



Regulatory Affairs Compliance Information (RACI)

NatureWorks has a fundamental duty to protect the environment, those that use our products, and our future. This duty is the basis for our Product Stewardship philosophy, by which we assess the health and environmental information on our products and their intended use. Our job is to maintain an effective product stewardship program to ensure that customers involved with our product receive sufficient information and training to store, use, and dispose of our product with no harm to human health or the environment. The information below is general regulatory compliance for a portion of the Ingeo™ biopolymer portfolio. If you need further information, please contact your account manager or via regulatory@natureworkslc.com.

CHEMICAL CONTROL LAW COMPLIANCE

Global regulations exist to evaluate materials to assure the protection of human health and the environment from any unreasonable risks associated with chemical substances. A majority of Ingeo™ biopolymer products as supplied comply with the below global chemical inventories and regional legislation:

United States (TSCA)	Listed - Active
European Union (REACH)	Compliant – Registered
Canada	Listed on the DSL
Japan (ENCS)	Listed
Australia (AICS)	Listed
Korea (KECL)	Listed
Korea-REACH	Compliant - Certified Exempt
China (IECSC)	Listed
Taiwan (TCSI)	Listed
UK-REACH	Compliant - Registered
California Proposition 65	Not listed

FOOD PACKAGING MATERIALS COMPLIANCE

Many Ingeo™ biopolymer products are suitable for food contact applications and have compliance with a number of global food contact regulations including Japan, China, Canada, and MERCOSUR. Information on US and Europe status can be found below.

As supplied, the following grades comply with the following requirements:

Ingeo™ biopolymer			
2003D	2500HP	3001D	3052D
3100HP	3251D	4032D	4043D
6100D	6202D	6252D	6400D
6752D			

In the US under FCN 178 (Food Contact Notification) for all food types with the limitation of conditions of use B-H. <http://www.fda.gov/Food/IngredientsPackagingLabeling/PackagingFCS/default.htm>

In Europe as a raw material with 1935/2004/EEC and Regulation 10/2011, applying to all EU Member States. Regulation 10/2011 specifies overall migration less than 10 mg/dm². There are no SML's for the above referenced Ingeo™ biopolymer products in Regulation 10/2011.

As supplied from our factory, the following grades comply with the following requirements:

Ingeo™ biopolymer			
4060D	6060D		

In the US under FCN 475 (Food Contact Notification) for all food types with the limitation of conditions of use C-G. <http://www.fda.gov/Food/IngredientsPackagingLabeling/PackagingFCS/default.htm>

In Europe as a raw material with 1935/2004/EEC and Regulation 10/2011, applying to all EU Member States. Regulation 10/2011 specifies overall migration less than 10 mg/dm². There are no SML's for the above referenced Ingeo™ biopolymer products in Regulation 10/2011.

We urge all of our customers to perform GMP (Good Manufacturing Procedures) when constructing a package so that it is suitable and safe for the end use. Please note that it is the responsibility of both the manufacturers of finished food contact articles as well as the industrial food packers to make sure that these articles in their actual use are in compliance with applicable legislation(s).

RoHS AND CONEG

Ingeo™ biopolymer products are compliant with RoHS (2011/65/EC) and CONEG. During the manufacturing of Ingeo™ biopolymer products listed below, none of the restricted substances are intentionally added nor thought to be present.

Ingeo™ biopolymer			
2003D	2500HP	3001D	3052D
3100HP	3251D	3D850	4032D
4043D	4060D	6060D	6100D
6202D	6252D	6400D	6752D

BIOBASED CONTENT

NatureWorks carries the TÜV Austria Belgium OK Biobased and USDA BioPreferred certifications. These certifications are based on the biobased content of Ingeo™ biopolymer products which can be determined through radiocarbon dating according to ASTM D6866 (Standard Test Method for Determining the Biobased Content of Natural range Materials Using Radiocarbon and Isotope Ratio mass Spectrometry Analysis).

Ingeo™ biopolymer			
2003D	2500HP	3001D	3052D
3100HP	3251D	3D850	4032D
4043D	4060D	6060D	6100D
6202D	6252D	6400D	6752D

This information is not intended to relieve NatureWork's customers from the requirement to test your biobased product. Under the TUV-Austria Belgium OK biobased and BioPreferred certification programs, a customer of NatureWorks cannot use the TUV-Austria Belgium OK biobased or BioPreferred logo on their products without gaining these certifications on their end products.

Visit the below links for details on NatureWorks certifications.

<https://www.biopreferred.gov/BioPreferred/faces/catalog/Catalog.xhtml>

<http://www.tuv-at.be/certified-products/>

ORGANIC RECYCLING – INDUSTRIAL COMPOSTING

Composting is a method of waste disposal that allows organic materials to be recycled into a product that can be used as a valuable soil amendment. Many Ingeo™ biopolymer products are suitable for industrial-based composting systems which are well managed systems that regulate temperature, moisture, and aeration. In these systems Ingeo breaks down just like other carbon based organic matter sources.

NatureWorks has carried out testing in accordance to ASTM D-6400, EU EN 13432 and ISO 17088 guidelines at an independent testing laboratory. Many Ingeo™ biopolymer products carry the BPI, Seedling, and DIN CERTCO certifications including:

Ingeo™ biopolymer			
2003D	2500HP	3001D	3052D
3100HP	3251D	4032D	4043D
4060D	6060D	6100D	6202D
6252D	6400D	6752D	

This information is not intended to relieve you from the requirement to test your product(s). Under the BPI (Biodegradable Products Institute), Seedling, and DIN CERTCO certifications, a customer of NatureWorks cannot use the BPI, DIN, or Seedling logo on their products without gaining these certifications on their end products.

Visit the below links for details on NatureWorks certifications.

www.bpiworld.org

<https://www.dincertco.tuv.com/companies/87938?locale=de>

KOSHER AND HALAL

NatureWorks has obtained certification for Ingeo™ biopolymer products through the Kashruth Division of the Union of Orthodox Jewish Congregations of America and such grades are accordingly kosher and pareve. Ingeo™ biopolymer products are not currently certified according to Halal however, many of the Ingeo™ biopolymer products do meet the requirements.

ALLERGIES

Triggers of allergic responses are antigens, often proteins, which can be found in air, food and water. In the case of corn allergens, profilin, a protein, has been identified in corn and in many other plant (food) extracts. When food is heated passed the heat-labile point, its chemical configuration changes. Due to the extreme heat and numerous processing steps to convert corn into lactic acid and then to Ingeo™ biopolymers, they would not contain immunologically reactive profilin and therefore no concerns regarding allergic reactions from Ingeo™ biopolymer products.

Ingeo™ biopolymer does not contain any known amounts of components derived from the ingredients listed in Regulation 1169/2011/EC or identified as “major food allergen” according to the definition under 21USC 321.201 of the FD&C Act and the Food Allergen Labeling and Consumer Protection Act (FALCPA).

The information herein is presented in good faith and believed to be accurate as of the effective date of this document. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

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