

COST-EFFECTIVE

VERSATILE

HIGH-PERFORMANCE

ZELFO  AUSTRALIA

ZELFO OFFERS YOU A NEW
HIGH STRENGTH
HIGH PERFORMANCE
MATERIAL WHICH CARES
FOR THE ENVIRONMENT
AND YOUR BOTTOM LINE.

READ ON TO LEARN ABOUT THE
ZELFO ADVANTAGE — IT'S
SUPER NATURAL
IMPROVING YOUR LIFE.



PLASTIC FROM PLANTS™

ZELFO OFFERS UNLIMITED POTENTIAL, NATURALLY.



Passion in producing products — especially for you.

Zelfo is a modern ecological, wood-like and mouldable material.

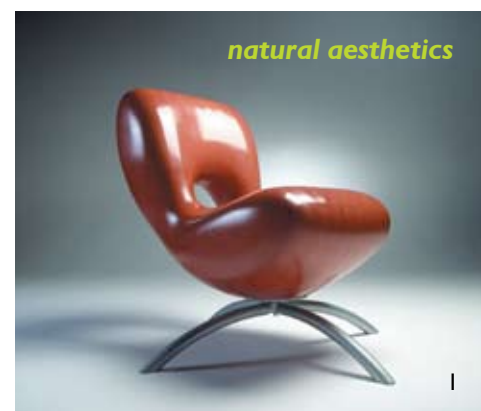
Zelfo products range from small pieces of jewellery to large eco-coffins. You decide. Examples of successful designs are found in the images throughout this document.

At Zelfo Australia we are committed to meeting your needs for cost, functionality and aesthetics.

A strong environmental story is a bonus.

The Zelfo process was patented in Europe early in 2000 by an Austrian team now based in Australia. Zelfo products have now established a niche in top market segments.

Dramatic growth in both population and industrial development now approach the limit of the world's resources. As a result governments, industry and consumers are increasingly committed to environmental protection. Many consumers are choosing to be visibly and actively environmentally conscious. Some believe there will soon be no choice. Make the super natural choice — Zelfo.



1. Chair design using Zelfo, winner BDO Auxilia award; 2. Eco- coffin, Austrian design prize; 3. Stool from 100% hemp fibre; 4. Jewellery — MIDORA design award; 5. Zelfo bowls - see page 3 for the now famous GEORGIO ARMANI bowl



ZELFO — WINNER AUSTRIAN DESIGN PRIZE.



WHY YOU WILL CHOOSE THE ZELFO DIFFERENCE

DESIGN YOUR PRODUCT FAST WITH ZELFO. SAVE YOUR DEVELOPMENT BUDGET FOR MORE IMPORTANT TASKS WITH QUICK SAMPLE TURNAROUND TIME.



COMPETITIVE ADVANTAGES

Zelfo Australia's core competence is the creation of products for the high-end of the market.

We partner with manufacturers in industries such as homeware, furniture and musical instruments.

We produce your products under contract so you may benefit from the Zelfo advantage.

Good functionality and aesthetics are superbly enhanced with this award winning sustainable material — from plant to product.

Zelfo Australia incorporates agricultural waste. Zelfo is a high strength biodegradable material.

In contrast to glass fiber and plastic moulding, Zelfo contains no toxins and creates no toxic waste. It uses totally renewable plant material and a purely mechanical process. Even timber furniture relies on the frequent harvesting of forests and the use of many environmentally destructive resins.

- Superb aesthetics
- 100% biodegradable and recyclable
- CO₂ neutral
- Moulded / sprayed onto forms
- Simple sampling methods
- One-off designs possible
- Cost-effective mould making

PRODUCTS & PROPERTIES

The list of potential Zelfo products is endless. Here are some products and their properties that will assist you in choosing your ideal Zelfo design concept. Unique custom pieces to mass produced items are yours.

Homeware



GEORGIO ARMANI provided us with an excellent design for the first Zelfo homeware item.

Smooth & rounded aesthetics.

Furniture

Zelfo can easily be formed over 3 axis of curvature without requiring toxins found in manufactured wood or glass-fiber. Limitless design features, sustainably.

Musical Instruments

Compared to wood, Zelfo has superb acoustic properties. In addition to its great timbre, Zelfo is stronger and kinder to the environment. A win for the musicians as well as the environment.



Jewellery

Small size and individual pieces are efficient and inexpensive with Zelfo. We can inlay with stones and other materials. We happily work with local and international artists and designers.

Modern - significant others

Zelfo is known for its modern design and feel. Skateboards, toys and similar high fashion items are being designed and produced with Zelfo.

Zelfo has immediate benefits in office furniture and decorative building items.

In its thinnest form, Zelfo has been used in translucent lighting — offering a unique effect not seen elsewhere.

Zelfo's production methods mean a cost advantage. Top designers have used Zelfo to produce award winning chairs, tables, boxes, cases, clock frames, eco-coffins and storage containers.

We are happy to work directly with your designers, in house or electronically.

All Zelfo products, even when mass produced still offer the handmade feel with each item capable of a unique texture and colour design due to the use of natural fibres that are inherently different.

Solid colours are possible with this Zelfo wheel showing some natural plant based colours in textured forms.



The design process is now in your hands. Please contact our friendly team who will support you in your journey to turn the Zelfo dream into a super natural product.

* **Furniture — No Limits**

* **Lighting — Translucent**

* **Homeware — Handmade Feel**

* **Jewellery — Intricate Designs**

* **Instruments — Unique Texture**

* **Abstract — Natural Colourings**

zelfoaustralia.com

NOVEL SOLUTIONS FOR DEMANDING TIMES

MOVING AHEAD, WITH THE PLANET IN MIND

PROCESS

The Zelfo process uses a wide variety of raw fibers, such as sugar, waste paper and hemp. Cellulose containing fibers are ground with water using optional natural additives, such as plant based pigments for colour. The material is then spray moulded or pressed into form. After finishing, Zelfo material may be finished similarly to wood.

There are various moulding processes that may involve pressure, interim drying, wetting, and reshaping. These allow for simple or more complex geometries, and dimensional precision.

Depending on the requirements, a pre-coating can be applied. The product is then dried slowly to the required density and stiffness.

Our factory uses **Green Power**.

FIBER SOURCES

Any raw material containing cellulose in sufficient concentration can be utilized for the production of Zelfo. Fibers may be sourced from the whole plant or waste from other processes such as dust, scrapings and short fibers.



Combinations of fibers result in materials with a variety of qualities that are suitable for a variety of applications.

We have successfully used hemp fibre, sugar cane, waste paper, waste textiles, sisal, jute, straw, old bank notes, brewery draff, spinning mill dust and other cellulose containing materials.

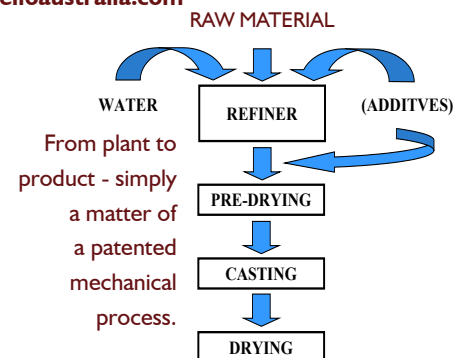
Of the fibers tested, hemp, sugar and waste paper are the superior materials due to:

- technical quality of material produced
- environmental costs and benefits
- the cost of the raw material.

TECHNICAL SPECIFICATIONS

Zelfo technology transforms a raw fiber into a solid product, using no toxic additives and with no toxic wastes produced. Density values from 0.5 to 1.5 g/cm³, tensile modulus from 1500 to more than 10,000 MPa, and tensile strength from 7 to more than 90 MPa are obtainable.

For technical references please visit zelfoaustralia.com



- * **Plant fibers (cellulose)**
- * **Spray moulded or formed**
- * **Varying densities/strengths**
- * **Cost-effective**
- * **No toxic additives**
- * **Zero waste production**

“...due to its strength and versatility, Zelfo is likely to compete with conventional plastics and chipboard”

M. Svoboda. Institute of Polymer Technology, Leoben, Germany



WHAT IS ZELFO?

A solid wood-like and mouldable material made from natural fibres, recycled paper or other cellulose raw materials. Zelfo is sustainable and biodegradable.

HOW IS ZELFO MADE?

By mixing fibres with water and other natural additives, without the use of resins or glues. Zelfo is sprayed or pressed into a form or mould.

HOW CAN ZELFO BE WORKED?

The material may be finished, screwed, glued and treated as hard wood.

WHAT PRODUCTS CAN I MAKE FROM ZELFO:

High-quality designer products with curved surfaces are ideal Zelfo products. Inexpensive samples and moulding process allow affordable test runs before high quantities.

WHAT IS THE PRODUCTION CAPACITY OF ZELFO AUSTRALIA?

Our minimum and maximum runs depend on product design. Small and medium runs (thousands, not millions) are 'usual' Zelfo runs. Please enquire for your Zelfo solution.

PLASTIC FROM PLANTS

NO HARMFUL CHEMICALS OR GM

USES RENEWABLE ENERGY

NATURAL INNOVATIONS

PROFITABLE BUSINESS FUELED SUSTAINABLY



ZELFO LEADERS

Paul Benhaim
CEO

Paul Benhaim is a hemp pioneer with the vision to create a twenty first century industry that nurtures rather than exploits the planet and its resources. He sees Zelfo as a material that will change the homewares industry, just as nylon changed textiles.

Born in the UK, Paul has founded hemp fibre and food companies in Europe and is the author of three books. This depth of marketing, communication and management experience has prepared him to realise this remarkable vision.

Martin Ernegg
Technical Director

As the main inventor of Zelfo, Martin has extensive experience with the Zelfo production process. Martin is your direct contact for production and all manufacturing-related operations from design to final product delivery.

Mitra Ardron
Business Development

With substantial success in sustainable business ventures that also meet economic competitive objectives, Mitra ensures that our vision and mission continue to meet yours.

WOM Pacific
Export

Our Japanese partners share our environmental and sustainable vision and ensure this is clearly communicated across cultures to bring plant based materials back to a modern world.

ETHICS

Zelfo Australia, is a quadruple bottom line company. That means we can benefit the environment and the communities in which we operate. The business offers a return to its shareholders and partners with our clients whilst operating with the highest ethical standards.

These objectives are all complementary and meet our best practice principles.

WHAT DO YOU WANT TO SEE MADE FROM ZELFO TODAY?



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