

Paper from rock

Money doesn't grow on trees and now, paper doesn't either. We have taken for granted the fact that paper comes from wood pulp but an Auckland company says that assumption will change with the introduction of paper made from stone

MANUFACTURED in Asia, Rockstock coated paper came to New Zealand after Alan Good, co-director of The Stone Paper Company, had looked for a paper that would meet high sustainability values. He says, "This is perhaps the most significant advance since the Chinese put print on paper. The whole focus on mineral rich paper is our environment.

Good says his fellow director Rob Fenwick brings impeccable environmental credentials to the enterprise. In 2009, Fenwick became a Companion of the New Zealand Order of Merit for his services to the environment as a co-founder and director of Living Earth, chairman of the Waste Advisory Board and co-founder of the NZ Business Council for Sustainable Development.

Good continues, "Rockstock has a low carbon emission. For a start, it's manufactured from ground down waste stone and off cuts used in the building industry. So the makers of this product have sited their mills close to those plants. An interesting thing is that quite a few tilers have sold their off cuts to the Rockstock manufacturers as well. It really is about the environment."

Good says that Rockstock contains no wood fibre. He adds, "It uses significantly less energy to produce than wood fibre paper. It generates no effluent in its manufacture and it

He says, "UV rays will degrade it back to calcium carbonate dust, even if it is in a landfill. After eight months in the sun the paper will harden up and crack like an eggshell and in a reasonable length of time it will return to stone and powder again or it can be recycled with no plastics as Calcium carbonate is also used as a filler in plastics. Calcium Carbonate is also used in Toothpaste, Tofu, Baby Powder, ant-acid and polishes."

Applications

SO far the mineral rich paper comes in weights ranging from 80gsm to 600gsm in a range of options Good says, "Most printing methods handle Rockstock, including water offset, dry offset and UV offset, it will dry quicker than art paper on the press and it holds the ink really well; letterpress, flexo, gravure, serigraphic and digital.

There's a range of Indigo presses that have processed the stock. However, extreme heat can warp it so it's not suitable for photocopiers and laser printers where high heat is involved. It's also easier on guillotine blades. There's no sound as the blade goes through the paper. That's because the powder in the paper is so fine."

While the Stone Paper Company has aligned with Spicers Paper to offer the mineral rich paper to New Zealand printers, Good points out that Rockstock differs from wood fibre papers. He says, "It's strong and tear resistant which makes it ideal for books, carry bags and uses where strength is an advantage. It won't crack or white line on folds and it's waterproof so it has application for maps, outdoor displays, golf score cards, envelopes and pads. You can even write on it while it is wet."

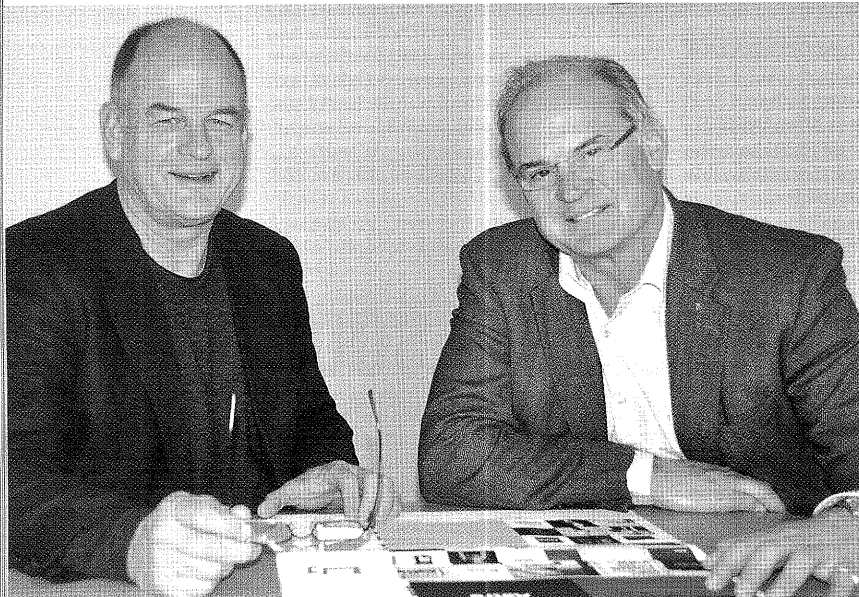
The other major application, food storage and packaging, derives from the paper's food grade. Good says, "It is FDA approved, and suitable for thermoforming food trays, containers and in mould labelling and because Rockstock is freezer grade-durable under very low temperatures, it is excellent for freezer food packaging and self-adhesive labels. It's moth and insect proof, grease proof and mist proof."

He believes printers can save and time from running certain jobs on normal offset presses. He says, "Look at printers making tags, wobblers and shelf talkers. They can do all these jobs on a normal offset press. You can over gloss the mineral rich paper, you can aqueous coat it, you can UV gloss it, and it foils beautifully; you can do all the normal things except apply high heat to it.

"Plant tags will go back to stone dust in the garden after a period of one or two years depending on the amount of UV from the sun. We've made bottles out of Rockstock and you can make bottle pouches. One of the guys filled it with water and jumped on it and it didn't break. It is heat sealed. You can't do that with most papers. There is a large range of variations with PE coatings and corona treatment especially for food applications and Heat sealing properties."

Certification

OBVIOUSLY, mineral rich paper needs no PEFC or FSC certification. Good says that the stock has received certification from Europe, Rohs and Reach, in relation to the environmentally responsible nature of its manufacture and properties; from the USA, FDA compliance Certificate as an environmental paper and food grade suitability; as well as ISO 9001 and ISO 14001.



Stone Paper Company directors Alan Good (l) and Rob Fenwick believe their product will help the environment

requires no water, acid, base or bleach during production. What's more, any trimmings or waste paper from production is recycled to make new paper. It is both recyclable and photo-degradable."

Calcium carbonate makes up 81 per cent of the paper. The remainder includes a small amount of non-toxic resin. Calcium carbonate also makes up part of the coating of 4 microns that helps prevent chalking. Good says that this means the paper can either be recycled or left to photo-degrade in the sun.