

5 YEARS LUCOBIT AG

Flensburg's new landmark – "water houses" on the Förde

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PARTNERSHIPS AND PERSPECTIVES

It is now five years since LUCOBIT AG entered the market. But the LUCOBIT story starts far earlier, because Lucobit® was developed and patented by BASF more than 40 years ago. It is the trade name for ECB (Ethylene Copolymer Bitumen), a quality material that has become firmly established worldwide in the production of sealing products, e.g. for sealing membranes of flat roofs & green roofs, as well as a polymer additive in asphalt for road construction.

LUCOBIT AG was founded as an independent company in the year 2000 and, based on the available know-how, has since specialised in the production, marketing and sales of flexible polyolefins. Development and production of high quality, customer-optimised materials for

the plastics processing industry are the core business activities of LUCOBIT AG. They are based on decades of know-how in research, development and manufacturing of flexible polyolefins, as well as the close cooperation with other leading companies.

Dear Readers,

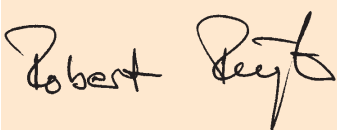
Here, hot off the press, is your personal copy of our new customer newsletter

INPLASTICS. Opening up new roads – nothing unusual for LUCOBIT AG. And **INPLASTICS** is no exception. We wish to intensify the dialog with our clients and partners.

For this purpose, we intend to inform you regularly about all our business activities.

INPLASTICS will appear four times a year in future, with topical subjects from the world of our flexible polyolefins. Here, the focus will be on product and application reports, feature articles, and news from the market. More information, more variety, and not least, more customer benefits – that is our aim. Moreover, we look forward to your feedback: Let us know what you think of **INPLASTICS**, and send us your suggestions if you see possible room for improvement. We would like to hear from you.

We wish you much enjoyment when reading our newsletter.



Robert Riegler
CEO of LUCOBIT AG

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5 YEARS LUCOBIT AG

This means that LUCOBIT AG stands by its roots: Company headquarters and production are still located on the premises of Basell GmbH in Wesseling. The LUCOBIT research facilities have been sited at BASF AG in Ludwigshafen for 40 years.

Thanks to this arrangement, LUCOBIT AG is linked into the structures of two global players in the plastics industry, but can still act and respond flexibly to the market.

In the fields of sealing technology and road construction, the second major application area for the material ECB, LUCOBIT AG enjoys stable and long-term business relationships and customer structures.

Meanwhile, the company has also established itself successfully as a developer, manufacturer, and patent owner for special materials based on ECB/EBT, FPO/TPO, PE and TPE, together with a simultaneous step-by-step expansion of the sales network.

This applies in particular to its presence on the European market, which is supplemented by a worldwide network of partner companies and free sales agents.

The past five years have confirmed this approach, which encourages them to view the future optimistically. LUCOBIT AG will continue along these lines, and is eager to accept coming market challenges together with their customers and partners.



RESIDING & LIVING AT THE WATER'S EDGE

Flensburg's latest landmark has its feet in the water – at least partially: The suburb of Sonwik (Sunny Bay) was built up on a previous naval base on the east bank of the Flensburg Förde. It combines maritime services and living comfort at the highest level. The buildings, which stand under preservation order, were converted into spacious apartments and lofts, as well as spaces for offices, services and gastronomy.



The buildings are designed in a wood panelled construction with wooden ceilings and roofs; the façades have been sectioned evenly by means of protruding steel U-profiles.

About 130 sqm living area per unit are supplemented by spacious balconies and loggias, as well as full-surface roof terraces. The overall filigree impression of these "Flensburg water houses" is also achieved by the roof overhang of 1 m. Consequently, the constructional element "roof" appears light and floating, an impression that is increased by a circumferential band of hot-galvanized steel profiles at the top of the façade.

The ensemble is augmented by a total of twenty detached houses in a filigree design, the so-called "water houses". They are located along the previous naval wharves, and are supported on long piles, a kind of "Venetian touch".

The flat roof, which doubles as a terrace, was sealed by means of light grey FPO sealing sheets made of Polyfin® (manufacturer: POLYFIN AG, Schönau; material: Lucofin®).

PROJECT INFORMATION

Builder:

SONWIK Management GmbH & Co. KG, Flensburg

Architects:

Asmussen & Partner GbR, Flensburg (design + implementation planning), Bauplan Nord Flensburg (site management)

Sheet manufacturer:

POLYFIN AG, Schönau

Pictures:

Asmussen & Partner GbR, SONWIK Management GmbH & Co. KG





PERSONAL DATA

Robert Riegler, born 1954.

Completed his engineering studies at the Technical University of Berlin.

Between 1987 and 2000, teamleader and head of marketing for Lucobit® at BASF AG/ELENAC GmbH, Ludwigshafen.

CEO of LUCOBIT AG in Wesseling since 2000.

INPLASTICS IN DISCUSSION

INTERVIEW WITH ROBERT RIEGLER, CEO OF LUCOBIT AG

INPLASTICS: LUCOBIT AG was founded about five years ago. What induced you and your 'comrades-in-arms' to take this step?

Robert Riegler: When the BASF subsidiary ELENAC GmbH founded the company Basell GmbH, they made us an offer to take over a product that was well established in the market, and to continue with its development.

By means of a management buy-out, we took over the brand name and patent rights for Lucobit®, including the production facilities.

This enabled us to continue working with an experienced crew in marketing, research and production. What's more, we were also able to rely on a customer base that had grown over many years – pretty good starting conditions for a new company.

→ **For example, thanks to modified post-processing, we can offer a wide range of PE and TPE materials in hardness classes which the suppliers of pure polyolefins do not provide.**

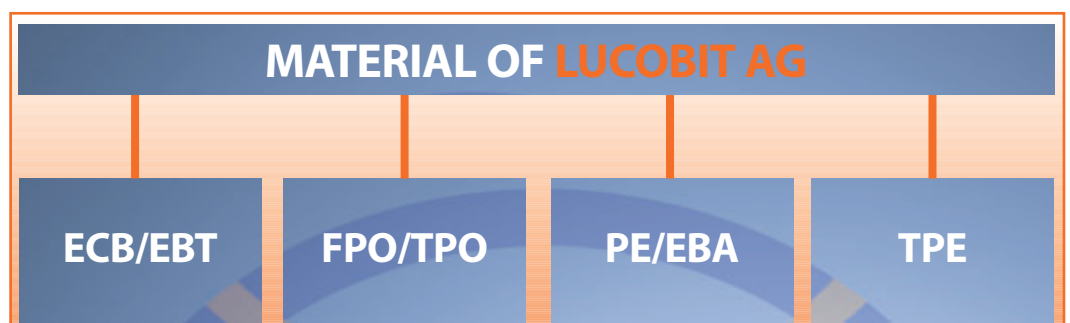
Robert Riegler: Looking only at turnover, our business has been tripled since then. On the one hand, this was possible because we were able to expand in the ECB area with a focus on sealing activities, mainly in Europe. On the other hand, we increased our product range and application markets with new developments as well as the acquisition of patents and partnerships, which allowed us to position LUCOBIT AG as an international manufacturer of flexible polyolefins.

INPLASTICS: In which areas will the future potentials of LUCOBIT AG be?

Robert Riegler: With our present four product lines, we can offer a range of more than 30 special materials, not counting all the specialized products and customized solutions. Especially in the area of soft and supersoft materials, we have recorded considerable growth. For

example, thanks to modified post-processing, we can offer a wide range of PE and TPE materials in hardness classes which the suppliers of pure polyolefins do not provide. Here, we have a niche market that can be expanded in future.

INPLASTICS: What is your interim assessment? Which developments has the company seen, and where does LUCOBIT AG stand today?



INPLASTICS: What about the sealing activities?

Robert Riegler: Through the introduction of European standards we will be faced by far-reaching changes. For example, this will affect our product ranges Lucobit® (ECB) and Lucolit® (EBT), combinations of polyethylene and bitumen, which are used in particular for the manufacture rolls of colored roofing and sealing material, as well as Lucofin® (FPO/TPO). Some of the newly developed products will thus become fit for Europe. Moreover, the CE standard will stipulate the new material abbreviation EBT (ethylene bitumen thermoplastic) throughout Europe, which will greatly increase the marketing chances for this material. If one keeps price developments for raw materials in mind – especially for petroleum – the use of single-layer sealing sheets based on plastic materials will increase, indeed also due to their durable and reliable application and functional performance. In particular, the possibilities for coloring offered by Lucolit® will give us clear growth potentials.

INPLASTICS: Which role does the material ECB play at present for LUCOBIT AG?

Robert Riegler: ECB continues to be our most important mainstay, and we have calculated that in Germany alone, some 800 jobs are directly connected with ECB processing. The process developed by BASF to combine liquid bitumen with flexible polymers is still unique, and has proved its worth in practice. These polymers are produced in a special compounding plant with an output of 24,000 t/a. We are the only ECB supplier in the world, and new application areas for this material are being found continually, e.g. in the automotive industry, where ECB is used among others in sound-absorbing.

INPLASTICS: Are there any new developments also in this field as well?

Robert Riegler: Of course. At present, our research department is engaged intensively with the development of ECB/FPO compounds, which

must meet the different European fire protection regulations. In spite of the tendency towards uniform European standards, the national building and construction codes of the member countries still do have a high significance. For instance, Germany, France, Great Britain and Scandinavia all have different regulations, which cannot be met by a single product quality. The developments are in an advanced stage, so that we are ideally prepared for the European market.

→ **But one thing is certain: in future, too, our solutions will continue to be instrumental in ensuring the success of our customers.**

INPLASTICS: How do you evaluate the present economic environment in Germany and in Europe?

Robert Riegler: The weak economy, the imponderables of the international exchange rates, and rising prices for raw materials are obvious, but in the final analysis, a medium-sized company like us cannot influence these factors. Nonetheless, it would be fatal to compensate the price at the expense of product quality. When selecting a material, price considerations must not be allowed to displace quality requirements. Today, trust in the long-term quality of a product is a secure foundation for a company's future existence.

INPLASTICS: To conclude, let's risk a look into the future: Where will LUCOBIT AG stand after the next five years?

Robert Riegler: We want to expand LUCOBIT AG to one of Europe's leading suppliers of flexible polyolefins and their modified materials. We intend to achieve this, for instance, by means of development partnerships, which will provide unique special solutions that in turn will give our customers decisive competitive advantages. Admittedly, that's an ambitious aim, but we have already come part of the way. We want to establish ourselves and grow in those market segments that are trendsetting for us. This can be achieved by mutual trust, competence and the exchange of know-how with our business partners. What our product range will be then, cannot be predicted today. But one thing is certain: in future, too, our solutions will continue to be instrumental in ensuring the success of our customers.



→ **Today, trust in the long-term quality of a product is a secure foundation for a company's future existence.**

FAIRS

PLASTICS

26.04. - 29.04.
ASEANPLAS
Singapur (SGP)

31.05. - 03.06.
PLASTPOL
Kielce (PL)

26.07. - 28.07.
PlasPak China
Shanghai (PR)

24.09. - 28.09.
IPF International Plastics Fair
Tokio (J)

04.10. - 06.10.
INTERPLAS
Birmingham (UK)

28.10. - 22.10.
FAKUMA
Friedrichshafen (GER)

14.11. - 18.11.
EUROPLAST
Paris (F)

14.11. - 18.11.
EQUIPLAST
Barcelona (E)

CONSTRUCTIONS

05.04. - 09.04.
CONSTRUMA
Budapest (HUN)

06.04. - 09.04.
EXPO Build China
Shanghai (PR)

04.05. - 07.05.
Dach+Wand 2005
Messe Leipzig (GER)

10.05. - 13.05.
KIBEX
Seoul (ROK)

NEW TPE-STANDARDS

CEN is planning the introduction of a new nomenclature and abbreviations for thermoplastic elastomers.

The production of thermoplastic elastomers belongs to one of the fastest-growing areas of polymer chemistry. With the introduction of **prEN ISO 18064** through CEN, this development has now been taken into account.

The international standard defines a uniform system of nomenclature for thermoplastic elastomers and rubbers based on their chemical composition. The materials are classified in seven categories, which in turn are divided into sub-groups:

TPO thermoplastic olefin elastomers

TPO-(EPDM+PP)

compound of ethylene propylene dien terpolymer with polypropylene

TPS thermoplastic styrene elastomers

TPS-SBS

block copolymer of styrene and butadiene

TPS-SEBS

polystyrene polyethylene-butylene polystyrene

TPS-SEPS

polystyrene polyethylene-propylene polystyrene

TPS-SIS

block copolymer of styrene and isoprene

TPV thermoplastic caoutchouc

TPV-(EPDM+PP)

combination of EPDM and polypropylene

TPV-(NBR+PP)

combination of acrylonitrile butadiene rubber and polypropylene

TPV-NR+PP)

combination of natural rubber and polypropylene

TPV-(ENR-PP)

combination of epoxy-enhanced natural rubber and polypropylene

TPV-(BR-PP)

combination of butyl rubber and polypropylene

TPU thermoplastic urethane elastomers

TPU -ARES/-ARET

aromatic hard segment, soft polyester segment

TPU-AREE

aromatic hard segment, soft segment with ester and ether bonds

TPU-ARCE

aromatic hard segment, soft polycarbonate segment

TPU-ARCL

aromatic hard segment, soft polycaprolactone segment

TPU -ALES/-ALET

aliphatic hard segment, soft polyester segment

TPA thermoplastic polyamide elastomers

TPA-EE

soft segment with ether and ester bonds

TPA -ES/-ET

soft polyester segment

TPC thermoplastic copolyester elastomers

TPC-EE

soft segment with ether and ester bonds

TPC -ES/-ET

soft polyester segment

TPZ other thermoplastic elastomers

TPZ-(NBR+PVC)

compounds of acrylonitrile butadiene rubber and polyvinyl chloride

LUCOBIT AG & NYNAS BITUMEN PROVEN PARTNERSHIP

The Nynas Group has been engaged in the oil business for more than 75 years. Company founder Charles Almquist built the first Swedish petroleum refinery in 1928. As Sweden's road network expanded, the demand for bitumen grew as well. The managers at Nynas recognized the growth potential of this raw material, and expanded this business activity to become the company's second mainstay.

Today, Nynas is one of the world's leading producers of special materials. The bitumen business is still a core activity of the company, which since the 1980s has been owned equally by the Finnish energy company Fortum and the state-

owned Venezuelan "Petróléos de Venezuela". And there is good reason for the close ties with Venezuela: only a relatively small portion of the world's petroleum reserves are suitable for bitumen production. Venezuela has large resources of heavy petroleum of the necessary composition.

Ever since its development in the 60s by BASF, the recipe for Lucobit® (ECB) is based on these particular South American bitumen quality, which characterize the special product properties and constant quality of this material.

www.nynas.com



BESTSELLER REPRINTED



The manual is available (ISBN 3-446-22670-2) in bookshops for EUR 49,90.

The 29th edition of the "Saechtling Kunststoff-Taschenbuch" (Saechtling Plastics Handbook) has been printed by the Munich publishers "Hanser-Verlag". On 900 pages, this reference manual provides fast, precise and compact information from the general area of plastics production and processing. It brings general practitioners and beginners up to date on the current state of plastics technology (products and processes), shows market changes (trade names, sources, standards), and supplies important trade information (training, addresses, literature).

DEUTSCHE KUNSTSTOFF-TAGE IN DÜSSELDORF

On 8th and 9th, Juni 2005 the "Deutsche Kunststoff-Tage" will be holding their premiere in Düsseldorf, Germany.

This new event is dedicated to current economic and economic-political topics, and is intended for executives and managers from all business sectors. For the first time, the plastics industry offers an overall forum for the exchange of experience, discussion and knowledge transfer. Program and application via the Internet under

www.kunststoff-tage.de.



NEWSTICKER - Latest news from the plastics industry

... **FAKUMA 2005 presumably fully booked** Eight months before the FAKUMA trade fair in Friedrichshafen opens (October 18th to 22nd, 2005), already 606 exhibitors have confirmed their participation. The organizers expect that the fair will be fully booked, as it already has

been in the previous years. With some 65,000 sqm of exhibition area, the fair will present everything connected with injection moulding and extrusion. This includes machines and plants, raw materials, additives, tools and molds, automation, and quality assurance ...

... **Growth for plastic sheets** According to information from the industrial association DUD, in Darmstadt, Germany, about 20.6 million sqm of plastic roofing and sealing sheets were laid by the DUD member companies in Germany in the past year, which represents an increase

of 0.4% in sales compared with 2003. In the year 2005, the industry is under severe cost pressure. The enormous price hikes for raw materials have therefore forced manufacturers to raise their prices this year – some of them considerably ...



WEBGUIDE THE MOST IMPORTANT PLASTICS PORTALS ON THE WEB - FOCUS GERMANY

PLASTICS INFORMATION

The website of the KI-Verlag (publishing house) offers compact and useful information plus market surveys and technical data. Subscribers of the printed issue have access to a full-text archive search and additional offers.



www.kiweb.de

KUNSTSTOFFFORUM

Professional contacts on the Internet, and information from the plastics industry. With job market, product information, links to manufacturers, producers, associations and universities.



www.kunststoffforum.de

KUNSTSTOFFE.DE

Portal of the trade journal "Kunststoffe"; with topical news, notes on events, purchasing sources and product reviews. Moreover, the site offers an archive with feature articles from previous issues.



www.kunststoffe.de

KUNSTSTOFFWEB

The website offers news, professional literature and feature articles. Data on purchasing sources, and information from research and teaching. Online bookshop.



www.kunststoffweb.de

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