

## Products Selection Grid — Bakery Applications

Bakery Category	Application	Product	Recommended Use Level (%)	Bulletin Number	Finished Product Benefits/Attributes
<b>Dough</b>	Frozen Bread Dough Frozen Pizza Dough Frozen Croissant Dough Frozen Danish Dough Frozen Cinnamon Dough	Viscarin® XP 3480	0.1 - 0.3	CNF-48	<ul style="list-style-type: none"> <li>■ Helps improve volume of frozen dough products (15-20%)</li> <li>■ Protects yeast cells/gluten during processing</li> <li>■ Withstands temperature abuses during storage and transportation</li> <li>■ Maintains sensory attributes of baked products</li> <li>■ Reduces bake-off loss (1-2.5%)</li> </ul>
<b>Bakery Snacks</b>	Cake Donuts, Fried	Viscarin XP 3399	0.2 - 0.3	CNF-29	<ul style="list-style-type: none"> <li>■ Helps improve product yield</li> <li>■ Extends shelf life</li> <li>■ Imparts viscosity for improved machinability</li> <li>■ Reduces fat uptake without affecting sensory attributes</li> </ul>
<b>Snack Bars</b>	Texture Improved Nutritional Snack Bars	Novagel® BK 2132	2.00 - 4.00	CNF-04	<ul style="list-style-type: none"> <li>■ Maintains soft texture through product shelf-life</li> <li>■ Provides smooth creamy mouthfeel</li> <li>■ Promotes a clean flavor profile</li> <li>■ Reduces mixing time</li> <li>■ Improves machinability</li> </ul>
<b>Icings</b>	Donut Icing and Glaze – Freeze-Thaw Stable	<b>For Icing:</b> Avicel-plus® BK 4430 + Viscarin SD 389  <b>For Opaque Glaze:</b> Novagel® GP 2180 + Viscarin SD 389	0.75 + 0.20  0.50 + 0.20 - 0.25	CNF-16	<ul style="list-style-type: none"> <li>■ Promote sugar crystallization and decrease setting time</li> <li>■ Inhibit separation and weeping or drying and cracking during freezer storage</li> <li>■ Produce desirable surface sheen</li> <li>■ Produce smooth, creamy mouthfeel</li> <li>■ Allow for even coating</li> </ul>
<b>Transparent Bakery Glazes</b>	Dry Mix Cake Glaze <i>(for house hold use)</i>	Gelcarin® DX 5253	0.5 - 0.7	CNF-43A	<ul style="list-style-type: none"> <li>■ Good gel clarity</li> <li>■ Non sticky with good sliceability</li> <li>■ Good syneresis control</li> <li>■ Wide range of textures possible</li> <li>■ Quick-setting, refrigeration not required</li> <li>■ Compatible with starch</li> </ul>
	Industrial Cake Glazes <i>(RTU)</i>	<b>For Use in Liquid Glazes:</b> (10 to 25°Brix) Gelcarin DG 4257 Gelcarin DX 5253 Nutricol® XP 2278  <b>For Use in Concentrated Glazes:</b> (30 to 65°Brix) Protanal® LF 20/40	0.6 - 0.9 0.5 - 0.7 0.6 - 0.9  0.4 - 0.6	CNF-43B	<ul style="list-style-type: none"> <li>■ Excellent syneresis control</li> <li>■ Excellent gel clarity</li> <li>■ Improved freeze-thaw stability</li> <li>■ Non-sticky with good sliceability</li> <li>■ Used in combination with pectin to increase meltability and soften texture</li> </ul>

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Inclusions	Fruit Based Inclusions: Refer to Selection Grid: <b>Restructured Foods</b>				
	Bake-Stable Marshmallows	Novagel® GP 2180 + Gelcarin® GP 379	2.00 + 0.50	CNF-10	<ul style="list-style-type: none"> <li>■ Impart heat stable properties</li> <li>■ Produce desired air-cell structure and texture</li> <li>■ Gelatin-free; suitable for kosher and vegetarian food systems</li> <li>■ Increase productivity by using a one-vat system</li> </ul>
Bakery Fillings	Fruit Based Bake Stable Fillings	Refer to Selection Grid: <b>Bake Stable Fruit Fillings for pH 3.6 — 4.0</b>			
	Neutral Fillings	Bakery Filling Creams, RTU ( <i>hot processed</i> )	<b>For High Brix Recipes:</b> Novagel GP 3282      0.8 – 1.0 Protanal® BK 6854    0.4 – 0.6 Protanal BK 0654      0.4 – 0.6  <b>For Low Brix Recipes:</b> Novagel GP 3282      0.8 – 1.0 Novagel® GP 2180    1.0 – 1.2 Viscarin® BK 7161    0.3 – 0.5	CNF-35	<ul style="list-style-type: none"> <li>■ Ease of processing due to thixotropic properties</li> <li>■ Possibility of obtaining excellent bake stability</li> <li>■ Improved freeze-thaw stability</li> <li>■ Imparts smooth texture, creamy mouthfeel and clean flavor release</li> </ul>
		Instant Bakery Filling Creams ( <i>cold processed</i> )	<b>For Quick Setting Creams:</b> Protanal BK 4754      2.0 – 3.0 Protanal BK 0854      2.0 – 3.0 Protanal BK 0454      2.5 – 3.5 Viscarin BK 7161      1.2 – 1.4  <b>For Slow Setting Creams:</b> Protanal BK 6854      2.0 – 3.0 Protanal BK 0654      2.0 – 3.0	Use-level in dry mix	CNF-01