

Questacon

Plastic Money



Australia leads the world in plastic banknote technology.

WHAT'S THE PROBLEM?

Paper banknotes wear out quickly, particularly if they get wet. They are also fairly easy to counterfeit - despite security measures such as watermarks and having metallic threads within the notes. The emergence of colour photocopiers and scanners has made it easier to reproduce paper money.

A GREAT AUSSIE SOLUTION

CSIRO and Note Printing Australia (part of the Reserve Bank of Australia) developed polymer money. The world's first polymer banknote was the \$10 commemorative note issued in January 1988 to mark the Australian Bicentenary. By 1996, all Australians were using plastic money, and that doesn't mean whipping out their credit cards! The new bills are much more durable and have proved to be a challenge for counterfeiters.

HOW DOES IT WORK?

Australia's plastic money is made of a non-porous polymer with a specially developed protective coating so the notes stay cleaner and don't absorb moisture. They last on average 4-5 times longer in circulation, with the plastic \$5 note lasting for around 40 months, compared to 6 months for the paper \$5. After it does wear out, polymer money is recycled into plastic products such as compost bins and plumbing fittings.

The polymer substrate behaves a lot like paper and conventional printing techniques are used to apply ink to the surface. The major security measure is a see-through window which makes the plastic money difficult to reproduce using photocopiers and scanners.

THE FUTURE

Australia was the first country to have all polymer banknotes, but the rest of the world is starting to follow our lead. Note Printing Australia has produced banknotes for Thailand, Indonesia, Papua New Guinea, Kuwait, Western Samoa, Singapore, Brunei, Sri Lanka and New Zealand.

Blank polymer substrate is also sold to a number of countries that print bank notes using their own facilities. The material is supplied by Securrency Pty Ltd, a joint venture between the Reserve Bank of Australia and Union Chemie Belge, a Belgium based chemical firm. Together with CSIRO, they are developing better polymer substrates and new tricks to outsmart counterfeiters.

FURTHER INFO, FACTS & FUN

- Every year in Australia there are over 18 billion cash transactions.
- Paper money was first used in China around the seventh century AD, only to be outlawed in 1455. The use of folding currency re-emerged in England in 1694.
- The US Treasury Department is testing polymer bank notes, but there are concerns that the American public will reject a plastic Greenback.
- For more info on plastic banknotes, check out:
The Reserve Bank of Australia <http://www.rba.gov.au>
Securrency Pty Ltd <http://www.securrency.com.au>

For more info on great Australian Science check out:

Questacon's Innovative Australians <http://www.questacon.edu.au/innovaus>

CSIRO's Australia Advances <http://www.csiro.au/promos/ozadvances>

The Australian Academy of Science's Nova <http://www.science.org.au/nova>

The Australian Science Archive Project <http://www.asap.unimelb.edu.au/>