

MURPEARL® + MURPEARL® AIR

PERFECTION YOU CAN SEE AND FEEL.

SURFACE TECHNOLOGY AT A WHOLE NEW LEVEL.

Two processes. One goal: perfect surfaces for your 3D-printed plastic components – functional, food-safe and impressively smooth.

3D printing opens up new freedom in design – but also brings challenges when it comes to surface quality. Without post-processing, 3D-printed components are often porous, uneven and therefore problematic in sensitive or functional applications. The consequences: more difficult cleaning, poor sealability, higher friction and limited optical quality.

3D-printed plastic components only realise their full potential with the right finishing. With MurPearl® and MurPearl® Air, Murtfeldt offers two targeted processes that perfectly combine surface quality, functionality and cost-effectiveness – depending on the application requirements.

Whether visible part, device, series component or media-carrying functional part: **our smoothing processes combine precision and performance.**



MURPEARL®

The original – for sensitive applications with the highest demands.

Immersion bath smoothing for hygienically smooth parts – without loss of geometry.

- + Interior smoothing & exterior smoothing
- + EU food approval (incl. interior areas)
- + Independent of geometry & component shape
- + Deep smoothing
- + Residual powder compound
- + Material: PA2200 natural
- + Max. component size: 240 × 240 × 200 mm

Typical applications:

- Food industry
- Medical technology
- Pharmaceutical industry
- Internally cooled nozzles, fluid-conducting channels etc.



MURPEARL® AIR

The smart addition – for coloured, filigree or large.

Automated steam smoothing for high-quality visual and tactile applications.

- + Exterior smoothing (depending on geometry)
- + For filigree, thin-walled & distortion-critical shapes
- + Movable components with function
- + EU food approval (for uncoloured parts)
- + Material: PA2200 natural + coloured, MurSint® PA12 blue
- + Intensive colour result
- + Large components up to 650 × 550 × 450 mm

Typical applications:

- Design objects & consumer goods
- Washable, movable functional components
- Coloured small series
- Large parts, filigree components, movable components

The surface decides. And we deliver it.

With decades of materials expertise in mechanical engineering, we develop solutions that bring real added value – both technically and economically.

OUR PROMISE:

We recommend the right process for you based on your requirements – honest, application-orientated and with a clear focus on quality and cost-effectiveness. **We make components better – with material expertise, mechanical engineering genetics and genuine passion.**

WHICH OF OUR PROCESSES SUITS YOUR APPLICATION?

Criterion	MurPearl®	MurPearl® Air
Smoothing	Exterior & interior	Exterior (depending on geometry)
Surface	Very smooth	Smooth
Residual powder compound	✓	×
Geometry-independent	✓	×
Coloured components	×	✓
Component size	240 × 240 × 200 mm	650 × 550 × 450 mm
Approval (EU food)	✓ (incl. inner surfaces)	✓ (uncoloured)
Process	Immersion bath	Vapour zone/condensation

Your added value WITH MURPEARL® TECHNOLOGIES

- ✓ **High-quality, sealed surface** – visibly smoother, non-porous, professional
- ✓ **Improved cleanability & hygiene** – reduced dirt adhesion, low-germ surfaces
- ✓ **Reduced friction** – optimised sliding properties for contact surfaces
- ✓ **Visually and functionally enhanced** – for visible components and demanding functional parts
- ✓ **Resistant & durable** – less abrasion, better resistance
- ✓ **Preservation of complex geometries** – no restrictions for filigree structures (MurPearl® Air)
- ✓ **Flexibility is retained** – ideal for functional, movable assemblies (MurPearl® Air)
- ✓ **Suitable for sealing surfaces** – improves the sealability of mounting surfaces
- ✓ **Also suitable for large-volume components** – scalability for different sizes (MurPearl® Air)
- ✓ **Reliable & reproducible** – suitable for industrial use and series production
- ✓ **Can be ideally combined with machining & reworking** – integrates flexibly into existing workflows

WHICH SMOOTHING PROCESS SUITS YOUR REQUIREMENTS AND YOUR COMPONENT?

LET US ADVISE YOU.

**EFFICIENT, SOLUTION-ORIENTATED,
FREE OF CHARGE.**



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