



## Polyolefins

### Borealis position on Food Hygiene demands and standards

#### 0. INTRODUCTION

Responsibility is a founding value within Borealis. Our HSE and ethical policies set high standards for our business activities. Our production locations in Austria, Belgium, Finland, Germany, Italy, The Netherlands and Sweden are certified according to ISO 9001 and ISO 14001.

#### 1. SCOPE

This position statement is intended to answer most of the questions on food hygiene performance and the application of GMP that are directed to Borealis as a supplier of PE and PP raw materials for Food Packaging. This statement supports the packaging manufacturer to fulfil the BRC/IOP standard, ISO 22000 and EN 15593.

#### 2. THE BOREALIS HSE&Q MANAGEMENT SYSTEM

Borealis is committed to [Responsible Care®](#) supported by an annual process of HSE&Q target setting and reporting. [The Responsible Care Policy](#) and [Quality policy](#) are available on our website. Borealis is certified at European level according to ISO9001 and ISO14001 standards for its activities in design and development of products, manufacturing, sales and distribution.

Borealis is additionally certified for ISO/TS16949 for products supplied to automotive customers. Conformance to ISO standards are regularly audited by independent third party certification bodies, in addition local authorities and major customers are frequently auditing Borealis locations. Valid certificates are available for [download](#) on our Borealis website:

#### 3. RAW MATERIALS FOR FOOD

Borealis materials intended for food contact are regularly assessed regarding their compliance with the latest applicable legislation and standards. Legal compliance is confirmed per polymer grade in our Declaration of [compliance to Food Contact Regulations](#), which can be downloaded from our website. The final responsibility for migration compliance lies with the manufacturer and the filler of the package.

#### 4. MANAGING THE CONTAMINATION ISSUE

##### 4.1 Mechanical contamination

The polymerisation process is a closed process, where Critical Control Points are very few and are controlled by normal operating and quality procedures. This is also why we do not see a need to introduce special rules regarding excessive protective clothing or other restrictions on personnel's behaviour.

##### 4.2 Microbiological contamination

The reasoning in paragraph 4.1 applies also to microbiological contamination. Further the high temperature (>200 °C) in the polymerisation and pelletising stages eliminates all biological activity.

##### 4.3 Chemical contamination

Borealis operates a process for Incoming Chemicals, where all chemicals bought, used and sold are assessed and controlled. No preparations without known composition are allowed into our system. Minor impurities, such as catalyst residues, may be present, but at levels of no concern.

## Polyolefins

### 5. SELF ASSESSMENT STEP BY STEP

In order to even better secure our delivery capabilities to the food packaging manufacturing sector, we have entered into a self-assessment of our process units. This is done by assessment based on FMEA principles:



#### 5.1 Management of raw materials

- Before being approved for use in Borealis, all new raw materials are controlled by our experts for incoming chemicals regarding their compliance with applicable legislation and standards
- Only selected and approved suppliers are used.
- All incoming raw materials are visually inspected when feasible.
- Raw material properties are verified according to the specifications agreed with the supplier; incoming control is carried out according to internal procedures.
- Raw materials are marked after release and segregated according to approval status before being stored in appropriate, closed facilities.

#### 5.2 Polymerisation and pelletising

- Preparation and dosing of raw materials is carried out according to product specifications and recipes stating defined tolerances and the raw material article number.
- Dosing of raw materials is controlled by process control systems and continuously monitored.
- Concentrations of additives in the final product are controlled through testing or mass balance calculations.
- All produced batches are identified with a unique batch number. This batch number is indicated on each CMR and CoA. Systems are in place for the traceability of raw materials and products.
- Transition rules secure a product sequence that minimises contamination risks.
- Treated water is used for pellet cooling.

#### 5.3 Handling and storing before loading and packing

- All plants have dedicated transfer lines.
- Pellets and polymer dust generated during transfer are removed in accordance with our cleaning procedures.
- Bacterial contamination is limited through filtering of transfer air and regular filter changes.

#### 5.4 Loading, storing and dispatching products in bulk

- Dedicated transfer lines exist for each plant at Borealis. Cleaning / flushing procedures to remove pellets from previous loading are in use.



## Polyolefins

- Requirements securing dry, clean and odourless tanks are reflected in forwarder contracts.
- Trucks are cleaned at SQAS audited cleaning stations; washing certificates are controlled (with exceptions for dedicated trucks in shuttle traffic carrying the same grade).
- Transshipment centres follow Borealis defined standards.

### 5.5 Packing, storing and dispatching packed products

- Only approved packaging material suppliers are used.
- The packaging materials conform to directive 94/62/EC (heavy metals, noxious and hazardous substances or regulations valid in the region where the material will be supplied).
- The packaging materials for pellets comply with the latest regulations on products intended to come into contact with food
- The process is controlled through packaging orders stating product name, batch number and storage silos.
- Cleaning / flushing procedures to remove pellets from previous packing are in use.
- Warehouses are cleaned and checked regularly.
- Pest control measures are in place and monitored at all locations
- Pallets are inspected before loading and corrected in case of deviations.

### 5.6 Transporting and delivery

- Strict regulations apply to material and construction of containers, gaskets and fittings.
- Bulk trucks are sealed during transport.
- Blowers on bulk trucks deliver air free of dust, oil and water and have filters removing particles larger than 5 microns from the transport air.

## 6. COMPLIANCE TO FOOD HYGIENE DEMANDS AND GMP

Based on the above description of our delivery process, we state that through our Quality and Incoming Chemicals Systems we

- are able to deliver products that can be safely used for hygienic food contact applications and make it possible for the packaging manufacturer to obtain applicable certification.
- fulfil the general rules on GMP as laid down in the Articles 5, 6 and 7 of COMMISSION REGULATION (EC) No 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food.

The described Borealis HSE&Q-management system has already been positively assessed several times in authority audits regarding its compliance with the applicable GMP-requirements.

### Issuer

This document is issued by Borealis Group Product Stewardship / Jürgen Emig.

### Disclaimer

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability whatsoever for the accuracy and completeness of such information.

 **Polyolefins**

**Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.**

**It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.**

No liability can be accepted in respect of the use of Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.