

AQUAFIL USA 
premium carpet fibres

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Green Matters

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 **ECONYL**[®]

Econyl is produced from recycled, post-industrial and post-consumer Polyamide 6 waste, and is fully recyclable at the end of its life. The recycling process is economically and ecologically sustainable.

You should see where we come from. Then you would understand why we've taken such a strong stand for sustainability, doing things that no one in our industry has ever done before. In a world of good intentions, we're here to show what real commitment looks like.



The Italian Valley of the Sarca and Lake Garda where Aquafil was born.



Closed Loop Recycling with Econyl® Fiber



Spools of Alto Chroma fiber with Econyl® ready for shipment.

THE ECONYL TIME-LINE

The Econyl path to 100% Sustainability.

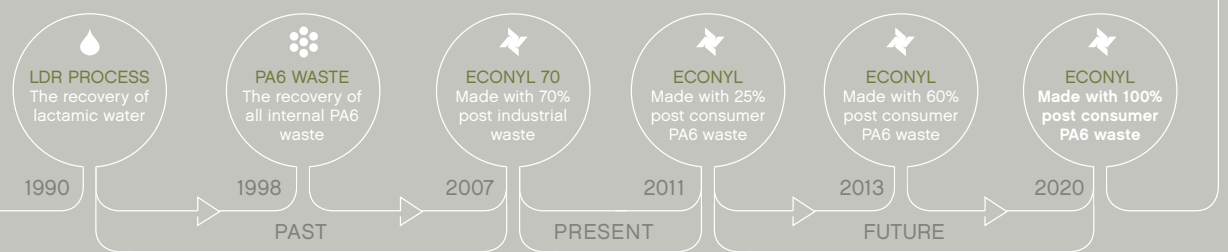
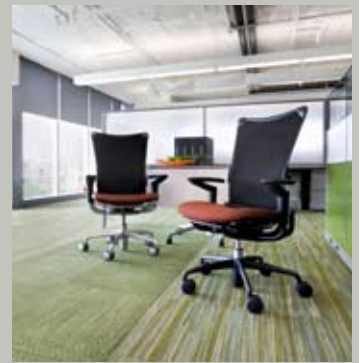
What 100% commitment looks like

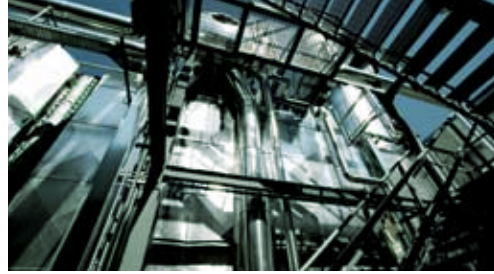
ECONYL® – The world's first and only 100% sustainable polymer.

When you're serious about sustainability, you find ways to do things never done before. So, we created a whole new kind of polymer: Econyl™. Featured in our Alto Chroma carpet fiber, Econyl is made from almost 100% recycled content and can even be recycled into itself, not just once, but time...after time... after time, making it 100% sustainable.

Econyl contains more post-consumer content than any other polymer on the market today, a minimum of 25% post-consumer content (Polyamide 6 waste) and the balance is post-industrial. It's an unprecedented accomplishment, but we're not stopping here. By 2013, we expect to be making Econyl from 60% post-consumer waste – achieving yet another industry first. By the end of the decade, Econyl should cross the finish line with 100% post-consumer content.

The extraordinary thing about fiber made with Econyl is that it sets new sustainability standards without any sacrifice in performance, color retention, stain resistance, or durability. Econyl quality is equal to that of virgin fiber. That's what makes Alto Chroma with Econyl so attractive. Available in nearly 100 different colors, it's a highly durable, solution-dyed yarn that's inherently stain resistant. No amount of abrasion or cleaning can wear away its natural stain resistance.





Detail of the Aquafil manufacturing facility in Slovenia.

For over a decade, we have been wasting no polamide. Then, an amazing thing happened: we began to purchase more waste than we produced. Not only do we consume fewer natural resources, we're taking other people's waste and reclaiming the polymers, creating clean energy, and setting new standards for sustainability.

getting positive about waste

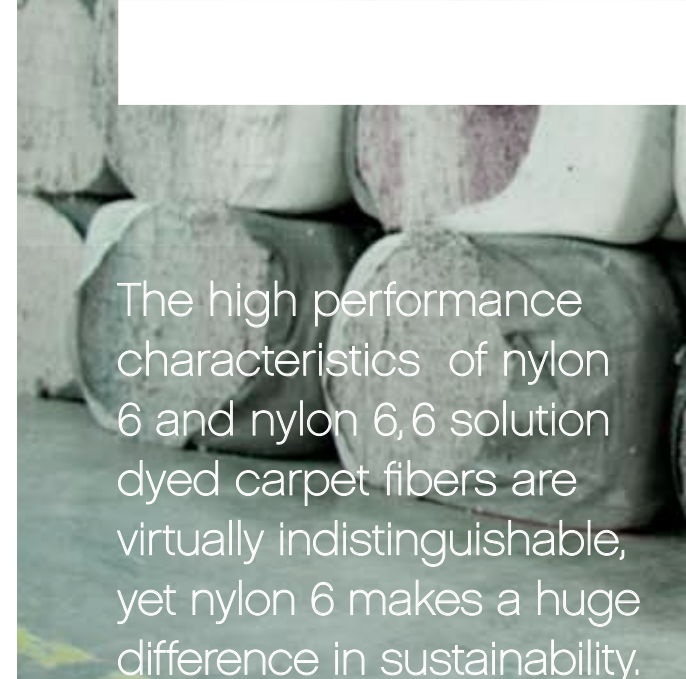
WE USE LESS AND REUSE MORE.

Every year, we divert nearly 9000 tons of waste from landfills, incinerators and down-cycling. In addition to purchasing tons of waste, we've developed proprietary technologies that let us recycle by-products from our manufacturing processes back into the production cycle. We even take the by-products that can't be used in fiber production to manufacture other plastics.

Bottom line? We constantly look at everything from our manufacturing processes to the way we heat our premises and market our products...and continue to come up with innovations that reduce our impact on air, water, and land.

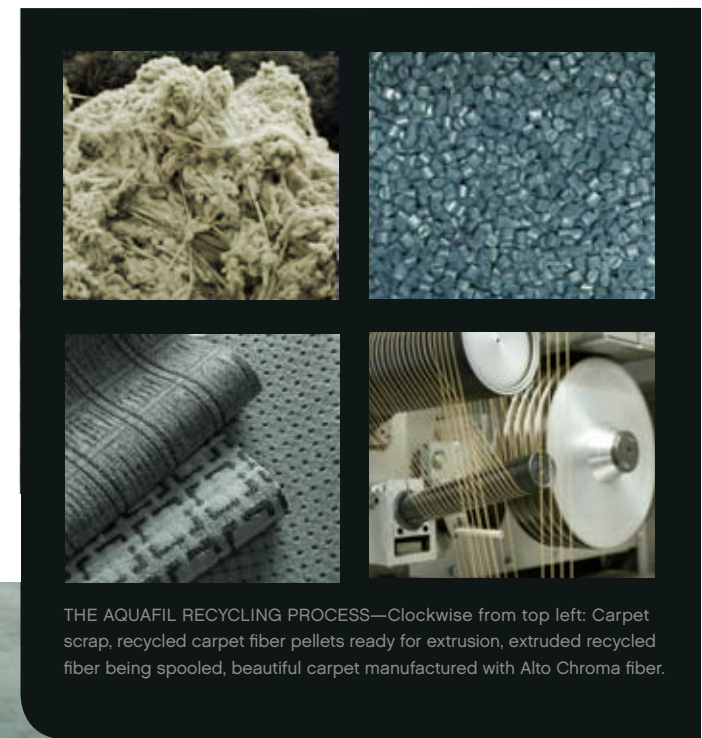
0 IS WHY WE'RE COMMITTED TO 6

A cornerstone of our zero waste strategy is our commitment to Nylon 6 yarn. Recovered post-consumer nylon 6 carpet fibers can be "closed loop" recycled back into new nylon 6 an infinite number of times. That's a huge advantage over the popular nylon 6.6 fibers that cannot be recycled without degradation. Our nylon 6 fibers can be recycled again and again without losing any of their exceptional quality and performance characteristics. Not only this, but nylon 6 requires far fewer natural resources in its manufacturing processes than nylon 6.6.



The high performance characteristics of nylon 6 and nylon 6,6 solution dyed carpet fibers are virtually indistinguishable, yet nylon 6 makes a huge difference in sustainability.

Oversized bales of nylon fluff shown here are processed in our Slovenia manufacturing facility where they are turned into recycled pellets ready for fiber extrusion.



THE AQUAFIL RECYCLING PROCESS—Clockwise from top left: Carpet scrap, recycled carpet fiber pellets ready for extrusion, extruded recycled fiber being spooled, beautiful carpet manufactured with Alto Chroma fiber.

Superior sustainability

With Econyl® Life Cycle assessment.

We've designed Econyl to save more at every single stage of its life cycle from the energy it uses...to the impact it makes on soil, water, and even "summer smog." With our emphasis on independent testing and verification, we're currently engaged in Life Cycle Assessment (LCA) and Environmental Product Declaration (EPD) testing according to ISO norms. Here are the areas we're focusing on:

Total energy potential – use less energy.

How much renewable energy is consumed throughout the entire process (hydropower, wind power, solar energy, and biomass)? How much non-renewable energy (natural gas, crude oil, lignite, coal, and uranium)? Econyl is designed to consume less energy.

Greenhouse Potential – emit less greenhouse gasses.

This is all about the greenhouse gasses that cause global warming (i.e., the greenhouse effect). The greenhouse potential of an emission is shown in relation to carbon dioxide (CO₂).

Ozone Degradation Potential – make less impact on the ozone layer.

Econyl is expected to have a much lower effect on the stratospheric ozone, which is needed to filter out harmful UV rays from the sun.

Acidification Potential – cause less acidification of soil and water.

Acidification occurs when air pollutants transform into acids. This can cause a host of problems including acid rain, nutrients washing out of soils, increased solubility of metals into soils, and even erosion of structures.

Nutrication Potential – minimize nutrication.

Nutrication is the excessive buildup of nutrients in water and soil. In water, this causes accelerated algae growth – inhibiting the sun's light from reaching lower depths. With less sunlight there is less photosynthesis and less oxygen production. Decreased oxygen levels in water can lead to fish dying and the destruction of an eco-system.

Photochemical Oxidant Formation – contribute less to "summer smog".

Photochemical oxidants are commonly known as summer smog and are believed to cause damage to vegetation. Smog can also cause high levels of ozone that are toxic to humans.



THE ECONYL LIFE CYCLE ANALYSIS—Our environmental impact indicator based on independent Life Cycle Analysis calculations.

Turning net hazards into net gains

Transforming damaging, discarded fishing nets into beautiful carpet fiber.

Fishing nets have become a big, yet all too easily overlooked, problem for our environment. Commercial fishermen cast away over 640,000 tons of fishing equipment such as nylon nets and lines every single year. 640,000 tons!

It's illegal to simply dump the used nets into the sea where they pose a serious hazard to wildlife and the environment (and often wash up on beaches). Even if the nets are discarded properly, they simply add more waste to landfills and incinerators. We looked at this problem and saw an even bigger opportunity: why not transform these mountains of useless waste into a valuable commodity? So we started buying up discarded nets and lines, reclaiming the nylon, and transforming it into new carpet fiber.

Now, we're partnering with fishermen's associations, community groups, and marine fisheries to recycle nets and lines that are of no more use to them. What's the net net? Instead of fishermen paying to fill landfills with tons of non-biodegradable material, we're paying them for discarded nets that can be converted to beautiful, colorful carpet fibers.



Far Left:
One of Aquafil's growing sea port net collection docks.

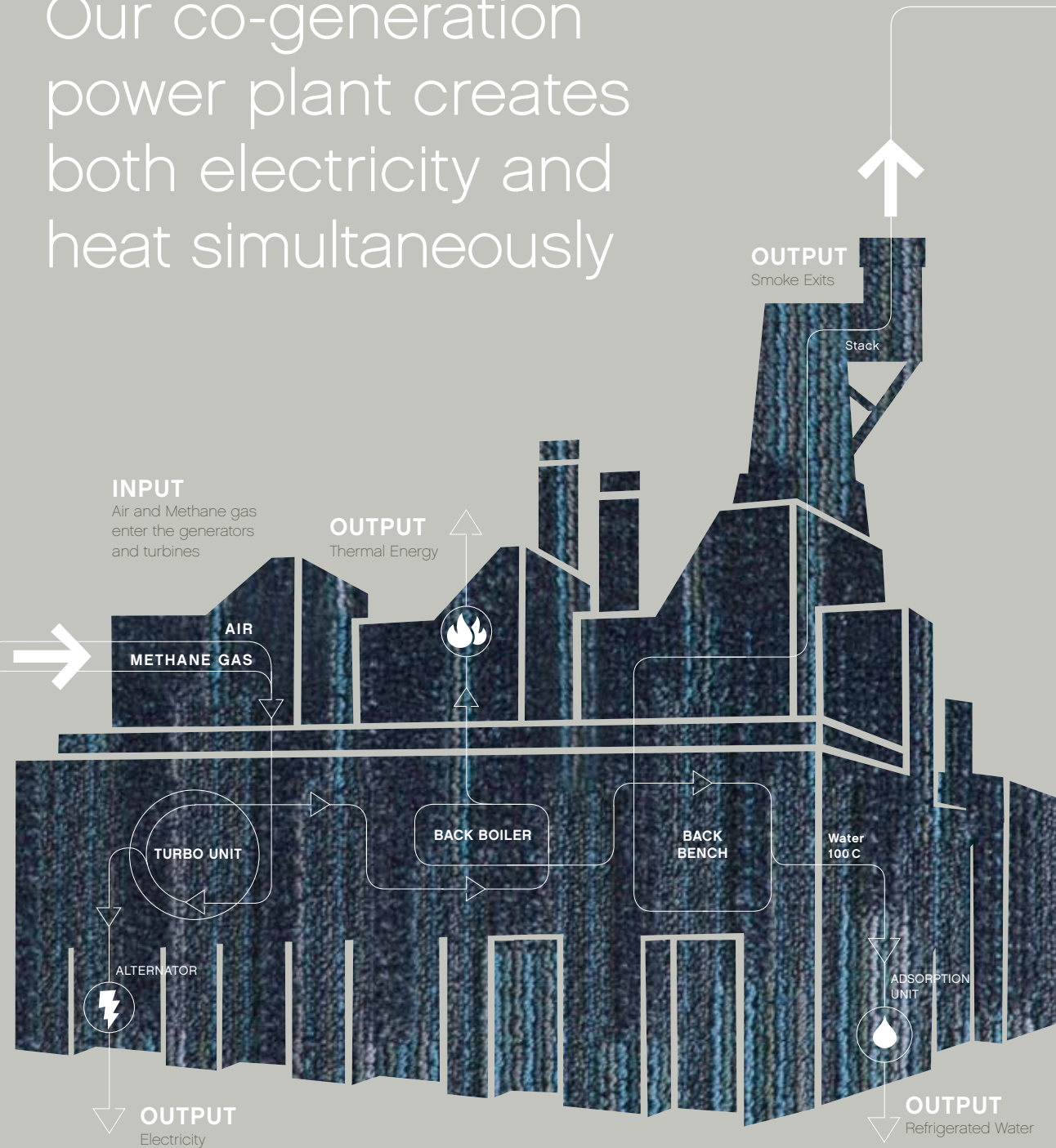
Near Left:
Multi-filament nets—the type of nets often found in fish farms—shown here cleaned, baled ready for net processing at Aquafil's Slovenia plant.

Aquafil has partnered with fishermen's associations and marine fisheries to recycle nets and lines, protecting the environment and the wildlife that inhabit it.



Recently as many as 55,000 sea turtles were killed each year in shrimp nets in the southeastern United States alone.

Our co-generation power plant creates both electricity and heat simultaneously



Talking about our co-generation

DOING TWO THINGS AT ONCE.

Our co-generation power plant creates both electricity and heat at the same time – all while delivering cleaner air. First, it produces our electricity using turbo generators powered by clean burning, natural gas turbines. Then, we capture excess heat from these generators and reuse it in boiling units to create steam and hot fluid for our fiber manufacturing. This means we're running a true Combined Heat and Power system. It's an incredibly efficient way to make our plant good for the planet.

USING AN LDR® SYSTEM TO DELIVER 15% RECYCLED MATERIALS TO ALL OUR YARNS.

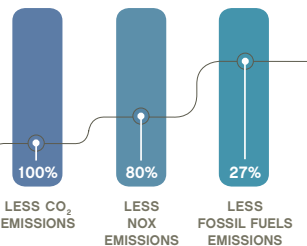
In the mid 1980s, we took one of our first big steps toward sustainability with the introduction of our Lactam Direct Recycling (LDR®) System. Lactamic water is waste water that results from our polymerization process. This water is full of monomers and oligomers – the molecules that make up nylon fiber. Our recycling system captures these materials so they can be used to create new polymers. Our LDR® process alone delivers 15% recycled materials to all of our yarns. It's how we've set a baseline of 15% minimum recycled content in every Aquafil USA yarn.

The beauty of this patented recycling system is that it gives us a fully closed water circuit. Not a single ounce of wastewater is left. It also eliminates solid waste (except waste from filters). There's no raw material and energy consumption. And it means zero environmental pollution.

At Aquafil, we were concerned about the environment long before it was popular to be green. Our commitment to sustainability reaches back nearly a quarter of a century – and today it's reflected in every fiber of our being.

THE POWER OF CO-GENERATION

Examples of resources conserved through our co-generation process



Aquafil headquarters in Arco di Trento, Italy.



Beauty...sustainability...
or performance? We
built our reputation on
the simple belief that
you should always be
able to choose all three.

Recycled content in every Econyl® fiber.

Reliable quality in every color.

Now that you've heard about the story of Econyl® –the world's first and only 100% sustainable polymer – take a look at what happens when its spun into our premier carpet fiber, AltoChroma with Econyl™.

Alto Chroma with Econyl™ is on track to become the world's first yarn made of 100% post-consumer content. This revolutionary new fiber not only sets the standard for sustainability, but it also features a patented clover-like shape that helps prevent matting and deterioration.

The same unique shape makes it harder for soil to penetrate the carpet – keeping it looking newer, longer. The fiber's built-in stain resistance makes cleaning easy, too – even with the toughest stains and soil. Because the fiber is also bleach resistant, its rich vibrant colors can withstand years of wear, cleaning, and maintenance without fading the way that other fibers do.

There really is no other fiber like AltoChroma with Econyl™ – the sustainable new yarn that stays new longer.

BENEFITS OF ALTOCHROMA

Aquafil's round, clover-like fiber shape preserves carpet buoyancy and prevents matting, even after wear.



Virgin Fiber After Wear

AltoChroma Fiber



Virgin Fiber After Wear

Traditional Nylon Fiber



< Monochrome carpet manufactured with Alto Chroma fiber with Econyl
in the colors: spa, ocean, asparagus, juniper, holly and mint julep.

You've seen what is
sustainable
now see what else
is possible

At Aquafil, you won't just find one or two green product lines, because all our fibers are designed with sustainability in mind. This sustainability is a beautiful thing. We've applied it to an incredible line-up of fibers and colors that give you a truly sustainable Aquafil option for any application.

HERE'S OUR LINE-UP

- **Chromacasa Full Circle** – our high quality, value fiber in 360 striking colors – the largest running color line in the industry
- **Chromacasa Shading** – the fiber with unlimited color possibilities, it is made with two to four colors in different proportions that make it appear as solid or contrasting
- **Aqualon** – highly versatile, piece dyeable yarn that comes in a host of different deniers, lusters, and dye-affinities
- **Accents** – an assortment of specialty yarns including small denier, metallic, and space-dyed yarns for providing color accents in both classic and contemporary colors
- **Heavy Denier** – providing Aquafil quality in fiber that can be used for tiles and mats

It's all
about the
fiber

Aquafil spools of Alto Chroma fiber made with Ecnonyl in the sampling yarn storage area.

Why we're committed to sustainability with every fiber of our being

With such beautifully sustainable fibers available, what are the possibilities for your next project? Great question. While most manufacturers are dropping color lines every day, we're continuing to add new colors to our massive collection of yarns. You have a huge array to choose from, and we invite you to take a look.

TRYK® DIGITAL SAMPLING MAKES DECISION-MAKING EASIER (and more sustainable). Every color in our entire yarn library is available in Tryk® Studios. This means you can use an online tool to visualize your pattern and order highly accurate digital prints. It's free, fast, and much more sustainable than ordering and storing stacks of carpet samples. Just check out the options at www.tryk.us. When you're ready for actual carpet samples, they'll be happy to send them to you, but the Tryk solution helps minimize the number of samples you need and accelerates your design process.

TAKE A STAND FOR BEAUTIFUL SUSTAINABILITY. Before you specify floor coverings for your next project, take a closer look at what matters most: the fiber itself. After all, great fiber makes great carpet, and no one makes fiber like Aquafil.



Visualize your future: Use Tryk® digital samples to see your pattern in place.



“Sustainability is not a result to be achieved, rather a way of thinking, a way of being, and a principle that must constantly guide us.”

Giulio Bonazzi
President, Aquafil S.p.A.