



Consumer Safety  
Resource Saving  
Climate Protection

# Consumer Safety, Resource Saving and Climate Protection

Our contribution to better  
textiles and a better future.



Putting \*FUTURE into Textiles.

 **BASF**

The Chemical Company

# We cannot change the world – but acting responsibly is the way to a better future



For over 100 years, BASF has been a committed partner for the sustainable development of the textile industry. As a globally operating company, we are aware of our responsibility to society, which is why we take an active role in sustainably shaping our environment. For us, long-term success and responsibility for the environment and society go hand in hand.

## Putting \*FUTURE into Textiles.

Consumer safety, resource saving and climate protection: these key fields of ecology are not new to us. Ecology and sustainability have been part of our business philosophy. However, with regulatory standards becoming increasingly strict and public awareness growing, we find it important to concentrate even more on these areas to be ready for future challenges.

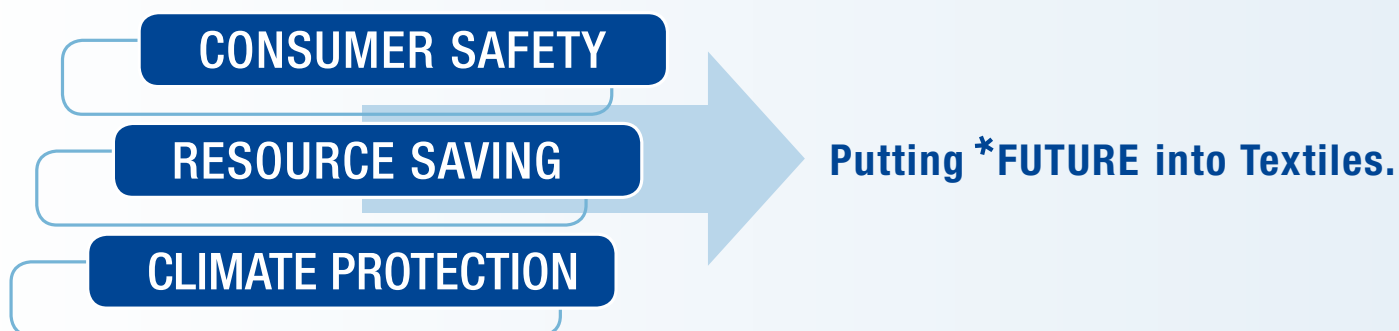


By doing so, we want to continue shaping the future of the textile industry together with our customers. We have given a name to this approach – Putting \*FUTURE into Textiles. This will be our contribution for better textiles and a better future!

### **BASF – future-oriented partner of the textile industry**

When developing new products, consumer safety and environmental protection are our top priorities. Our products help customers fulfill the latest ecological requirements and standards. Moreover, our products contribute to saving resources, such as water and energy, thereby increasing the eco-efficiency of our customers' processes.

The world is constantly changing. Today, we see climate change as one of the areas that will have an immense impact on the textile industry in the future. That is why we pay special attention to climate protection – reduction of carbon dioxide emissions.



# Consumer Safety

**Nothing in life is absolutely certain – but with the know-how and the right applications, safety can certainly be improved.**

Consumers take it for granted that what they buy is safe. Regulatory standards are becoming increasingly strict and the responsibility of manufacturers to protect consumers even greater. Public awareness is also growing and consumers are becoming more ecologically conscious and this awareness informs their purchasing decisions.

## Meeting high ecological standards

We take seriously our responsibility to contribute to a better world for all of us. With our many years of experience and expertise in the textile industry, we are fully aware of the latest ecological requirements. We provide information on our textile chemicals, and share our knowledge and expertise with our customers on how they can better meet ecological demands.

## Greatest possible safety for consumers

In the development of new products, improvement of consumer safety and environmental protection

are our top priorities. Customers can be confident about complying with current and future requirements, and consumers can rest assured that the products they buy are safe and reliable.

✦ Our products can be used to produce garments that fulfill the following standards: **Oeko-Tex®<sup>1</sup> Standard 100, the European Union Eco-Label**, as well as those of leading retailers and brands. The lists are available on our website: [www.basf.com/textile](http://www.basf.com/textile)

## Zero add-on formaldehyde textile processing system

BASF's solutions, such as the "zero add-on" formaldehyde Helizarin® pigment printing system and the Fixapret® Resin NF easy care finishing system ensure "zero add-on" of formaldehyde during production.

\* See [www.basf.com/textile-responsibility](http://www.basf.com/textile-responsibility) for our understanding of the term "zero add-on of formaldehyde".

<sup>®1</sup> is a registered trademark of the <Internationale Gemeinschaft für Forschung und Prüfung auf dem Gebiet der Textilökologie (Oeko-Tex)>



# Resource Saving

**Resources are not infinite – which is why we must never forget how infinitely valuable they are.**



Global competition is becoming increasingly fierce, while at the same time the textile industry is confronted with ever stricter environmental standards and regulations. Innovation is the key driving force leading the textile industry towards a stronger future. Long-term success will come only to those who can meet the growing demand for eco-efficient products. Innovations therefore, must be environmentally friendly as well as economical.

## **Resource saving – a fundamental principle**

Resources are limited and we need to handle them reasonably and responsibly. New resource-saving potential along the textile value chain is worth exploring. For example, the environmental impact of textile production is considerable due to the vast quantity of water required and the variety of chemicals used that generate waste. BASF offers products that can bring the same desired effect using lower amounts of chemicals. In addition, we offer solutions that increase the efficiency of a process resulting in savings in water and energy as well as time and costs.

## **Economically and ecologically sound**

In the long term, only those who meet both environmental and economic challenges remain competitive. At BASF, we call such products or

processes “eco-efficient” solutions. Eco-efficiency is a measure of how environmentally friendly and economical a product or process is, and this can be illustrated using our Eco-efficiency Analysis (more details on Eco-efficiency Analysis on page 7).

### **Examples:**

- ✦ **Cyclanon® Washoff XC-W New**  
After-soaping agent for reactive-dyed cellulose fibers. Compared to the conventional process, it considerably shortens the processing time, saving both water and energy.
- ✦ **Cyclanon® Clear ECO**  
After-cleaning agent for dyed polyester fibers. Significant savings in time, water and energy can be achieved.
- ✦ **“BASF-RedEx-BLEACH” Process**  
The “BASF-RedEx-BLEACH” Process is a two-step pretreatment from BASF, offering a high-quality pretreatment in only two process-steps:
  - Reductive, extractive pretreatment before the bleaching step
  - Peroxide bleach





# Climate Protection

**The environment cannot protect itself – so it's up to us to intervene on its behalf.**

Climate change is one of the main challenges facing our society today. Industries, scientists, politicians and society are called upon to halt rising emissions of greenhouse gases and make more efficient use of existing resources. In terms of output and production, export and employment, the textile industry is one of the largest industries in the world, so its impact on greenhouse gas emissions and climate change is significant.

## **Contribution to reducing carbon dioxide emissions**

BASF's eco-efficient products and solutions can contribute to climate protection. They help customers reduce carbon dioxide emissions during textile production. In addition, consumers can contribute to climate protection by using garments and home textiles treated with our products.

## **Carbon footprint of textiles**

The carbon footprint of a textile measures how much carbon dioxide and other greenhouse gases are generated during the entire life-cycle of a textile. In order to further deepen our understanding of the impact textiles have on climate change along the

textile value chain, and to evaluate the potential of reducing carbon dioxide emissions using BASF products and technologies, BASF conducted a joint project with customers and partners along the textile value chain: Systain Consulting (Member of the Otto Group), Puma AG and textile mills in Bangladesh. We calculated the carbon footprints of specific textile articles from empirical data collected during the actual production process. In addition, the partners were able to reduce overall carbon dioxide emissions by using BASF textile auxiliaries and technologies.

### **Examples:**

#### **\* BASF Color Fast Finish**

A one-step process combining pigment dyeing and finishing. The total processing time is considerably shortened compared to the conventional process, reducing energy and water use and thereby carbon dioxide emissions.

#### **\* Fixapret® Resin AP, Fixapret® Resin ECO**

Non-iron and easy care finishes that can be applied to clothing and home textiles such as shirts or bed linens. They can considerably reduce time and effort in drying and ironing. As a result energy is saved and carbon dioxide emissions are reduced.

#### **\* Ultraphor® Whitener HFN Lq. and Ultraphor® Whitener HF Lq.**

This special range of optical brighteners can be applied at lower temperature. This leads to energy savings and the reduction of carbon dioxide emissions.

# Eco-efficiency Analysis

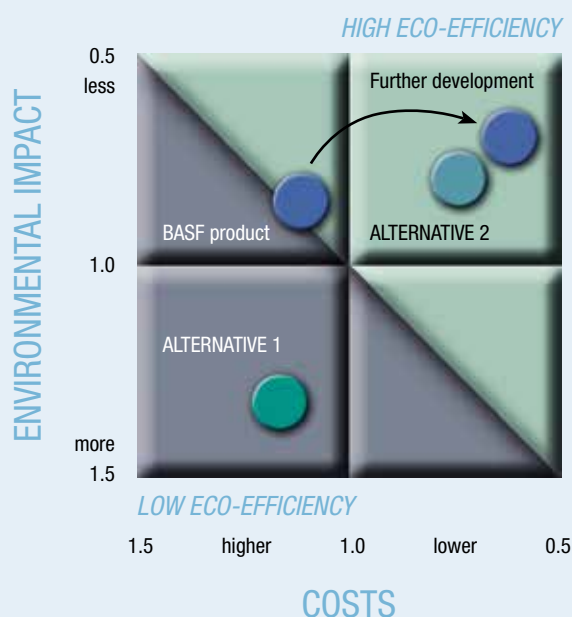
There are many ways of doing things for the environment – ours is systematic.

## Harmonization of economy and ecology

Eco-efficiency Analysis is an innovative tool developed by BASF that compares and evaluates the potential of alternative products and processes from both ecological and economic points of view. It is applied in order to minimize the amount of materials and energy in producing our products, and to keep emissions as low as possible. Also by using our products, our customers can further conserve resources. The tool harmonizes economy and ecology.

## A unique method

In an Eco-efficiency Analysis, the entire life-cycle of a product or process is investigated. It takes into account the total environmental impact as well as all the costs from production to disposal, so that the



entire value chain is considered. It is based on customer benefits: determining which product best meets the customers' needs and offers the most eco-efficient solution.

BASF is one of the first chemical companies to develop such a tool for use in business activities. Since 1996, when we first started applying this method, more than 500 different products and processes have been evaluated, including over 10 products related to the textile industry.

## Eco-efficiency portfolio

Results of the analysis are plotted on a graph: costs are shown on the horizontal axis and the environmental impact on the vertical axis. The graph shows the eco-efficiency of a product or process compared to other alternatives catering to the same customer needs. Furthermore, it allows us to make strategic decisions such as potential future product developments.

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Responsibility for ensuring that garments processed using the BASF products comply with the requirements of the downstream textile market rests with processors.