

MURPEARL® + MURPEARL® AIR

PERFECTION YOU CAN SEE AND FEEL.

SURFACE TECHNOLOGY TAKEN TO A WHOLE NEW LEVEL.

Two processes. One goal: Perfect surfaces for your 3D-printed plastic parts—functional, food-safe, and impressively smooth.

3D printing offers design freedom—but it also presents challenges when it comes to surface quality. Without post-processing, 3D-printed components are often porous and uneven, making them unsuitable for sensitive or functional applications. The consequences: difficult cleaning, poor sealability, higher friction, and limited visual quality. Only

through the right post-processing do 3D-printed plastic components realize their full potential. 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 it's a visible part, a fixture, a production component, or a media-carrying functional part: **our smoothing processes bring precision and performance together.**



MURPEARL®
The Original—for sensitive applications with the highest standards. Immersion-bath finishing for hygienically smooth parts—without loss of geometry.

- + Internal Smoothing & External Smoothing
- + EU Food Contact Approval (including internal areas)
- + Independent of geometry & part shape
- + Deep Smoothing
- + Residual pul connection
- + Material: PA2200 natural
- + Max. part size: 240 × 240 × 200 mm

Typical Applications:

- Food industry
- Medical technology
- Pharmaceutical industry
- Internally cooled nozzles, fluid-carrying channels, and much more



MURPEARL® AIR
The smart addition—for colored, delicate, or large-scale applications. Automated steam smoothing for applications with a high-quality look and feel

- + External smoothing (depending on part geometry)
- + For delicate, thin-walled, and warpage-sensitive shapes
- + Functional moving parts
- + EU food contact approval (for uncolored parts)
- + Material: PA2200 natural + colored, MurSint® PA12 blue
- + Vibrant color
- + Large parts up to 650 × 550 × 450 mm

Typical applications:

- Design objects & consumer goods
- Dishwasher-safe, moving functional parts
- Colored small-batch production
- Large parts, delicate parts, moving parts

THE SURFACE MAKES ALL THE DIFFERENCE. AND WE PROVIDE IT.

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

OUR PROMISE:

We recommend the right process for you based on your requirements—honestly, with a practical focus, and with a clear emphasis on quality and cost-effectiveness.

We make components better – with materials expertise, a heritage in mechanical engineering, and genuine passion.

WHICH PROCESS IS RIGHT FOR YOUR APPLICATION?

Criterion	MurPearl®	MurPearl® Air
Smoothing	Inside & Outside	Exterior (geometry-dependent)
Surface	Very smooth	Smooth
Residual pulse connection	✓	×
Geometry-independent	✓	×
Colored Components	×	✓
Component size	240 × 240 × 200 mm	650 × 550 × 450 mm
Approval (EU Food)	✓ (including interior surfaces)	(undyed)
Procedure	Immersion bath	Steam Zone/Condensation

YOUR ADDED VALUE WITH MURPEARL® TECHNOLOGIES

- ✓ **High-quality, seamless surface** – visibly smooth, non-porous, professional
- ✓ **Improved cleanability & hygiene** – reduces dirt adhesion, low-bacteria surfaces
- ✓ **Reduced friction** – optimized sliding properties for contact surfaces
- ✓ **Visually and functionally enhanced** – for visible components and demanding functional parts
- ✓ **Resilient & durable** – less abrasion, better durability
- ✓ **Preservation of complex geometries** – no limitations on delicate structures (MurPearl® Air)
- ✓ **Mobility is preserved** – ideal for functional, movable assemblies (MurPearl® Air)
- ✓ **Suitable for sealing surfaces** – improves sealability on mounting surfaces
- ✓ **Also suitable for large-volume components** – scalable for different sizes (MurPearl® Air)
- ✓ **Process-reliable & reproducible** – industry-ready and suitable for mass production (MurPearl® Air)
- ✓ **Ideal for combination with machining & rework** – integrates flexibly into existing workflows

WHICH SMOOTHING PROCESS IS RIGHT FOR YOUR NEEDS AND YOUR COMPONENT?

LET US ADVISE YOU:

EFFICIENT,
SOLUTION-ORIENTED,
FREE.



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Go to the contact form – [Click here!](#)