



The Chemical Company

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About this issue

With its corporate purpose “We create chemistry for a sustainable future”, BASF is focusing on innovations from chemistry which in their application contribute to a sustainable future. To meet customers’ and society’s needs even better in the future and to secure long-term business success, BASF’s entire product portfolio is being analyzed and evaluated with the “Sustainable Solution Steering” method. In this issue, you will learn more about background and objec-

tives of the method and how BASF’s products have been evaluated.

Furthermore, we will give you some examples of products with which we support our customers to meet their sustainability goals: a high-performance net for the protection of harvested timber, an intelligent gypsum board for comfortable room temperatures, and energy-related modernization measures using modern insulating materials. We also

report on a BASF cooperation in the area of catalysis research and the development of a handbook which helps assess the social impact of products.

For more information on BASF and sustainability please go to the section “Read on”.

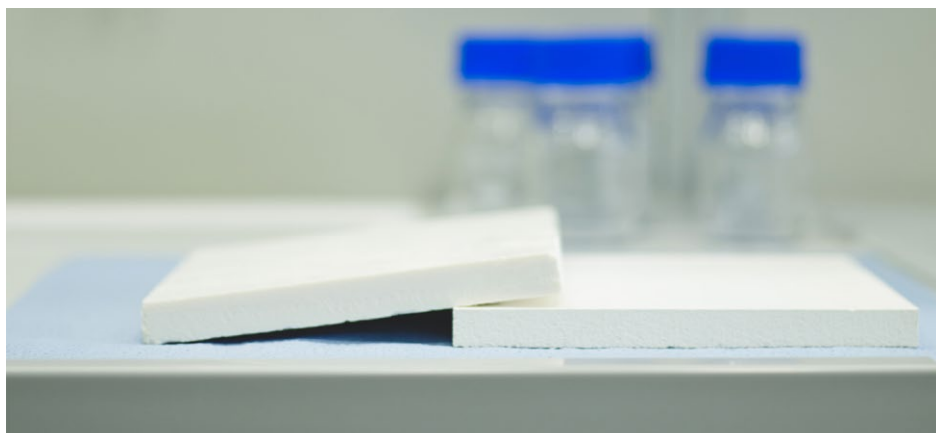
We wish you an inspiring reading.

The editorial team



Operational
Excellence

InnovationCares: Involve customers and suppliers early on



Slentite™, the high-performance insulation material, in the laboratory.

The new method InnovationCares aims to support the business units in their efforts to introduce innovations successfully into the market. Technologically advanced developments may be valued differently by different stakeholders. InnovationCares seeks to consider these varying views even better and early on.

In structured surveys both BASF internal and external groups, such as suppliers, customers or analysts, are involved in the innovation process. The interviewees can submit their specific expectations and requirements of a product anonymously and at an early stage in the development process. The product’s contribution to sustainability throughout its

entire life cycle – from the raw material to disposal – plays a central role. The BASF Polyurethanes GmbH developed the method together with the division perspectives and both are contacts for internal users.

The method was first used as part of the product launch of Slentite™, the high-performance insulation material: As a first step, Slentite™ was assessed by researchers, marketing specialists and sustainability experts within BASF. Secondly, external stakeholders, like architects, sustainability certifiers and specialists in building insulation, were interviewed. The internal and external viewpoints were finally compared. The business unit of BASF Polyurethanes uses the results to prepare the launch of Slentite™.



Operational
Excellence

BASF's product portfolio evaluated for sustainability



More than 20% of products analyzed are in the Accelerator category.

In order to better help its customers align environmental and societal aspects with business success, BASF has developed a new process for steering its portfolio based on sustainability criteria. The Sustainable Solution Steering method is used to systematically review and evaluate the sustainability aspects of the approximately 50,000 relevant product applications in the company's portfolio, which represent sales of €56 billion. The benefit: This externally validated process makes it possible to measure the products' contribution to sustainability within their various markets and industries and to increase this contribution through targeted steps.

Over the past three years, BASF has already analyzed more than 80% of its portfolio of around 50,000 specific product applications. The data shows, for example, how a product contributes to cost effectiveness and resource conservation as well as to health and safety. The concrete sustainability requirements of various customer indus-

tries are taken into account as well as regional differences. Finally, the process determines the extent to which BASF solutions can accommodate these needs.

Based on the results to date, the analyzed product applications have been sorted into four categories:

- Accelerators make a substantial contribution in the value chain to sustainability. 22% of the analyzed products by sales are in this category.
- Performers are solutions that meet the standard market requirements for sustainability. Around 73% fall under this category.
- For the Transitioners, specific sustainability issues have been identified and concrete action plans defined. These recommendations are in the process of being implemented. Around 4.5% of the analyzed products are currently in this category.

■ Applications with a significant sustainability concern are labeled Challenged. BASF is developing action plans for these products in order to find improved solutions. This currently applies to 0.5%.

Sustainable Solution Steering aims to increase the number of "Accelerator" solutions in the long term in order to further improve the sustainability profile of both BASF and its customers. That is why the product portfolio is under continual review – which means that this four-category segmentation is also subject to change, for example, in response to altered market requirements or new legislation.

The whole product portfolio will have been analyzed by the end of 2014. With this new method, BASF continues to drive its "We create chemistry" strategy. "It is becoming increasingly important to our customers to be able to combine economic, environmental and societal demands. We see this development as a business opportunity for BASF, and intend to seize it in a targeted manner. This approach forms an integral part of our corporate purpose: 'We create chemistry for a sustainable future.' By analyzing our entire portfolio with respect to sustainability and systematically expanding on especially sustainable solutions, we underscore this endeavor", said Dr. Kurt Bock, Chairman of the Board of Executive Directors of BASF.





Products and
Solutions

Energetic refurbishment of buildings examined

BASF and its housing company LUWOGÉ have published a first comprehensive investigation into the long-term effects of energy-related modernization measures in the Brunck residential quarter in Ludwigshafen. The main focus of the study is on all aspects of sustainability. In addition to purely technical criteria such as the condition of buildings around 10 years after the renovation work, the level of heating energy consumption and an ecological assessment, the well-being of the residents was also ascertained by carrying out a direct

survey. This integrated approach makes the study the first of its kind.

Dr. Klaus Ries, who is responsible for BASF's Styropor®, Neopor® and Styrodur® business in Europe, explained the motivation behind the comprehensive study: "In light of the discussion surrounding energy, insulation, and the renovation of existing housing stock, it was important to us to examine this showpiece site in detail." The housing sector has a key role to play worldwide in the public debate about sustainability, as it accounts for



View from above: the LUWOGÉ Brunck residential quarter in Ludwigshafen.

significant energy and resource consumption, with different materials and technologies being employed.



Responsible
Partnering

New method helps analyzing the social impacts of products

BASF participated in the development of a handbook for social impact assessments of products. The handbook describes innovative approaches for identifying a product's social impacts, giving businesses the means to assess the entire life cycle of a product and scan their supply chains for risks and improvement opportunities. It also helps to improve a sustainable product development, reporting and communication.

The method was developed by the Roundtable for Product Social Metrics, a collaboration of 12 multi-industry, market-leading companies, among others Akzo-Nobel, BASF, BMW, Goodyear, L'Oréal and Philips. The handbook

is written for practitioners such as sustainability and life cycle assessment professionals.

"For us, sustainable development means to combine economic success, social responsibility and environmental protection", says Dr. Peter Saling, Senior Expert for Sustainability Methods at BASF. "BASF developed sustainability evaluation methods like SEEBALANCE® and AgBalance™, where social indicators play a significant part. To discuss social indicators and the further development of them together with other industry partners was a main motivation of taking part in this project. To test specific indicators in case studies and writing a handbook for prac-



The handbook for social impact assessments of products is written for practitioners.

tioners are important outcomes which BASF wanted to contribute to."





Products and
Solutions

New gypsum board ensures comfortable room temperatures



The construction of BASF's Employee Center for Work-Life Management in Ludwigshafen saw the use of gypsum boards containing the Micronal® PCM latent heat storage material.

The gypsum board "Comfortboard 23" by Knauf, a manufacturer of construction systems, was recently launched to the German market and is going to be available worldwide. The gypsum board is based on BASF's Micronal® PCM and facilitates intelligent temperature management – without the use of

energy- and maintenance-intensive climate control systems.

When temperatures rise, the Micronal® PCM material within the board gets activated. Through absorbing and storing superfluous heat as and when required, the micro-encapsulated Micronal phase change

material ensures that the ambient room temperature remains comfortable for longer. This is achieved through the paraffin wax core of the microscopically small Micronal® PCM polymer capsules, which starts to melt around temperatures of 23°C; this leads to an absorption of heat and prevents the room temperature from rising too fast. As soon as, for example during the night, the room is ventilated and the room temperature goes down, the absorbed heat gets re-released. The core of the Micronal® PCM latent heat storage material cools down, solidifies and is once more ready to absorb the next temperature peak on the following day of summer weather.

Due to the minute size of its particles, Micronal® PCM with its latent heat storage effect can be incorporated in virtually all building materials.



Water

Films about sustainable use of water

The documentary **"Water in the classroom"** provides an insight into an educational project all about water which the BASF Foundation and UN-Habitat, the United Nations urban environment program, jointly set up in 2011 in Mangalore, India. The aim of the project is to provide



Water is a scarce resource in Cyprus.

sanitation and raise awareness among schoolchildren about dealing with water resources and the importance of clean water. For the video, BASF was awarded the Silver Victoria at the 26th International Corporate Film Festival in Vienna. At the World Media Festival, the film also won the "intermedia-globe Silver" award in the Public Relations category.

In the latest film dealing with the subject water, BASF presents sea water desalination with ultrafiltration membranes in Cyprus. The membranes operate similarly to

conventional filters: While water molecules penetrate through pores just a few nanometers in size, suspended matter such as sand, silt, algae and even disease-causing organisms cannot pass this barrier. The movie with the title **"The new source"** demonstrates how the Mediterranean island suffering from acute water scarcity is able to meet 100% of their drinking water requirement for local authorities and tourism from sea water desalination plants.

The operation of ultrafiltration is explained in this [animation](#).



Products and
Solutions

BASF strengthens performance materials production in China

BASF has undertaken three key capacity expansion projects for performance materials at its Pudong site in Shanghai: BASF more than doubled the total capacity for Ultramid® and Ultradur® compounds from 45,000 to more than 100,000 metric tons per year, the Elastollan® plant established in 2007 has been significantly extended and the Technical Center for Cellasto® has been enlarged as well as the production capacity extended.

“More than 60% of China’s population will live in cities by 2020. Supporting

an environmentally friendly path for urbanization presents a huge opportunity for chemistry as an enabler for sustainable innovations in areas ranging from industrial manufacturing to construction, transportation and consumer goods,” said Dr. Albert Heuser, responsible for BASF in China.

Ultramid® and Ultradur® are used in automotive parts and innovative applications including seat structures, oil sump modules, sensors, engine mounts, connectors and highly integrated laser-structured electronic devices. The expansion



Technical experts are testing the noise level of Cellasto® components in the expanded Technical Center.

of capacity for Elastollan® in China will support growth of the rapidly growing market for textile, footwear, transportation, wire and cable sheathing and other industrial applications. Cellasto® is the customized solution for damping and reduction of the noise, vibration and harshness (NVH) level of vehicles.



Responsible
Partnering

China’s “Golden Bee” initiative with close links to Europe

As initiator and founding partner of the “Golden Bee” initiative, BASF was actively engaged in the 9th International Corporate Social Responsibility Forum, hosted by China WTO Tribune, a journal on Corporate Social Responsibility (CSR), and GIZ (German Federal Enterprise for International Cooperation) in Beijing on June 5 – 6, 2014. The event, co-hosted by the sustainability networks CSR Europe and econsense, aimed to deepen innovative business initiatives and to engage in new collaborative ventures under the “Golden Bee 2020” initiative.

During the forum, BASF participated in a workshop hosted by econsense and GIZ with other German-based companies to share experi-



Business leaders and representatives from initiator companies and CSR Europe at the launching event of the new group actions under “Golden Bee 2020”.

ences and best practices in managing sustainable supply chain in China.

Inspired by CSR Europe’s “Enterprise 2020”, “Golden Bee 2020” was the first CSR platform in China, inaugurated in 2011. The initiative brings together multi-business sectors and other stakeholders deliberating common and complementary

sustainability goals. There have been altogether twelve group actions being identified and developed under the “Golden Bee” framework, such as a sustainable supply chain, where BASF takes the lead, and “Active Aging”, working jointly with CSR Europe, which aims to drive social innovation in tackling the challenges of demographic change.





Products and
Solutions

BASF receives registration for first wood protection nets



Storanet® is a high-performance net coated with an insecticide, specifically designed for covering or wrapping timber piles.

The novel, patented net technology Storanet® has received registration for commercialization in Germany. The first non-liquid technology to prevent pest problems in harvested timber does not need to be applied with conventional spraying systems. It can significantly reduce the risk of exposure for operators, as well

as the environment, making the net a significant improvement towards more sustainable forest protection.

Storanet® is a high-performance net coated with an insecticide, specifically designed for covering or wrapping timber piles. The fibers in the net are treated with an exclusive coating

technology developed by BASF that controls the amount of insecticide available on the surface of the net. Due to this process, Storanet® uses eight times less active ingredient than conventional treatments, still achieving the same level of control.

The Storanet® technology also offers economic benefits. It is quicker to apply and when reused as recommended, can reduce treatment costs by up to 70% compared to liquid insecticides. Storanet® is also registered in Switzerland and further registrations in Poland, the Czech Republic, Slovakia, Austria, Slovenia and Sweden are expected later in the year.



Responsible
Partnering

New BasCat laboratory opens at TU Berlin

On the South Campus of Technical University (TU) Berlin, BASF together with the Cluster of Excellence "Unifying Concepts in Catalysis" (UniCat) has opened the new BasCat Laboratory building. On about 1,000 square meters of laboratory and office area, 17 scientists will in future be researching the principles of heterogeneous catalysis for raw material change.

Heterogeneous catalysts make many chemical reactions more cost effective and environmentally compatible. Especially in times of increasingly scarce resources, energy and raw material efficiency are playing an ever

more important role. The goal of the research lab is therefore fundamental scientific knowledge of the activation of less reactive molecules to accelerate the development of industrially relevant catalysts over the long term. The research partners include working groups from the natural and engineering sciences, e.g. at the Institutes of Chemistry, Process Technology and Material Sciences at TU Berlin, and in the Inorganic Chemistry Department of the Fritz Haber Institute.

Since the cooperation agreement was signed in 2012, the research partners have already launched numerous projects and made important contribu-

tions to securing our energy and raw material supplies. BASF and TU Berlin are devoting considerable resources to establishing the BasCat Laboratory: BASF is investing up to €6.4 million during the first five years. The total volume is around €13 million.



On the South Campus of Technical University Berlin the new BasCat Laboratory building was opened.



Food

Food fortification standards in Liberia

July 2014 marked the end of Liberia's nine month grace period for local industries and importers to comply with the nation's adopted food fortification standards. To ensure compliance, Liberia's first set of inspectors were trained on a national sampling and testing protocol to be implemented at the factory, border, and market levels. Donated iChecks and BASF test kits for quantitative and qualitative testing in the lab and at the border and market levels were received from Global Alliance for Improved Nutrition (GAIN) and BASF.



More



Responsible Partnering

econsense online quiz tackles prejudices against sustainability

econsense

Forum for Sustainable Development of German Business

Sustainable development starts with asking the right questions:

What is the point in combining economic, environmental and social goals? What is the benefit for customers, investors and every single person if companies operate sustainably? The econsense online quiz questions the subject of

sustainability. The quiz is mainly based on the econsense members' business reality. Its questions deal with the opportunities and challenges of sustainable development.



More



Products and Solutions

Support for ecovio® plastic bags from European Parliament

The EU Parliament decided to reduce the consumption of plastic bags in the years ahead. While the Parliamentarians recently voted to allow EU member states to introduce bans and taxes on plastic bags, the taxes for compostable plastic bags on

the other side may be significantly lower. The decision of the Parliament could stimulate the demand for compostable plastic bags. At the same time, national bans on plastic bags could distort the market and set a precedent for bans on other pro-

ducts. ecovio®, the bioplastic developed by BASF, is compostable and contains biobased content. The main areas of use are organic waste bags, dual-use bags for shopping and then for organic waste or agricultural films.



More

Read on:

[BASF commissions new flat laminating line for polyurethane \(PU\) insulating panels](#)

[Public consultation on flame retardant under REACH authorization with BASF participation](#)

[New BASF plant for automotive coatings in Shanghai opened](#)

[Best supplier award from PSA Peugeot Citroën for BASF](#)

[BASF blogs at IIRC on “The Trilemma of Reporting”](#)

[Dow Jones Sustainability Index again lists BASF share](#)

BASF present at the following events:

[September 24 – 26: Sustainable Brands New Metrics '14, Boston](#)

[November 3 – 5: Sustainable Brands, London](#)

[November 11 – 13: EcoChem, Basel](#)

[November 19 – 20: Sustainable Supply Chain Summit – Europe, London](#)

Material Aspects

Eight material aspects have been identified for BASF based on the results of the stakeholder survey and internal workshops.



Employment and
Employability



Energy and
Climate



Food



Operational
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Responsible
Partnering



Products and
Solutions



Resources and
Ecosystems



Water

Contact

Do you have questions or comments?

We are looking forward to your suggestions.

BASF SE

Communications & Government

Relations BASF Group

Jacob-Nicolas Sprengel;

Tobias Berg

E-Mail: sustainability@basf.com

Internet: www.basf.com/sustainability

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