High-Tech in Polyurethane

Since the start in 1971 LUC specialises in producing and processing hot cast and cured polyurethane (PUR) elastomers. Polyurethane elastomers combine the strength of plastic with the elasticity of rubber. The enhanced properties make their use in many cases preferable over that of the classic rubber. The strength of LUC is the fact that the company has a very profound knowledge of polyurethane chemistry, which is especially reflected by the numerous formulations and processing methods. In addition, when problems in a specific customer application arise, the formulations and processing methods may be altered in order to meet with the customers’ requirements.

LUC processes many different classic polyurethane systems, with the brand names Vulkollan®, Adiprene® and Baytec® being the most commonly known. In addition to these systems LUC processes many proprietary formulations where polyether, polyester and other polyols are combined with diisocyanates such as NDI, TDI, MDI, PPDI and CHDI, and with different cross-linking agents. Due to many years of research LUC has been able to develop and produce these proprietary polyurethane systems, known in the market as LUCANYL, LUCTHAAN, LUCHYD and LUC-THS/R. LUC has an ongoing research and development program which will lead to new future polyurethane materials with special properties.

Product Range

The product range of LUC is based on products which have proven their excellent performance during many years and includes the polyurethane systems LUCOLLAN, LUCANYL, LUCPREEN, LUCTEC, LUCTHAAN, LUCHYD and LUC-THS/R. Furthermore, all common rubber grades are part of LUC’s portfolio.

All together LUC can offer over 350 different material grades where each material grade will have its own specific set of properties. For example high dynamic load bearing capacity, excellent chemical resistance, high friction and high temperature resistance can be a part of this set of properties. Details about all materials, their applications and properties are available on the individual material data sheets.

Customers & Applications

Due to the extensive product range of different materials and hardnesses there is a continuous growth in applications for various industries.

LUC delivers products to the following industries:

- **Steel and aluminium industry**
  - Cold rolling mills and strip processing lines: Bridle rolls, pinch rolls, squeeze and wringer rolls, driver rolls, steering rolls, braking rolls, guide rolls, support and transport rolls, shape-meter rolls
  - Contact rolls, slitter rings, coating and applicator rolls, print rolls, laminating rolls

- **Offshore and Onshore / Oil & Gas**
  - Pipe handling equipment: Track shoes and pads, conveyer rolls, stinger rolls, diabolo rolls, spring blocks
  - Pipe coating plants: Transport rolls, rotation wheels, concrete spray rolls
  - Pipe maintenance: Pipe pigs

- **Chemical industry: Plastics and Fiberglass**
  - Strand pelletizer rolls (feed rolls), cutting rolls, cutting sleeves, cot wheels, knife-holder rolls

- **Leisure industry / Amusement rides**
  - Roller coaster wheels, spring blocks, hub caps

- **Transport**
  - Fork-lift wheels, rollers in sorter equipment and baggage handling systems, guide wheels for cable-cars

- **Minning**
  - Convoyer drive and idler rolls

- **Paper, Cardboard and Packaging industry**
  - Reel spools, embossing counter rolls, supporting and guide rolls, pressure rolls, calendar rolls
  - No crush rolls, pulling rings, feeding rings, creasing rings

- **Textile industry**
  - Seydel rolls, calendar rolls, guide rolls

- **Foil industry**
  - Support rolls, pressure rolls, laminating rolls

- **Concrete & Bricks industry**
  - Wear parts, Stoneware cases / Brick moulds, Gripper Fingers, Moulded parts

- **Wood processing / timber industry**
  - Support rolls, band saw wheels, drive wheels, wheels for timber peeling equipment, glue rolls

- **Glass industry**
  - Rolls in laminating and washing equipment, transport rolls

- **Machine construction**
  - Various rollers and moulded parts, spring elements, drive and clutch systems, pads for rubber-pad forming of sheet metal, wear protection

- **Food processing industry**
  - Bakery rolls, flour deposit rolls, hydro cyclones

- **Recycling / waste and water treatment**
  - Heavy-duty wheels for drum sieves and water treatment tanks

- **Intermediate products for various uses**
  - Base material for high-end sealants, sheets, rods

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Although the majority of LUC’s product portfolio is intended for these industries, the supply of products is not limited to these. Numerous other industries and applications are currently also supplied and LUC continues to expand into new markets.

LUC supplies these products to a broad, fast-growing number of customers in the European Union, Switzerland, Norway, USA, Russia, China and other countries.

**Capacities & Services**

For LUC the quality of the products and an excellent customer service are first priority. Therefore a certified quality assurance system according to ISO 9000 is in place and all co-workers follow continuous internal and external training programs.

The customers of LUC can rely on a prompt response regarding quotations and technical questions, where a team of professionals can offer extensive problem solving assistance. Customer orders are carried out in a fast and proficient manner and customers are provided with a competitive price and excellent quality. Furthermore LUC provides a friendly and ambitious team and subscribes to responsible care towards people and planet.

The range of capabilities as well as the services offered by LUC is continuously growing and currently includes the following:

- Covering and recovering of cylinders, rolls and wheels with polyurethane and rubber (maximum dimensions ø2400x10000mm and maximum weight 20 tons).
- moulded parts, plates and blanks made of polyurethane and rubber.
- Rubber sleeves for decoilers and recoilers.
- steel cores and shafts including bearings and other parts made of steel, aluminium, glass fibre reinforced plastic and carbon fibre reinforced plastic.
- Complete assembled steel and aluminium wheels (i.e. including bearings and covering).
- Service for grinding, balancing and grooving.
- Mechanical maintenance and repair of steel cores.
- Project Management.
- Research & Development services with laboratory and specialised test facilities.
- Pick-up and delivery service.

**History**

On 6 June 1971 Mr. and Mrs. Winkens founded the company Limburge Urethaan Chemie BV in Brunssum, The Netherlands. The engineer Mr. Winkens as a specialist for the polyurethane chemistry, and his wife as a businesswoman, started to produce, process and sell polyurethane elastomers. The small company developed quickly and in 1980 a new manufacturing plant was established in the industrial estate Bouwberg in Brunssum. After subsequent major expansions in 1984, 1988 and 2000 this facility now covers a production area of 4000 m² and is therefore the biggest plant of its type in The Netherlands.

Right from the beginning lots of small parts were and still are produced and recovered, especially wheels, rolls, rings and moulded parts. By the end of the eighties LUC had also started to re-cover bigger rolls and soon a new production plant for these products was planned. In 1993 LUC opened a new production facility in Maasmechelen, Belgium. The newly founded company Limburgse Urethane Castings NV grew rapidly, and in 1999 the production area was almost doubled and now covers 6000 m². The largest production facility of polyurethane elastomers in the region was established.

In 1993 the sales activities were expanded by opening a new company, LUC Urethan Kunststoff GmbH in Neuss, Germany, specifically responsible for the sales to German-speaking countries. In December 2004 the offices were moved to Jüchen. At this new location a service centre was created, to support the activities of the sales office in Germany.

Expansion continued in 2000 when LUC opened a new production plant, LUC Kft in Plíscsaba, Hungary. From this facility LUC is supplying all types of coverings to Eastern Europe and Austria. In 2003 the activities of LUC Kft moved to Esztergom and this facility was expanded with a new 1000 m² building in 2008. A major step into the UK market was made in 2005, when LUC acquired the South Wales Roller Company in Newport, Wales, as of 2008 named LUC (UK) Ltd. With this acquisition LUC incorporated a facility to make roller coverings in rubber elastomers. In 2009 LUC (UK) moved both rubber and PU manufacturing to a completely new build to purpose 1200 m² facility in Dowllais. During the next years further expansions, acquisitions and co-operations are planned, due to the steadily increasing demand for LUC’s products and services. The LUC Group, founded as a small family business, is directed nowadays by the second generation.