

NOVATION[®] LUMINA 650

Functionality: NOVATION[®] Lumina 650 is a functional, clean label, cold water swelling (CWS) waxy maize starch with moderate process tolerance, coarse granularity and enhanced shelf-life stability. Suitable for instant applications with long or challenging texture stability over shelf life, where lumping is a risk, slower hydration is required, mixing in low temperatures or processes that have challenges of mixing and dispersion, e.g. sauces, gravies and powder mixes.

Description: functional native cold-water swelling starch

Features	Benefits
Consumer friendly simple "starch" labelling Classed as a food ingredient in the EU	Potential for marketing and labelling claims (e.g. can support clean label positioning*). Ideal in wide range of foods, where thickening combined with clean, simple consumer friendly labelling is a requirement. May be used in foods certified as organic*, permitted within 5% of the agricultural ingredients of non-organic origin**. *depends on other ingredients in the recipe ** EU legislation defining permitted non-organic origin ingredients is due to be amended by end 2020, and from January 2023, non-organic waxy maize starch will no longer be permitted for use in organic processed foods
Cold-water swelling (CWS)	Develops instant viscosity in cold or hot water, providing energy savings and reduced cost to the manufacturer.
Excellent dispersion characteristics	Easy to use starch in a wide range of instant food applications. It can be added directly to hot or cold water without lumping and without the need for pre-blending and even at low shear conditions. Helps to save time and energy as a pre-mixing and cooking step are not required.
Bland flavour profile	Specially designed for applications with delicate flavours can enhance the flavour of existing products and/or reduce flavours used in application.
Neutral colour	Specially designed for white-, light- and bright coloured applications
Moderate process tolerance to the effects of heat, acid and shear	Suitable for a wide range of application with medium/ low pH or those that require cooking or baking. Enables food manufacturers to apply low shear and low temperature processes.
High texture stability over shelf life (ambient, refrigerated and frozen)	Offers differentiation by maintaining indulgent textures with a creamy mouth feel and glossy appearance at ambient, refrigerated or frozen storage conditions
Gluten-free	Suitable for "gluten-free" positioning

APPLICATION AND USAGE INFORMATION

Application Summary:

NOVATION[®] Lumina 650 functional native cold-water swelling starch is specially designed for white-, light- and bright coloured applications with delicate flavours. NOVATION[®] Lumina 650 is a unique functional native pre-gelatinized

Effective Date 06.10.2020

The information described above is offered solely for your consideration, investigation, and independent verification. It is up to you to decide whether and how to use this information. Ingredion Incorporated and the Ingredion group of companies make no warranty about the accuracy or completeness of the information contained above or the suitability of any of their products for your specific intended use. Furthermore, all express or implied warranties of noninfringement, merchantability, or fitness for a particular purpose are hereby disclaimed. Ingredion Incorporated and the Ingredion group of companies assume no responsibility for any liability or damages arising out of or relating to any of the foregoing.

The INGREDION mark and logo are trademarks of the Ingredion group of companies. All rights reserved. All contents copyright © 2020.

starch with moderate process tolerance allowing for easy dispersion and instant viscosity build, while at the same time providing enhanced texture stability for instant products that have an extended shelf-life or need to be freeze-thaw stable.

Typical applications include:

NOVATION® Lumina 650 can be used in fruit fillings, pies, cheese cakes, quiche, where it develops a creamy indulgent mouthfeel.

Fruit preparation: NOVATION® Lumina 650 provides high gloss in fruit preparations. Additionally, NOVATION® Lumina 650 can be used in a hot process for high brix fruit preparations to achieve an optimized starch cook whilst other cook-up starches compete against the high sugar amount and cannot develop their full viscosity.

Quiche: NOVATION® Lumina 650 controls the viscosity of the quiche filling while preventing food pieces to sink to the bottom. NOVATION® Lumina 650 can be used alone at higher usage level (4 to 5 %) or at lower usage level (2 to 3 %) in combination with cook-up starches e.g. NOVATION® Lumina 600.

Mayonnaise: Moderate acid and shear stability make NOVATION® Lumina 650 ideal for cold processed mayonnaise with short and moderate shear processes that require a long, cold or frozen shelf-life. It provides exceptional creamy mouthfeel, perfect for the use in both high and low-fat mayonnaises.

Sweet baked goods: NOVATION® Lumina 650 supports gluten-free formulations through viscosity management and by improving the crumb structure e.g. in muffins. Additionally, NOVATION® Lumina 650 provides creamy and stable textures over shelf life in cheesecakes.

Usage Information:

NOVATION® Lumina 650 provides instant viscosity and can be directly added to the water phase. Pre-mixing with other dry ingredients is not obligatory.

For fruit preparation the starting usage range varies from 2 - 4%.

For quiche the starting usage range varies from 4 - 5% instant alone or 2 - 3% in combination with a cook-up starch.

For mayonnaise typically 4% are being used.

For sweet baked goods typically 2% are being used.

Label declaration recommendation: Starch (Customary name* in UK is cornflour)

*UK Food Labelling Regulations, further information available on request

EU Classification: Food ingredient

This document is issued on behalf of the Ingredion EMEA Company which is supplying the product. The Ingredion EMEA Companies are part of the Ingredion group of companies. The respective details of each of the Ingredion EMEA Companies are as follows:

Ingredion UK Limited	Rafhan Maize Products Company Ltd	Ingredion Germany GmbH	Ingredion South Africa (Pty) Ltd
Ingredion House Manchester Green 339 Styal Road Manchester M22 5LW England	Rakh Canal East Road Faisalabad Pakistan	Grüner Deich 110 20097 Hamburg Germany	Infinity Office Park, Suite 6, Block C, 2 Robin Close, Meyersdal, 1448, Gauteng RSA
P: +44 (0) 161 435 3200 F: +44 (0) 161 435 3300	P: +92 (0) 41 854 0121 F: +92 (0) 41 871 1016	P: +49 (0) 40 23 91 50 F: +49 (0) 40 23 91 51 70	P: +27 (0) 11 867 9260 F: +27 (0) 11 867 9271
Registered in England No. 07315745	Registration number 79 of 1952-1953	Amtsgericht Hamburg HRB 105432	Registration number 2010/013219/07

Effective Date 06.10.2020

The information described above is offered solely for your consideration, investigation, and independent verification. It is up to you to decide whether and how to use this information. Ingredion Incorporated and the Ingredion group of companies make no warranty about the accuracy or completeness of the information contained above or the suitability of any of their products for your specific intended use. Furthermore, all express or implied warranties of noninfringement, merchantability, or fitness for a particular purpose are hereby disclaimed. Ingredion Incorporated and the Ingredion group of companies assume no responsibility for any liability or damages arising out of or relating to any of the foregoing.

The INGREDION mark and logo are trademarks of the Ingredion group of companies. All rights reserved. All contents copyright © 2020.