The specifications in this catalogue are based on our current knowledge and experience. They do not acquit the processor from testing our products at its own due to the plenty of possible effects during processing application of our products. The legally binding confirmation of certain properties or of the qualification for a certain purpose can not be derived from our specifications. Possible trade mark rights as well as existing laws and regulations are to be followed by recipient of our products at his own responsibility.

Terms and conditions
Our terms and conditions can be found on our homepage under the following link:
http://www.behabelt.com/terms/agb.pdf

Changes
for the benefit of technical enhancements respectively adoption to modified standards or provisions are provided.

Pictures
in this catalogue are examples of types and are not binding for the type at the time of delivery.
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About us

Beha Group of Companies

All companies belonging to the family-owned BEHA Group of Companies are operating in various specialized fields. Therefore we can offer our customers a broad variety of product portfolios built on competent knowledge in any of the specific areas.

Thanks to this unique combination of expert knowledge of all BEHA divisions, we are able to develop products in close cooperation with our customers, which are extremely practical and are especially adapted to the markets.

BEHAbelt

Extruded profiles and the proper welding technology for transport applications are marketed under the trademark BEHAbelt. You will find further information on the following pages of this catalogue.

The following companies within Beha are responsible for BEHAbelt:

Beha Innovation GmbH, Glottertal, Germany
The main production facility with profile extrusion lines and calendared homogeneous flat belt equipment is located at the headquarters in Glottertal. Roll goods and tailored belts along with our complete line of joining equipment from our central warehouse serves our customers in Europe, Asia-Pacific, Africa and Latin America.

Our excellent technical service provides support to our worldwide customers.

BEHAbelt USA Inc., Wood Dale, IL, USA
Our sales office and warehouse centrally located in Chicago IL serves our North America area customers through a network of industrial distributor partners.

Additional sales and application support is provided by our experienced sales team.
HDT GmbH, Glottertal, Germany

Creative ideas are born and first class products are created in our facility in the heart of the Black Forest. Strategic planning and financial control, key account management and customer communication all take place in Glottertal.

The technical support group provides initial design and electronic product development for HDT.

Beha R&D d.o.o., Belgrad, Serbien

Final electronic product development is in the town of Nikola Tesla providing a quick turn around on prototyping and production of small quantities.

HDT (Dongguan) Ltd., Kanton, P.R. China

Our factory is located in the center of the electronics industry. There the products are industrialized and then manufactured. The concentrated Know-How of our mechanical development team and our lab for testing of housings and other mechanical parts completes the puzzle for developing new products. They work hand in hand with our electronics development teams in Serbia and Germany.

HDT Asia Ltd., Hong Kong

The Hong Kong facility provides a window to the Chinese market and product management for the factory in China. This gives HDT product management world wide.

HDT provides support to its customers from the idea to market success.

HDT is serving customers worldwide. With locations in Germany, Serbia, Hong Kong and China we can offer high class service and quality at favorable prices.

With offices in Germany, Serbia, Hong Kong and China, HDT provides high-class service and quality at favorable prices. HDT support teams are active from the idea to market success.

HDT provides support to its customers from the idea to market success.
About us

We focus on our customers

“We put innovative ideas into practice.”

Company

Beha Innovation GmbH is a German company based in the heart of Europe. We extrude a complete line of the highest quality Polyurethane and Polyester profiles for transport and drive applications. With over 38 years of experience with the market, we know our customers’ needs. We provide quick and accurate service through our main factory in Glottertal Germany, our subsidiary located in USA, as well as our worldwide distribution network.

We focus on our customers

Our success is based on knowledge of the market and serving our customers with a broad line of profiles and belts. Our strategy is to provide the best extruded profiles and homogeneous belts in the market today and lead the industry in new innovative products in the future. Our in house tool shop allows us to react quickly to changing demands in the market. This strategy has resulted in a complete range of high quality products where we hold International trade mark rights and patents.

“Our people make the difference. The combination of motivated people at Beha and our partners worldwide provide the right product and services for our customers.”
Top Quality is our target

“We comply with the requirements of the standard DIN EN ISO 9001”

Our customer service people are linked closely with our customers in the market and work together with them to provide the fastest and most accurate handling of inquiries and orders. We employ a sophisticated logistic process that ensures highest quality of service – worldwide. All procedures and activities are conducted with the highest possible commitment to quality. We comply with the specification of the standard DIN EN ISO 9001.

This is of course also important for our development work so that we always can offer best products, today and in the future.

Our people make the difference

We combine technical expertise and practical experience with excellent social skills to provide the best support available in the industry to our customers. We listen to our customers and encourage them to tell us what they need to be successful. Our corporate philosophy and corporate policy are based on the principal of ethics. We hire employees with good training from the practical side of business. We teach them to work closely with our customers to fill the needs of the market place. Continuous improvement of process and products ensure this.
Conveyor belts made of Polyurethane and Polyester

Our mission

For 38 years BEHA has produced high quality thermoplastic weldable belts made of Polyurethane and Polyester. Those belts are used for drive applications and conveying. We use only the very best raw materials and combine them with our experience in the extrusion field to provide time tested and proven products. New products are added to the line only after they have been tested in the laboratory and in the field. Our mission is to supply our customers with the highest level of quality and innovation in the thermoplastic extrusion industry worldwide. In the following pages, you will find all the important information about material properties, purposes, technical data and joining methods.

Very good properties

The excellent melting ability of the material enables easy welding in order to obtain endless belts. Not only does this result in simplified installation of belts but also allows for reduced inventory as it is no longer necessary to store belts in different lengths.

In the majority of cases when a common drive belt has to be changed, machine and conveyor systems have to be disassembled for the belt replacement. This is not the case if you use BEHAbelt products. BEHAbelt drive and conveyor belts can be installed and endlessly finished without the need of disassembly and in a short period of time. BEHA Innovation GmbH develops and manufactures handy joining tools, which can be used for this purpose.

When our homogeneous materials are properly joined with Beha equipment, the splice is the same strength of the belt.

Material qualities

BEHAbelt profile belts and homogeneous flat belts are produced in different compounds in PU 60 A (approx. 65° Shore A) - 95 A (approx. 98° Shore A) and TPE 40 D (approx. 40° Shore D) up to TPE 63 D (approx. 63° Shore D). The selection of materials should be based on application requirements.

Material properties:

- high tensile strength
- excellent wear and abrasion resistance
- high resilience, low level of belt stretching
- resistance to oil, grease, dirt and most chemicals
- temperature resistance from -30°C to +80°C (dynamic)
- high coefficient of friction
- silent running
- excellent weldability
- hydrolysis resistant
- hygienic and easy to clean
- FDA/EC compliant
Chemical characteristics of PU and TPE

General

Thermoplastic material can be used in a variety of applications where there is interaction with various chemicals.

Chemical resistance depends on the period of exposure, the temperature, the quantity, the concentration and the type of the chemical substance. It is therefore difficult in any case to make a clear distinction between the effects described below. In the case of chemical degradation of polyurethane the chemical reaction results in cleavage of the molecular chains. In the course of degradation, polyurethane loses strength, and in extreme cases this can lead to disintegration of the part.

For critical applications, a detailed resistance test considering both swelling and the effect on mechanical properties is recommended.

Swelling

Swelling is the fundamental physical process of the absorption of liquid substances by a solid. In this process, the substance enters into the material without chemical interaction. This results in an increase in volume and weight with a corresponding reduction in mechanical values. After evaporation a reduction in swelling occurs and the original properties of the product are almost completely restored. Swelling is a reversible process. By using reinforcements in the polyurethane, for example polyester or aramid cords, you can almost avoid this mechanical impact on the material.

Hydrolysis resistance

If polyester-based polyurethanes are exposed for lengthy periods to hot water, moisture vapour or tropical climates, an irreversible break-down of the polyester chains occurs through hydrolysis. This results in a reduction in mechanical properties. This effect is more marked in flexible grades, where the polyester content is correspondingly higher than in the harder formulations.

Degradation of polyester-based polyurethanes is however rarely experienced at room temperature. Because of its chemical structure, polyester-based polyurethanes are much more resistant to hydrolytic degradation.

Microbiological resistance

When using polyester-based thermoplastic polyurethane under climatic conditions of high heat and humidity, parts can be damaged by microbiological attack. In particular, microorganisms producing enzymes are able to affect the molecule chains of polyester-based TPU. The microbiological attack initially becomes visible as discoloration.

Subsequently, surface cracks occur which enable the microbes to penetrate deeper and to cause a complete destruction of the TPU.
Conveyor belts for the food industry

The hydrolysis resistant BEHAbelt transmission and conveyor belts are mainly developed for applications in the food industry with direct food contact.

Important characteristics at a glance:

- FDA/EC- compliant
- Especially high durability in wet areas
- Very good hydrolysis resistance and stability against Microbes
- Very good weldability
- All Round- and V-Belts also available with reinforcement on request
- Available with smooth and rough surface
- All BEHAbelt belts in PU 80 A transparent/orange and TPE Polyester of the standard delivery programme are also suitable for applications in the food industry.

Materials/qualities:

- PU 70 A (approx. 76° Shore A) transparent
- PU 75 A (approx. 80° Shore A) sky blue
- PU 80 A (approx. 84° Shore A) ultramarine blue/transparent/orange
- PU 85 A (approx. 88° Shore A) sapphire
- TPE 40D/55D
- Special profiles and further materials on request

GOOD TO KNOW

General directives for plastics with direct food contact

There are several country-specific and global directives for the application of food contact materials. In general, all food contact materials have to be produced according to the principles of Good Manufacturing Practice (avoiding the occurrence of a health hazard or any other unacceptable change in the composition of the food during its intended use).

FDA Guideline „Title 21: Code of Federal Regulations“

The Food and Drug Administration of the Public Health Service of America is the world’s best-known authority involved in consumer protection in respect of potential detrimental influences. The FDA has prepared a review “Title 21: Code of Federal Regulations” in respect of their approval of raw materials in a processed or finished state, and also specified the conditions under which the approval is valid.


The framework Regulation EC 1935/2004 (EU Directive No. 10/2011) Food Contact and belonging specific Directive 2002/72/EC Monomers Additives of the European Parliament regulates plastics intended to come into contact with foodstuffs. The EU legislation for food contact materials is based on positive lists of the substances and maximum limits of migration into food. Only substance on these positive lists may be used for manufacturing plastics that are designated to have food contact. Furthermore, you have to show the evidence of the global and specific migration. This can be requested and interpreted differently depending on the application.

BfR „Plastics Recommendations“ for use in the food industry

The German Federal Institute for Risk Assessment (BfR, formerly BgVV) was founded to strengthen the consumer health protection and frames scientific opinions on possible health risks of substances which have food contact. Those recommendations are listed in the framework of the Food and Feed Code (LFGB), known as the „Plastics Regulations“.
Metal detectable profiles and conveyor belts

Metal detectable Polyurethane round and V-belts

Fast moving Polyurethane conveyor belts in the food processing industry are subject to wear and abrasion. The BEHAbelt FDA compliant belt is manufactured in an easy identifiable blue colour, so that it is clearly visible if a small particle gets into the food during the production process.

BEHAbelt introduces a new product range of metal detectable food grade belting to take food processors to the next step in food safety. PU80A Safe belts are made of a special thermo-plastic recipe that allows very small particles to be detected by most standard metal detection equipment used in the food industry.

Metal detection with PU 80A SAFE:

- FDA/EC compliant
- for dry and wet food applications
- allows extremely small pieces to be detected
- ensures food safety by reducing the risk of contamination

Applications / Overview

- Especially for the requirements in the food industry we have added homogeneous conveyor belts and completed our range with detectable cleats and guiding profiles. Therefore they also meet the high standards and requirements of HACCP.

Our PU SAFE range:

- PU 80A SAFE round and V-belts
- PU 80A SAFE homogeneous conveyor belts
- PU 70A SAFE V-Guides
- PU 90A SAFE cleats
- PU 80A SAFE sidewalls
PU75A / PU85A with weldable reinforcement

Reinforced belts are mainly used for transport of heavy loads or in case of long conveying distances. When joining the belt with the standard reinforcements like polyester or aramid: the splice is the weak point.

Our patented reinforcement can be welded in the classic manner such as non-reinforced belts with full strength in the splice.

Important characteristics at a glance:
- Available with a smooth and rough surface
- Low stretch
- No drilling out of the reinforcement necessary
- Joined with a simple butt weld

Materials/qualities with patented reinforcement:
- PU75A V-belt
- PU85A round, V- and Ridge Top belts

Materials and application areas

PU75A PLUS, PU85A PLUS – low stretch and high flexibility

Thanks to our patented material mix we are able to optimize our proven standard qualities PU75A and PU85A especially for critical applications with small pulley diameters and heavy loads. With a consistent quality the performance of the belt will be significantly improved concerning stretch and tensile strength without having to change the design of the equipment.

For applications as for example roller conveyors with vertical shafts it becomes more and more difficult to ensure the required belt life and reliable operation - due to restricted space availability and increasing transport load. Therefore → PU PLUS!

Important characteristics at a glance:
- Available with a matt and rough surface
- Low stretch
- High flexibility for smaller pulley diameters
- Joined with a simple butt weld

Materials/qualities with patented reinforcement:
- PU75A PLUS round belt (matt)
- PU85A PLUS round belt (rough)
- PU85A PLUS V-belt (matt)
Polyurethane type PU 75 A red (approx. 80° Shore A)

The very elastic and flexible BEHAbelt material PU 75 A in red is particularly suitable for lead in conveyors and vertical shafts.

Important characteristics at a glance:
- Very soft belt material
- Very elastic
- High adhesion
- Available with smooth and rough surface
- Very flexible at low temperatures
- Reinforcements available on request
- Shore-Hardness approx. 80° Shore A
- Colour: red and orange (PLUS)

Application examples / industries:
- Furniture industry
- Painting lines
- Returnable bottle systems
- Transport system with drive via vertical shaft
- Guiding profiles for linear tracking to weld on flat and timing belts
- Roller conveyors
- …

Polyurethane type PU 80 A transp./orange (approx. 84° Shore A)

The BEHAbelt material PU 80 A is optionally available in transparent and orange colour. The soft Shore-hardness of this PU material is partnered with a high resilience.

Important characteristics at a glance:
- High transparency
- Very good resilience
- Good adhesion
- Available with smooth surface
- Available with/without reinforcement
- Shore-Hardness approx. 84° Shore A
- Colours: transparent and orange

Application examples / industries:
- Solar pannel production
- Transport system for shingles
- Food industry
- …
Materials and application areas

Polyurethane type PU 85 A green / yellow / ultramarine blue / emerald green (approx. 88° Shore A)

The BEHAbelt all around belt PU 85 A is medium hard and therefore ideally suited for power transfer in machines, devices, metal production, as well as for conveyors of many types.

Important characteristics at a glance:

- Medium Shore-hardness
- Suitable for a large range of applications
- Available with rough and smooth surface
- Also available as static dissipative belt for the electronic industry
- Available with and without reinforcement
- Shore-hardness approx. 88° Shore A
- Colours: green, yellow, ultramarine blue, emerald green

Application examples / industries:

- Ceramic, floor tile and brick industry
- Timber industry
- Furniture industry
- Canteen kitchen
- Paper factory
- Printing industry
- Bowling alleys
- Textile industry
- Electronic manufacturing
- Roller conveyor systems in logistic centres
-...

Polyurethane type PU 90 A white (approx. 92° Shore A)

The excellent elasticity and damping characteristics of the BEHAbelt PU 90 A profiles are suited for applications that require medium and heavy loading.

Important characteristics at a glance:

- Excellent elasticity and damping characteristics
- High tensile strength
- Replacement for conventional rubber V-belts
- Available with and without reinforcement
- Shore-hardness approx. 92° Shore A
- Colour: white

Application examples / industries:

- Ceramic and floor tile industry
- Transport and logistics centres
-...

Preprocess offset printing
Tray transport in canteen
Bowling pinsetter alley
Conveying machine with lock out
Tile glazing machine
Transport system
Polyester Typ TPE 40 D beige (approx. 92° Shore A)
Polyester Typ TPE 55 D blue /beige (approx. 100° Shore A)

The high performance BEHAbelt Polyester belts TPE 40 D and TPE 55 D are especially designed for high loading and extreme temperatures between -30°C to +100°C (dynamic).

Important characteristics at a glance:
- Very hard quality for high loads
- Suitable for frozen goods
- High cut resistance
- Good gliding properties
- Available with and without reinforcement
- TPE 40 D (40° Shore D or approx. 92° Shore A) beige
- TPE 55 D (55° Shore D or approx. 100° Shore A) beige/blue

Application examples / industries:
- Pharmaceutical industry and medical technology
- Paint and cleaning systems
- Glass and floor tile industry
- Sheet metal forming
- Roller conveyors
- ...