

	CORE PELLETS					COATED PELLETS
	DRUG LAYERED CORE PELLETS		MATRIX CORE PELLETS			
structure of · core pellets · coated pellets						
Glatt Technology	Wurster (bottomspray) 	Rotor powderlayering 	CPS pelletisation 	Extrusion / Spheronisation 	MicroPx 	ProCell
process mode	batch	batch	batch	batch / continuous	continuous	
solid starting material	starter pellets ≥ 100 µm	starter pellets ≥ 100 µm	microcrystalline cellulose powder API etc.	microcrystalline cellulose powder API etc.	no	
processing of API/coating liquid solvent(s)	from a liquid (solution, suspension, emulsion, melt) water, organic solvent(s)	as powder water, organic solvent(s)	as powder water	wetted mass of API + microcrystalline cellulose water, organic solvent(s)	from a liquid (solution, suspension, emulsion, melt) water, organic solvent(s)	
API dosage	strength / drug load	strength / drug load	strength / drug load	strength / drug load	strength / drug load	strength / drug load
low	• • • • • ~0,01 - 10 %	na ~0,01 - 10 %	• • • • • ~0,01 - 10 %	• • • • • ~0,01 - 10 %	• • • • • ~0,01 - 10 %	• • • • • ~0,01 - 10 %
medium	• • • • • ~10 - 50 %	• • • • • ~10 - 50 %	• • • • • ~10 - 50 %	• • • • • ~10 - 50 %	• • • • • ~10 - 50 %	• • • • • ~10 - 50 %
high	• • • • • ~50 - 80 %	• • • • • ~50 - 80 %	• • • • • ~50 - 80 %	• • • • • ~50 - 80 %	• • • • • ~50 - 80 %	• • • • • ~50 - 80 %
very high	na ~80 - 100 %	na ~80 - 100 %	na ~80 - 100 %	na ~80 - 100 %	• • • • • ~80 - 100 %	• • • • • ~80 - 100 %
properties of API	chemically stable in water, organic solvents	sensitive to moisture	chemically stable in water	chemically stable in water, organic solvents	chemically stable in water, organic solvents, melt	
smallest pellet size achievable	~150 - 400 µm micropellets possible	~300 - 400 µm micropellets possible	~150 - 400 µm micropellets possible	> 700 µm micropellets NOT possible	~150 - 400 µm micropellets possible	
comment	preferred technology for drug layering with chemically stable APIs	preferred technology for medium / high dosed moisture sensitive APIs	high impact of physico-chemical properties of API on the process quality (sticking of wetted API)	often imperfect sphericity and surface smoothness potential impact on coating quality and performance	usual drug load: 90 - 95 % preferred technology for high drug loaded micropellets	usual drug load: 90 - 95 % preferred technology for high drug loaded pellets including temperature sensitive API
high potent/ containment feasibility	smart high potent processing approach				smart high potent processing approach	
						coating liquid: · solution · dispersion · melt solvents: · water · organic solvent(s)