

TheraPEA™

Biodegradable Polyester Amide Platform

Gentle on APIs. Powerful in performance.

Backed by 15+ years of development and clinical research, TheraPEA™ polymers enable sustained drug delivery with zero-order degradation kinetics. Their non-acidic breakdown avoids low pH environments, making them ideal for pH-sensitive APIs and reducing degradation-related side effects*.

Built for long-term impact in drug delivery

- From weeks to months of sustained release
- Broad IP lasting into the mid 2030s
- Proven track record of use in FDA-, EU-, and PMDA-approved medical devices

Enabling the development of novel sustained drug delivery treatments

Excellent biocompatibility proven in multiple settings*

Metabolic disease – Increasing patient convenience and adherence in the management of metabolic diseases, including diabetes and obesity through longer duration therapies.

Cardiovascular – Enabling natural healing across a variety of applications, ranging from drug-eluting stent coatings to drug coated balloons.

Oncology – Formulating long-duration drug formulations that are compatible with even the most challenging APIs.

Ophthalmology – Creating more effective therapy options with lower dosing frequency.

Pain management – Enables longer acting non-opioid pain relief treatments.

Chronic disease management – Potential for developing long-acting therapies.

Versatile formats for controlled drug delivery

Fibers and rods	• Microfiber diameter: 100µm – mm • API loading possible from 10 – 50% by weight
Injectable microparticles	• Typical diameter can range from 10 – 100µm • A broad range of API loadings is possible
Drug eluting coatings and films	• Compatibility with number of substrates, with excellent adhesion to metals • Excellent melt processability • Unique solubility properties, including in low molecular weight hydrocarbon alcohols
In-situ forming depots	• Emerging technology for small hydrophobic APIs and large hydrophilic molecules

Proven differentiators over traditional biodegradable polymers

- The ability to enable formulations with near linear release rates from weeks to months*
- Controlled degradation kinetics (weeks to months) without acidification of the micro-environment
- Unique solubility properties, including in low hydrocarbon alcohols, for ease of processing with active pharmaceutical ingredients including low temperature melt processing into multiple treatment forms
- Broad IP (Intellectual Property) protection provides opportunities for drug life cycle extension
- Excellent material shelf-life at recommended storage conditions – up to five years at storage conditions*
- Sustainability – reducing medical waste and more effective use of APIs

*Data on file

Product Disclaimer Evaluation of the biological safety and functional performance (including API compatibility with TheraPEA™) of a material produced by dsm-firmenich in a final, finished medical device/medicinal application remains the responsibility of the legal medical device manufacturer.

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