



Looking for a new  
partner for *innovative* solutions  
in the plastics industry?

We tailor our *material solutions* precisely  
to meet the needs of your plastics application



# POLYMERWERKSTATT

POLYMERWERKSTATT GmbH is active in the service, manufacturing and research & development sectors of the plastics industry. We provide solutions made from plastic granules, with a portfolio of international projects spanning the construction, mobility, electrical & electronic engineering, medicine & health and sports & leisure industries.

We are your professional partner for the development of material solutions based on sound research. As a result of this research, we are able to guarantee optimal levels of quality, efficiency and cost-effectiveness. Personalised guidance and the effective implementation of projects are our hallmarks.

## Our company lives by its core values:

**innovative** - our pioneering technical plastic solutions safeguard the innovative capabilities of our customers. As well as focusing on innovation, we are committed to providing optimal levels of quality and cost-effectiveness.

**research-based** - engagement with the scientific and technological cutting edge is a natural prerequisite for the optimal provision of support to our customers. Our research places the development of technical solutions at the forefront.

**passionate** - the best ideas don't come merely from the crunching of numbers, data and facts, but from a willingness to engage with the problem and find the best solution. This guarantees a project's successful implementation.

**collaborative** - as a dependable partner, our aim is to ensure the best possible provision of thermoplastic solutions. This is why we place a high value on availability and adherence to scheduled delivery dates.

**independent** - as a production and development company, our goal is to provide technical material solutions across a wide spectrum of industries. Keeping the principle of cost-effectiveness in mind, we focus on selecting appropriate raw materials and producing innovative, cost-optimised compounds.

In addition to the above, we also offer support with technical issues pertaining to the application of materials, a personalised, free initial consultation, and a consulting and implementation service to guarantee the quick, efficient realisation of your project.

# Plastic-based solutions for your products

POLYMERWERKSTATT develops sophisticated plastic solutions for a wide range of industries. In doing so, we place a focus on the provision of personalised support and the development of custom-tailored plastics. Our innovative material combinations, cost-optimised selection of raw materials and forward-thinking technical solutions are developed on the basis of our on-site analyses and implemented with our core values in mind.

Our high-quality *product solutions* span the following areas



## Service

tailored guidance and optimised selection of raw materials  
for your plastic parts

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## Compounds

individually tailored, cost-optimised plastic solutions

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## Concentrate & Masterbatches

all functions and forms with  
high-dose additives and batches

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## Sustainable products

Optimised products for sustainable materials

We guide you through our  
*five-step process* for  
developing optimal solutions  
for your plastic parts



## Service

Our tailored service is key to developing the perfect custom-fit plastic solution. How does it work - and what can you expect?

Get in touch with us and arrange an appointment at your premises for an individually tailored initial consultation

1

Following your consultation, we'll conduct detailed research and come back to you promptly with material recommendations based on up-to-date scientific findings

2

On the basis of these recommendations, we'll then converse with you about possible approaches and choices of material. Our decisions about materials are manufacturer-independent and made purely on the basis of cost-benefit ratios and/or structure-property relationships

3

Following approval of the chosen plastic solution, the material will be sampled at your production facility and a collaborative optimisation phase embarked upon. During this phase, we will offer you support with technical issues pertaining to the material's intended application

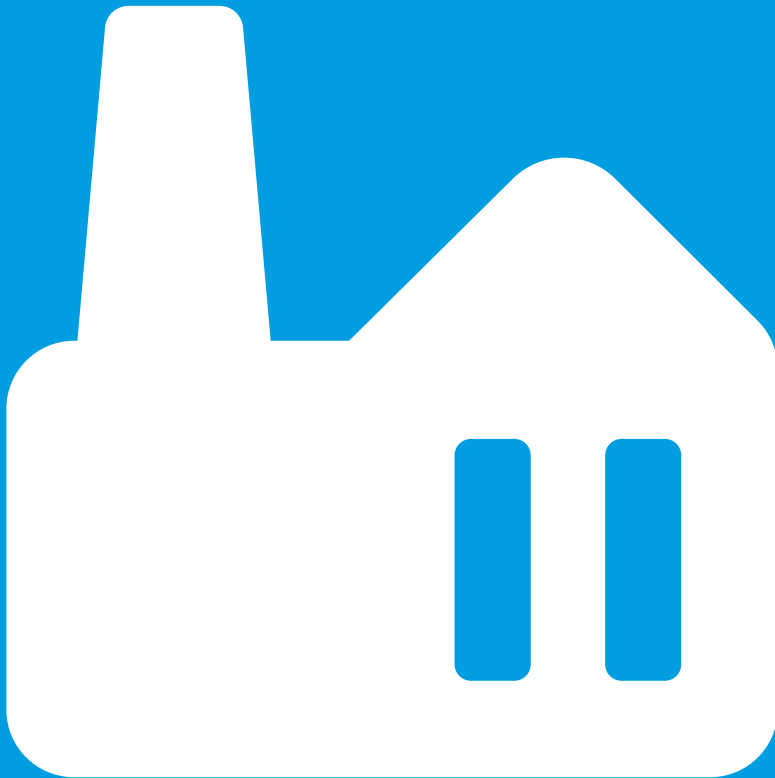
4

Batch production of plastic parts at your production facility using POLYMERWERKSTATT's innovative material solution

5

**We manufacture all product and material solutions at temperatures of up to 400°C in our own production facility.**

**Our external quality control guarantees the highest possible standards of quality.**



Our custom-tailored  
*compounds* provide the optimal  
solution for any scenario

# Product portfolio Compounds

Product lines based on thermoplastic materials PW

Ilium

are compounds with the base materials PC, PET, PBT und PEN

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Etamis

are compounds with the base materials ABS, SAN, ASA, MMA, SBC

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Elcoor

are compounds with the base materials PEEK, PSU, PAEK, PESU,  
PPSU, PI, PAI, PBI, PEI

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Laros

are compounds with the base materials TPE-S, -E, -A, -V

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Orbital

are compounds with the base material POM

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Normal

are compounds with PP & PE

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Anor

are compounds with the base materials PS

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Permulan

are compounds with polyamides

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Raloy

are polymer blends

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Gellix

are special solutions, including those made from LCP,  
fluoropolymers or plastics with special tacticity values

# Product portfolio Compounds

Functional additives and fillers - “modifiers”, to give them their more general name - are responsible for a significant percentage of modifications made to the properties of plastic products. The incorporation of these modifiers calls for a range of process and material-related considerations to be taken into account. They allow us to create enhanced structure-property relationships and better cost-benefit ratios for our customers.

Modifiers we offer

## Fibres

refers to all fibrous reinforcement materials with a high aspect ratio and the appropriate surface modifications for adhesion to the polymer matrix. These generally include glass, carbon, aramide, basalt and polymer fibres.

## Powders

refers to all powdered filler and reinforcement materials as well as to additives in powder form. These generally include talc, chalk, mica, wollastonite and other similar materials. They also include additives for thermo-oxidative stability, UV protection or other special modifications.

## Granules

are property modifiers that take the form of granules and/or plastics for polymer blends. They are selected and incorporated on the basis of the polymer’s intended application.

## Liquids

are used when a certain modifier is available only in liquid form and/or when a modifier is used with liquids to serve a secondary purpose besides its basic function, particularly to provide translucent colouring.

**A wide range of products for a full spectrum of applications**



# Product portfolio Compounds

We offer tailored solutions for the following purposes

- Conveying special transmission properties
- Adjustment of impact strength
- Polymer stabilisation
- Surface Enhancement
- Reduction of cycle time
- Adjustment of melt viscosity
- Weight reduction
- Improved surface feel
- Flame retarded finish
- Enhancement of colour intensity
- Adjustment of rigidity
- Odour optimisation
- Improvement in electrical conductivity
- Enhancement of chemical resistance
- Process optimisation
- Deterring wear
- Enhancement of sliding properties
- Improvement in thermal conductivity
- Cost reduction
- Special solutions with additives

## Where can our Compounds be used?

	Household	Electrical & electronic	Transportation	Sport & Leisure, Toys	Packaging	Construction	Medical & Health
Illium (Polyester)	•	•	•	•			•
Etamis (Styrene- & acrylatecopolymers)	•	•	•	•	•		•
Elcoor (Ketones, sulfones, usw.)		•	•	•			•
Laros (TPE's)	•	•	•	•		•	•
Orbital (Acetal polymers)		•	•	•			
Nornal (Polyolefins)	•			•	•	•	•
Anor (Polystyrene)	•	•			•	•	
Permulan (Polyamides)		•	•	•		•	•
Raloy (Polymer blends)	•	•	•	•	•	•	•
Gellix (Spezial solutions)	•	•	•	•		•	•

Our functional *concentrates* and  
*masterbatches* can fulfil  
any requirement



# Portfolio Concentrates & Masterbatches

## Concentrates

Concentrates are highly filled products containing pigments or additives. They require only small amounts of carrier substances - or no carrier substances at all - to be used successfully. The mixtures we use are tailored to the project and/or customer at hand.

The advantages of using our concentrates are:

- no powder in the production process
  - explosion protection measures are not required
  - high feeding accuracy
- no costly repairs to scales due to improper handling
- can be tailored fully according to the function to be achieved

## Masterbatches

Masterbatches are granules containing colours or additives, the concentrations of which are higher in the masterbatch than in the final application. Unlike with concentrates, it is not technically possible to gain full use of the masterbatches without introducing a carrier material.

The advantages of using our masterbatches are:

- excellent dispersibility in the polymer matrix through precise tailoring to your base polymer
  - high cost-performance factor
  - improved cost-effectiveness through unbiased selection of materials and individually tailored guidance

# Functions of Concentrates & Masterbatches

	PW Nimus MB	PW Noveria MB
Transparency	•	
Impact strength		•
Stabilisation (One-Pack)	•	•
Surface modifier	•	
Mould release aid	•	
Surface feel (Soft-Touch)	•	
Conductivity (thermal/electric)		•
Process aid (One-Pack)		•
Chemical resistance	•	
Cost reduction	•	•
Flame retardant		•

- Custom-tailored *colouration* made to measure for translucent to high coverage finish

POLYMERWERKSTATT offers a “custom-fit” colouration agent or masterbatch for any and every plastics application. Our portfolio contains compound solutions for a number of specific applications and features - we make everything from translucent plastics to laser-weldable coloured ones.

## Portfolio Colouration & Masterbatches

The precise imparting of colours to plastics can serve important functions. These colours can assume a signal function (such as in high pressure pipes) or a purely aesthetic one (such as in special applications for the everyday consumer goods sector). When colouring plastics, it is especially important to ensure compliance with standards for contact with foodstuffs as well as with other health-related legal provisions.

## Possible Colouration & Masterbatches

Our products are available as finished Compounds or Masterbatches

	Compounds	Masterbatches	Concentrates
<a href="#">Illium (Polyester)</a>	•	•	•
Etamis (Styrene- & Acrylatecopolymers)	•	•	•
<a href="#">Elcoor (Ketones, sulfones, usw.)</a>	•	•	•
Laros (TPE's)	•	•	•
<a href="#">Orbital (Acetal polymers)</a>	•	•	•
Nornal (Polyolefins)	•	•	•
<a href="#">Anor (Polystyenes)</a>	•	•	•
Permulan (Polyamides)	•	•	•
<a href="#">Raloy (Polymer blends)</a>	•	•	•
Gellix (Spezial solutions)	•	•	•



Enhance your *sustainable*  
credentials with our recycled  
plastic products

# Solutions for Sustainable Products

Most companies now have sustainable aims anchored in their philosophies. With this in mind, POLYMERWERKSTATT offers a line of mono-material recycled plastics with almost the same properties as the original plastic. Together, we can make significant strides towards your sustainability goals. We support you in performing a variety of calculations - such as CO<sub>2</sub> equivalents - and can prepare the relevant documents for authorities on your behalf. What's more, our standards can help you achieve accreditations from internationally recognised institutions.

Our recycled products are made from *mono-material* production waste

POLYMERWERKSTATT recycles production waste so efficiently that it can be used for up to 100% of the content of new plastic parts. This production waste can be modified in such a way that losses in quality are negligible or non-existent; this in turn, allows recycled versions of coloured solutions and other compound solutions from our portfolio to be produced. These materials have a high cost-benefit ratio and are suitable for use in price-sensitive applications.



Our service in the area of recyclables includes:

- a free initial consultation that factors in your requirements
- a calculation of potential savings and environmentally relevant parameters
- the production and tailoring of the material
- support with technical issues regarding the material's application
- and the relevant technical documentation

[www.polymerwerkstatt.com](http://www.polymerwerkstatt.com)



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