

UNIPEKTIN Ingredients AG - Functional Fibres, Portfolio and Comparison			V2, Oct. 2021			unipektin			unipektin			unipektin		
Product	Apple Fibre		Carrot Fibre	Citrus Fibre		Guar Fibre depolymerized (PDGG)	Sugarbeet Fibre		Pear Fibre	Pectin HM				
Fibre Type / Source	de-juiced apples, apple pomace		carrot pulp	citrus peels		Partially depolymerized guar gum	sugarbeet pulp after sugar extraction		de-juiced pears, pear pomace	sugar beet	apple	citrus		
Tradename	VIDOFIBRES AF 3 C	VIDOFIBRES AF 7 C	VIDOFIBRES KF 15 C	VIDOFIBRES CF 1525 A	VIDOFIBRES CF 1525 C	VIDOFIBRES GF 25 A	VIDOFIBRES BF 5	VIDOFIBRES BF 10	VIDOFIBRES PF 3 C	VIDOPECTINE EBS 00	VIDOPECTINE RSA 00 USP	VIDOPECTINE RS 00 USP		
	grades: A,C,E,F,G,H,Flake			grades: A,C,E,F,G,H,Flake			grades: A,C,E,F,G,H,Flake			pure pectin, DE > 50%	pure pectin, DE > 69%	pure pectin, DE > x %		
% Dietary Fibre (average values)	> 60 %	> 55 %	> 60 %	> 70 %	> 70 %	> 75 %	> 70 %	> 65 %	> 55 %	≤ 65 %	> 85 %	> 85 %		
% insoluble	> 50 %	> 45 %	> 40 %	> 35 %	> 35 %	n.d.	> 52 %	> 47 %	> 40 %	-	-	-		
% soluble	≤ 10 % (= pectin)	> 10 % (= pectin)	> 18 %	> 35 %	> 35 %	> 75 %	< 18 % (mostly pectin)	> 18 %	> 15 %	55 - 65 %	> 85 %	> 85 %		
Carbohydrates, total	< 23 %	< 25 %	< 18 %	< 11 %	< 11 %	< 11 %	< 10 %	3.0 %	< 24 %	≤ 25 %	≤ 25 %	≤ 25 %		
Carbohydrates, sugars				< 2 %	< 2 %	< 1.0 %	< 2.5 %	< 2.5 %	< 4.6 %	< 0.5 %	< 2.0 %	< 2.0 %		
Protein	< 5 %	< 5 %	< 7 %	< 7 %	< 7 %	≤ 1.0 %	< 8 %	< 8 %	3.0 - 5.0	≤ 9.0 %	< 1.0 %	< 1.0 %		
pH value (1% in water)	3.0 - 5.0	3.0 - 5.0	4.5 - 6.5	4.0 - 6.0	4.0 - 6.1	4.5 - 6.7	4 - 6	5.0 - 6.8	2.8 - 3.8	2.8 - 3.8	2.8-3.8	2.8 - 3.8		
Minerals, ash	< 3.0 %	< 3.0 %	< 5.0 %	< 4.0 %	< 4.0 %	< 1.5 %	≤ 4 %	≤ 4 %	< 3.0 %	Acid insoluble ash < 1.0 %	Acid insoluble ash < 1.0 %	Acid insoluble ash < 1.0 %		
Functionality														
viscosity (hot or cold)	no significant viscosity	no significant viscosity	hot & cold viscosity	hot & cold viscosity	hot & cold viscosity	cold (1%) 20 - 30 mPas	low hot & cold viscosity	low hot & cold viscosity	no significant viscosity	low hot & cold viscosity	medium hot & cold viscosity	medium hot & cold viscosity		
Water binding capacity WBC (g H <sub>2</sub> O per g of fibre)*	3 - 4	6 - 7	16 - 20	12 - 15	12 - 15	5 - 10	3.5 - 6	7 - 10	3 - 4	n/a	n/a	n/a		
Swelling Capacity SC (volume in ml per g of fibre)**	3 - 5	3 - 5	30 - 40	10 - 15	10 - 15	not specified	5 - 7	5 - 7	3 - 5	n/a	n/a	n/a		
Oil binding capacity (g oil per g of fibre)	n/a	n/a	4	4	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
particle size	95% < 0.15 mm (100 mesh)	95% < 0.15 mm (100 mesh)	≥ 90% < 0.150 mm	≥ 90% < 0.070 mm (200mesh)	≥ 90% < 0.150 mm (100mesh)	max. 1% > 0.250mm (60 mesh)	superfine to flake	superfine to flake	95% < 0.15 mm (100 mesh)					
solubility	weak	weak	partly soluble	partly soluble	partly soluble	soluble	partly soluble	partly soluble	weak	soluble when heated	soluble when heated	soluble when heated		
processing tolerance	stable	stable	stable	stable	stable	good stability	stable	stable	stable	heat and low pH stable	heat and low pH stable	heat and low pH stable		
gelling effect (usually shearing necessary)	weak gel >60Bx and pH <3.2	weak gel >60Bx and pH <3.2	no gel	gels at >55Bx and pH <3.5	gels at >55Bx and pH <3.6	no gel	no gel	no gel	no gel	gels at >55Bx and pH <3.5	gels at >55Bx and pH <3.5	gels at >55Bx and pH <3.5		
emulsion capacity	n/a	n/a	supporting	supporting	supporting	n/a	supporting	supporting	n/a	good, typical dosage 0.25 - 2.0%	n/a	n/a		
clarity/sheen/opacity in finished product	opaque, brownish	opaque, brownish	opaque, whitish	opaque, yellow tinge	opaque, yellow tinge	opaque	cloudy, turbid	cloudy, turbid	opaque, brownish	clear	clear	clear		
cold water swelling/dispersibility	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	no	no		
Film Forming properties	no	no	no	no	no	no	no	no	no	yes	yes	yes		
free flow agent	no	no	(yes)	yes	(yes)	no	(yes)	(yes)	no	no	no	no		
Sensory Properties														
Mouthfeel in dispersion	slight pulpiness, sandiness		pulpy, smooth	pulpy, smooth	pulpy, smooth	smooth	pulpy, sandy	pulpy, sandy	slight pulpiness, sandiness	smooth	smooth	smooth		
Taste	fruity, typical apple		sweetish, bland	fruity, bland	fruity, bland	neutral	typical	typical	fruity, typically pear	bland	bland	bland		
Colour	light brown		beige to off-white	beige to off-white	beige to off-white	white to off-white	beige-grey	beige	light brown	greyish	light brown	off-white		
Transparency (1% dispersion in water)	low, turbid, light brown		turbid	turbid	turbid	turbid			low, turbid, light brown	opaque	opaque	opaque		
Specification details														
labelling, declaration	apple fibre, fruit fibre, plant fibre		carrot fibre, vegetable fibre, plant fibre	citrus fibre, fruit fibre, plant fibre		guar fibre	sugar beet fibre, vegetable fibre		pear fibre, fruit fibre, plant fibre	pectin (440)	pectin (440)	pectin (440)		
Country of origin	Switzerland		Germany	Switzerland	Switzerland	Switzerland	Switzerland		Switzerland	Switzerland	Switzerland	Switzerland		
HS-Code	4706.9100		712.9089	1302.3900	1302.3901	1302.3290	2303.2090		4706.9100	1302.2019	1302.2019	1302.2019		
Organic certification	BIO quality available					no	BIO quality available		BIO quality available	no	no	no		
GM status	GMO free		GMO free	GMO free	GMO free	GMO free	GMO free		GMO free	GMO free	GMO free	GMO free		
Allergen status	allergen free		allergen free	allergen free	allergen free	allergen free	allergen free		allergen free	allergen free	allergen free	allergen free		
Gluten-free	< 20 ppm		< 3 ppm	< 3 ppm	< 3 ppm	< 20 ppm	< 10 ppm		< 20 ppm	< 20 ppm	< 20 ppm	< 20 ppm		
Halal certified	yes		yes	yes	yes	yes	yes		yes	yes	yes	yes		
Kosher certified	yes		yes	yes	yes	yes	yes		yes	yes	yes	yes		
USP Grade	no		no	no	no	no	no		no	no	no	no		
Pack size	22 kg bags or boxes	25 kg bags or boxes	12.5 kg bags	22 kg bags or boxes	25 kg bags	25 kg bags	A - G: 22kg bags, H: 14kg bags, Flakes: 16kg bags		20	25	25	25		
Best before, months	24	24	24	24	24	24	36	36	24	24	24	24		

\* Method Water Binding Capacity: 0.8g sample is mixed with 9.2g water, let stand for 24h, the centrifuged at 3,000rpm for 10 min. The supernatant is weighed off, then the WBC calculated as x g of water per g of fibre.

\*\* Method Swelling Capacity: SC is determined according to the modified method of Rosell, Santos & Collar (2009). One gram of sample is mixed with 40 mL of distilled water with light agitation/panning (no mechanical shearing or stirring), then allowed to hydrate for 24 h at 25 °C ± 1 °C. The volume of the sample is recorded after 24 h. Swelling capacity is expressed as mL per gram of sample.

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