecure™ coin instead of 15 banknotes.

Mr. Volodymyr Bahlai, General Director of the Banknote Printing and Minting Works of Ukraine said *"The Banknote Printing and Minting Works of the National Bank of Ukraine were excited to find a more cost effective and secure currency to replace some of our Banknotes. We evaluated and tested Jarden Zinc's new ZincSecure™ product. Not only did it provide the security needed for higher denominations, we also found that our minting operations were much more efficient with this material and that we could increase the complexity and relief height of our coin images."*

An internal study by Jarden Zinc estimates that central banks could save approximately \$370 million over a 20-year period if they switch to a ZincSecure™ coin from a banknote for a single denomination. The capability of Jarden Zinc to produce single piece or two-piece bi-metal coins, in different combinations of ZincSecure™ or other alloys, enhances the security of the coin and makes it a viable candidate to banknotes.

Advantage over plated steel and high cost alloy coins

ZincSecure™ offers a distinct electromagnetic signature (EMS), a critically important security feature, from other coin materials. The added advantage of ZincSecure™ is that different zinc alloy combinations can be manufactured, each with its own unique EMS. This creates a tremendous advantage for ZincSecure™ as countries can avoid any risk of similar coins being substituted across borders. Existing vending and coin-sorting equipment sensors can recognize the ZincSecure™ EMS. Additionally, ZincSecure™ blanks require lower tonnage during the coining process in comparison to other coinage materials. In fact, the NBU observed that ZincSecure™ required at least 35% less tonnage than high-cost

solid alloy. The softer nature of base zinc alloy allows sophisticated designs on ZincSecure™ further enhancing the security. Designs on the UAH 5 and UAH 10 (see picture) are evidence of this.

For plated ZincSecure™, the base zinc drives the EMS whereas for plated steel, the plating layers largely drive the signal. The EMS for plated steel coins varies as the plating layer wears due to usage, while the EMS for ZincSecure™ coins remain consistent over its life. This is a point of concern for the central banks/ mints using plated steel coins as they must maintain a wide EMS window to ensure coins with different degrees of wear can pass, leaving them vulnerable to counterfeit coins.

Outlook for the Industry

This recent announcement is an interesting development for the central banks and mints around the world. This new technology does an excellent job maintaining the balance between high security and cost effectiveness. With ZincSecure™, central banks and mints can reassess their position on coins and banknotes. This breakthrough offering is certainly a positive Change for the Future!



Picture: UAH 5 and UAH 10 ZincSecure™ circulation coins

**(exchange rate as on 8th June /2018 of US\$1 = UAH 26.16*

*** Calculations based on information on <https://www.economist.com/content/big-mac-index>*

For more information on ZincSecure™, visit www.jardenzinc.com/zincsecure.

About Jarden Zinc Products

Jarden Zinc Products is a leading global supplier of solid zinc coil, coinage, automotive fuse, architectural and cathodic protection products. Jarden Zinc Products is the largest manufacturer of zinc strip in North America. Located in Greeneville, Tennessee since 1970, the company has been manufacturing zinc products in the U.S. since 1885. Jarden Zinc Products is a subsidiary of Newell Brands.

About Newell Brands

Newell Brands (NYSE: NWL) is a leading global consumer goods company with a strong portfolio of well-known brands, including Paper Mate®, Sharpie®, Dymo®, EXPO®, Parker®, Elmer's®, Coleman®, Jostens®, Marmot®, Oster®, Sunbeam®, FoodSaver®, Mr. Coffee®, Rubbermaid Commercial Products®, Graco®, Baby Jogger®, NUK®, Calphalon®, Rubbermaid®, Contigo®, First Alert®, and Yankee Candle®. For hundreds of millions of consumers, Newell Brands makes life better every day, where they live, learn, work and play. For further information about Newell, please visit www.newellbrands.com.