

YOUR SPECIALIST FOR TECHNICAL PLASTICS



WHO WE ARE ...

Murdotec Kunststoffe is a leading manufacturer of thermoplastic semi-finished products in Germany. Quality, service, and environmental friendliness are our primary objectives, not only in the selection of our raw materials, development, and formulation of our recipes, but also in production.

In addition to this, Murdotec sets standards in terms of flexibility, adherence to deadlines, and customer focus. As a traditional medium-sized enterprise, we are keenly aware of the requirements of the market and we always strive to exceed expectations. Our vast in-house knowledge and experience is geared towards providing the best possible service to our customers. Working closely with you, we develop individual solutions, providing expert advice on how to optimise the application of our semi-finished products.



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WHAT WE DO ...

We specialise in thermoplastic semi-finished products made from ultra-high molecular weight (UHMW-PE / PE 1000) and high molecular low-pressure polyethylene weight (HMW-PE / PE 500). To do so, we rely on innovative production technologies, like using the most modern, computer-controlled, and monitored press line in the world, or environmentally friendly raw material handling constantly updated to comply with new standards.

In this way, once again we attain top product quality and process reliability. The result is a wide product range of sheets, pre-cut parts, and rods that enables us to precisely respond to your special requirements. Whether machine construction, conveyor technology, lining and bulk material handling, the paper, food or forestry industry – working closely with you, we reliably provide the best solution possible.





TOGETHER WE CAN ACHIEVE THE ULTIMATE ...

For Murdotec, quality means much more than simply being a DIN-ISO 9001-certified company, thereby meeting our customers' requirements. Rather, quality is the result of the extremely high standards we set ourselves, which drive us on to find the optimum solution with you to meet your requirements. We guarantee a constantly high level of quality, monitored and documented around the clock by our quality assurance system, which is regularly inspected and certified by the German Management Certification Centre (DQS).



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EXPERIENCE, WHICH PAYS OFF ...



At Murdotec, we develop up-to-date materials to meet your requirements. The philosophy behind this: practitioners develop practical solutions.

Our team not only consists of chemists and chemical engineers but is, in fact, made up of specialists from the market segments we serve. In our laboratory, we are able to simulate what will later be manufactured by our pressing machines and then prove itself in use. Special additives, modifiers, and colours pass diverse tests before they go into production. The vast experience of our staff helps us to focus on new developments. We are innovative but not fanciful.

Your wish is our command.



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YOU BENEFIT ...

... from our developments and innovations, which always need to be one step ahead of the market. As a manufacturer, we therefore believe that it is our job to help recognize the challenges you encounter with various applications in order to work with you to create individual, cost-effective solutions. You can rest assured that we will use our many years of

experience, accumulated expertise, and market-leading know-how to work with you as a partner you can trust in.

- Research & Development by our specialists
- State-of-the-art production processes
- Extremely high quality standards
- Extensive product range



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... AND ENJOY OUR SERVICE!

The value creation chain moves at relentless speed. You may also feel the constantly increasing pressure. Relax! Murdotec Kunststoffe sets standards when it comes to flexibility, meeting deadlines, and customer service

- Personal customer care from start to finish
- Quick reaction times for enquiries and orders
- Quick delivery times thanks to excellent availability
- Outstanding willingness of all employees to help





... OUR PRODUCTS

... are machinable semi-finished products made from ultra-high molecular and high molecular weight polyethylene produced as

- Sheets
- Rods
- Tape material

Murdotec semi-finished products are available in the following qualities to meet the diverse requirements of the market:

Murdotec® 1000

Ultra-high molecular weight polyethylene (UHMW-PE) as per ISO 15527 Sheet group 1.2

The standard UHMW-PE with a molecular weight of 5 million g/mol is characterised by its very good wear and abrasion resistance. It has excellent impact and shock resistance, very good chemical resistance, good anti-adhesion properties, a low density, and a low friction coefficient. It has very good electrical isolation and dielectric properties (with the exception of static dissipation and conductive types) and good resistance to radiated energy (gamma and X-ray radiation). It is physiologically safe and approved by the EU and FDA.

Murdotec® 2000

Ultra-high molecular weight polyethylene (UHMW-PE) as per ISO 15527 Sheet group 1.1

Murdotec® 2000 is the premium UHMW-PE with a molecular weight of 9 million g/mol. It has greater abrasion resistance than Murdotec® 1000. It is also resistant to chemicals and has good shock and noise damping, good anti-adhesion properties, excellent sliding properties, and very good insulation and dielectric properties (with the exception of static dissipation and conductive types). Murdotec® 2000 is physiologically safe and approved by the EU and FDA.

Murdotec® 1000 U

The environmentally-friendly UHMW-PE

Murdotec® 1000 U is environmentally friendly and cost-effective as it is a recycled material. It has good sliding properties and is wear-resistant. It also has good shock and impact resistance, good anti-adhesion properties, and, depending on the type, is electrically isolating or antistatic.

Murdotec® 500

High molecular weight polyethylene (HMW-PE) as per ISO 15527 Sheet group 2.1

Owing to its good anti-adhesion properties and good sliding properties, Murdotec® 500 is especially suitable for use in the food sector. Murdotec® 500 is characterised by very good electrical isolation and dielectric properties (with the exception of static dissipation and conductive types). It also has good cut resistance and is approved by the EU and FDA.

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HIGH-QUALITY RAW MATERIAL SOURCES ...

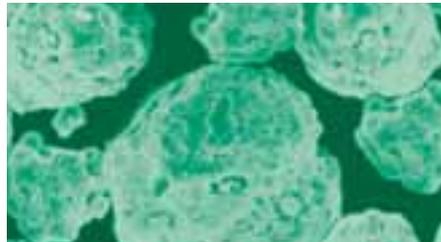
... for virgin materials

Polyethylene takes centre stage amongst Murdotec's materials. For ease of choice, these materials are divided into the groups LD-PE, HD-PE, HMW-PE and UHMW-PE. The designations are merely restricted to membership of a group that fulfils specific minimum requirements.

What defines the quality of a UHMW-PE in accordance with ISO 15527?

The quality is essentially guaranteed by two factors:

- The raw material used
- The processing parameters



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What makes the difference?

We attach importance to our products achieving a high and constant level of quality. We can reach this by the use of selected raw materials from reputable manufacturers. Particle size, particle size distribution, and molecular weight are parameters constantly monitored by our incoming material inspection team. Our computer-controlled press lines guarantee optimum heating-up, pressing and cooling phases. Through precise compliance with the processing parameters, Murdotec ensures the production of

semi-finished products with a very low level of residual stress. Fully-automated mixing lines give us the opportunity to offer precisely reproducible material types with clearly defined specific values. Our UHMW-PE material lines, Murdotec® 1000 and Murdotec® 2000, as well as our HMW-PE Murdotec® 500, exceed the standards for semi-finished products as set out in ISO 15527.

That is what sets us apart.



THE ENVIRONMENT AND SUSTAINABILITY

For Murdotec, these aren't simply fashionable concepts to be bandied about - they represent our duty towards man and the environment. This is a duty that we are eager to fulfil and embody with our actions. We therefore reuse our chippings and off-cuts produced during cutting and further processing. This waste is collected, sorted, stored, and processed to produce new semi-finished products in a pressing cycle appropriate for the type of material, and returned to the material cycle as regenerated materials.

Only material types of the same quality may be mixed together. This prevents mixed types being produced that keep appearing on the market but cannot be identified. With Murdotec® 1000 U, you can be sure to receive a material made from UHMW-PE raw material of the highest quality.

And we go even further. A certain amount of virgin material is added to each batch on our mixing lines. You can rely on our technical specifications.

How can you be so sure?

We precisely know our quality level as the raw material for this material quality never leaves our production cycle and has passed through all the quality assurance stations on its way. As with our in-house virgin materials, the pressing process is a crucial factor. Pressing cycles specifically adapted to the type of material ensure the quality of the product. We pay attention to the idle times of the semi-finished products prior to further processing, ensuring that your Murdotec® 1000 U semi-finished product displays an optimum range of properties combined with excellent value for money.

Test our Murdotec® 1000 U material types and discover the difference.

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CERTIFIED ENVIRONMENTAL AND ENERGY MANAGEMENT

Each and every one of our members of staff is conscious and sensitive to the need for operational environmental protection with the use of processed materials. Naturally, the energy sources are used to produce our materials in a responsible as possible way form a key part of this. We are constantly striving to perform regular inspections in this area too, in order to reinforce the fact that sustainable business is one of the key pillars of our corporate philosophy. We can once more offer you the certainty that we are best placed to serve you in this respect with our certified ISO 14001 and ISO 50001 management systems.

In addition, the ongoing maintenance, inspection, and - if required - replacement of our high-tech machines ensure that we not only keep to the emission values defined for our production but actually manage to cut them down even further. Our aim of sustainably improving energy efficiency therefore contributes to both the preservation of our company's economic health and the upkeep of a clean environment.

Even during the development process, we attach great importance to only using products which are harmless to our employees and our environment.



YOUR APPLICATION, OUR SOLUTION ...



... for machine construction

Our materials open up completely new possibilities for applications for which, up until only a few years ago, only metallic materials were used. This is thanks to their optimised mechanical, electrical, and chemical properties. Sliding properties, abrasion resistance, weight saving and noise reduction – there are so many reasons why our materials will help to shape the future of machine construction.

... for transport and conveyor technology

Our materials meet exacting expectations, regardless of the diverse requirements of the products to be conveyed. Their innovative material properties provide, for example, optimum sliding properties, good abrasion resistance, excellent efficiency, and cost savings and therefore offer ideal prerequisites for applications in all transport and conveyor systems.

... for food and drink filling machines

While the food-approved properties of our materials are paramount during the production and filling of drinks, rather the focus is on the surface and electrostatic properties of our materials in the handling of paste-like or potentially explosive materials. Our product range includes the optimum material for every application – we would be very happy to advise you.

... for the food sector

The highest hygiene and cleanliness standards are essential when it comes to the manufacturing and packaging of foods. Of course, this also applies to all our materials that come into contact with foods during manufacturing and packaging.

Abrasion-resistant, antibacterial, non-adhesive – these are just some of the material properties that illustrate why our materials are perfectly suited for the food sector. Our **LM materials**, compliant with legal requirements for use in the food industry, meet **the European directives (EU) 1935/2004 and (EU) 10/2011**.





YOUR APPLICATION, OUR SOLUTION ...

... for electrical engineering

More than 3 million tons of plastics are processed annually by the electrical industry and the need for plastics with special properties and particularly combinations of properties is constantly increasing. Our materials provide individual solutions to the problems associated with your application: insulation and impact resistance for electrical housings, conductivity and wear resistance for components in potentially explosive areas, self-lubricating, and low abrasion for functional parts.

... for linings and bulk goods handling

Many sectors of industrial production work with large quantities of raw materials, stored as bulk goods in silos. But what kind of lining material is most suitable, for example, for adhesive or abrasive bulk goods? Our extensive product range offers you the right material for every application.

... for crane building and harbour construction

Reliable protection is essential when excessive forces are exerted on a surface, either concrete or steel structures. Tough materials are called for in crane building and harbour construction, which require good energy absorption as well as excellent resistance to wear and weathering. Protective fenders, lock gateways, loading ramps or heavy-duty bracing – our materials make industrial sites safe.



... for the chemical industry

The use of plastics for the construction of chemical plants enables new systems and processes to be developed yet also places extremely exacting requirements on the material used. Regardless of whether they are used as lining material or construction material, you can always rely on the guaranteed and continuously tested properties of our materials.

... for the paper and forestry industry

Wood is becoming an increasingly important raw material. The use of our particularly abrasion-resistant and low-friction materials has proved to be highly efficient for optimum transportation prior to and during processing. From the chain and conveyor plant in the sawmill to the filter plate in the pulp industry, our particularly low-wear materials ensure a trouble-free and low maintenance manufacturing process.



COMMITTED TO TRUST

With the aid of our own quality standards, our overriding goal is to gain and to develop the trust of our customers. Once stated, we regard this maxim as our duty.

Over and above discipline at all quality levels, an ever-changing market demands innovation, reliability, short delivery times and, last but not least, a willingness and capability to solve problems together. The consistent and concerted actions of all our employees enable us to confront new opportunities and challenges on the market in a target-orientated way.

We will face the challenges of the future together with you.



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Murdotec - your reliable partner

- experienced
- professional
- reliable
- versatile
- flexible
- friendly



murdotec.de Murdotec Kunststoffe GmbH & Co. KG Heßlingsweg 8 D-44309 Dortmund Tel +49 231 425 77 98-0 Fax +49 231 425 77 98-29

