

waste not, want not

Notoriously tricky to get rid of, paint is now being recycled in some innovative ways.

Resene takes its product stewardship for paint very seriously. As part of its PaintWise programme, many litres of unused paint and thousands of cans have been recovered.

In the last three years alone, more than 500,000 packs were collected from Resene ColorShops and a further 150,000kg from council depots. Of this, more than 250,000kg of steel from the cans was recycled, more than 160,000 litres of solventborne paint was sent to solvent recovery and more than 60,000 litres of waterborne paint was donated to community groups.

Despite this, there is still an excess of waste waterborne paint. Now, as a result of two innovative developments, you may find you're walking over reused paint... in our concrete.

Tests are currently underway to see if recovered paint can help the use of bottle glass as an aggregate in concrete making. There are piles of recovered glass around the country from successful recycling programmes but the recycling options are limited – mainly to making them back into bottles (in Auckland) or other smaller low-volume applications. Some of these options are very costly.

When glass is used in concrete, however, the alkali-rich cement reacts with the silica-rich glass, and causes cracking. Recovered paint may be literally the key to overcoming this problem, creating a bond between the cement and glass to avoid the cracking. This new product combining concrete, paint and glass is called GlassCrete™.

In another innovation, Resene and product stewardship company 3R approached Golden Bay Cement in 2005, to develop what is now called PaintCrete.

Acrylic polymers have been key ingredients in high priced mortars and cement grouts for many years. But they are expensive, and they have to be used with de-foaming chemicals. Waste paint solved both the cost issue and the foaming.

To provide confidence in the new PaintCrete product to industry



Above The innovative new GlassCrete™.

and design professionals, Resene and 3R formed a partnership with Fletcher Concrete and Infrastructure to prioritise those applications where waste waterborne paints could add benefits to concrete and to apply for research funding to prove those benefits.

Adding waterborne acrylic and latex paint to concrete allows the cement content to be reduced, lowering both the carbon footprint and the embodied energy of the concrete. It makes a very user-friendly concrete that is easier to place and finish and most importantly it does not noticeably affect the final colour – a random mix of leftover paint from a large enough market typically results in a light, concrete grey colour.

PaintCrete's first and obvious use was as blockfill for reinforced concrete masonry. While the search for other uses of waste paint in concrete continues, the blockfill market neatly matches the current volume of available waterborne waste paint. **H**

Top tip

If you live in a community suffering from graffiti, you can get free 100% recycled grey waterborne paint to cover it. Apply online at www.resene.co.nz/paintwise.htm or email update@resene.co.nz (New Zealand only).

- Resene Masala
- Resene Quarter Truffle
- Resene Triple Malta

