

## Frequently Asked Questions

As leading Austrian plastics producer, Borealis is frequently asked about its environment, health and safety practices and performance.

The following answers some of the most frequently asked questions and links you to other parts of our web site for more information.

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Borealis is always open for dialogue and to share its views. If you have any additional questions, please contact: [info@borealisgroup.com](mailto:info@borealisgroup.com).

### 1. What plastics materials does Borealis manufacture?

Borealis is a leading provider of innovative polyolefin solutions (PE and PP) for the infrastructure (pipe systems and power and communication cables), automotive and advanced packaging markets. As a polyolefins specialist, Borealis does not manufacture nor sell other types of plastic materials whether PS, PVC, ABS or PC.

For more information on our plastics solutions please visit [Industry Solutions](#).

### 2. How does Borealis ensure that its products are safe?

Plastic materials and additives used for applications like food packaging, drinking water or medical care are strictly regulated by health authorities. As part of our chemicals control process, all substances used at Borealis are documented and tested. We further strictly prohibit the use of a range of substances that pose specific regulatory or scientific concerns. For transparent communication with its customers and other stakeholders, Borealis publishes a ["Black and Grey list"](#) of banned or restricted substances and regularly updates it in light of the conclusions of risk assessments and classifications of chemicals. It includes, for instance, all known endocrine disrupters, phthalates, PAHs, heavy metal additives or brominated flame retardants.

For further information consult Borealis' [product stewardship](#) pages.

### 3. How transparent is Borealis about its products and performances?

Committed to Responsible Care®, Borealis endeavours to open dialogue and transparent information to all stakeholders. We report annually our environmental, health and safety performance from greenhouse gases emissions to recorded incidents.

All our products are documented with extensive products and [safety data sheets](#). We further declare the presence of regulated additives, have published our ["Black and Grey list" of banned or restricted substances](#) and further certify compliance with all applicable regulatory limits or restrictions. All this information is openly available on our web site.

For more information see our [datasheet section](#), or [responsible care section](#) of our 2009 [annual report](#) or our [product stewardship pages](#). You can also [e-mail](#) us your feedback or further questions.

#### **4. How do you ensure safety for your employees and the surrounding area?**

Borealis places a constant priority on health and safety at work place. The guiding rule of all our operations is simple: "if we can't do it safely we don't do it at all".

Due to the high pressure of our processes and the explosive nature of our feedstock, our plants are classified installations and require indeed strict safety rules for workers, contractors or visitors. Because safety starts with controlled access and mandatory safety equipments, any visitor entering our plant has to follow safety instructions and we do not allow anyone to get closer to a plant than absolutely necessary. This even includes our own employees.

Safety of operations and staff preparedness is further constantly checked and improved. In 2009 we performed more than 12,400 safety observation tours across all our locations and 95% of reported incidents were recorded and followed up by actions. Thanks to this continuous focus on health and safety, our level of work place incidents has been kept below 2 per million of hours worked and is recognised as a world class performance.

For more information on our HSE performance please consult our [annual report](#).

#### **5. Why don't you produce bio-plastics?**

Bio-plastics are renewable based and/or biodegradable plastics. Borealis has investigated the possibility of using bio-ethanol as a feedstock. After review, we do not consider it to be ethical and sustainable to use feedstock competing with food, water and land uses for manufacturing our products. Second generation "bio-fuels", based on biomass waste, may offer a more sustainable feedstock route but are not today available for large scale production.

Biodegradable plastics may offer to some applications interesting properties. But they also raise significant problems for existing waste management as they may contaminate recycling streams and require industrial facilities to be composted. In any case, we do not consider biodegradable plastics as a solution for waste littering which is first of all a behavioural issue.

#### **6. How do you address climate change?**

Climate change is one of the main challenges our world is facing. Borealis therefore strives to cut its own emissions, reduce its energy use but also to advance plastics solutions for a more energy efficient and lower-carbon world.

From 1990 to 2009, the carbon intensity of the production from Borealis' current locations decreased by 43%.

Compared to traditional, heavier materials, the light weight and resistance of plastics materials makes a key contribution to prevent carbon emissions. One kilo of PP used in a car application such as a fender or bumper can prevent more than eight kilos of carbon emissions over the life of the vehicle. In advanced packaging our LDPE Borstar® film grades makes it possible to reduce by 40% CO<sub>2</sub> emissions during the life of the applications.

For more information read our [climate change brochure](#).

#### **7. What do you do for waste management?**

Whether plastic or not, waste littering is an acute issue in some regions, particularly for the marine environment. But, plastics are too valuable to throw away. All plastics waste can have a second life - either as material or as an energy source. We all have a shared responsibility to tackle waste and prevent littering: industry to design products for reducing, recycling or recovering waste, authorities to put efficient waste management systems in place and consumers to discard their waste properly. Borealis develops solutions that reduce, prevent or can help remedy littering, such as new material solutions that reduce the amount of waste or better fit recycling needs. Our latest generation of PE allows a further reduction of 25% of material use hence less waste for packaging applications. Borealis is also a founding member of the Waste Free Ocean Foundation - an industry-led initiative bringing innovative solutions and advancing education to clean-up Europe's coast lines and waters.

For more information visit [www.wastefreeoceans.eu](http://www.wastefreeoceans.eu) and "[Sharing our views](#)".

## **8. How do you support the REACH implementation?**

Borealis has welcomed the adoption of REACH, the new EU regulation on chemicals registration, evaluation and authorisation. This regulation gives clear foundations to better manage chemicals and to strengthen trust in the contribution chemicals make to society. Since 2004, Borealis has been anticipating the implementation of REACH. We were the first plastics manufacturer to partner with the plastics converters to exchange chemical information and better assess possible risks for each type of application.

Today, Borealis only purchases from suppliers that have so far confirmed their REACH compliance.

For more information, please consult our [REACH pages](#).

## **9. What do you do to cope with the risks of a pandemic?**

At Borealis, we have extensive emergency plans in place to cope with the risks of business interruptions that might occur due to a further spread of the H1N1 virus. These plans have been in force since the Avian influenza ("bird flu") in 2006, and are regularly updated in line with internal revisions as well as external recommendations, such as those issued by the World Health Organization (WHO).

In addition, governments and local authorities in the countries in which we operate have also taken preventative measures, so that we currently assume that the H1N1 virus does not pose a threat to your raw material supply, production, or cross-border delivery from Borealis.

Whilst we cannot guarantee the above assumption, we continue to monitor the global H1N1 development, as well as other potentially pandemic diseases. Although they are unlikely to affect our production schedules, any interruptions in production that might affect your business will be communicated at the earliest opportunity.

## **10. What do you think about the ongoing discussion around the ban of plastic bags?**

Even though plastic bags represent a small fraction of littered waste, it has become a general symbol for the waste challenge our today's society is facing today. Yet plastics bags littering is a plague in some countries where it might pose a risk for marine wildlife or cause blockages in sewage systems.

The fact is that littering, like any improper use of a product, is first and foremost a behavioural issue which requires education and raising consumer awareness. We believe that banning or taxing a product does not change people's behaviour and will just shift the littering problem to other applications. It does neither improve waste management practices.

Borealis is in favour of substituting single use carrier bags by reusable plastic bags through programmes which combine effective education to a sound environmental solution. Reusable plastics bags have the best environmental performance compared to other material alternatives where we see that paper sacks alone generate 70% more air pollutants and 50 times more water pollutants than its plastic counterparts.

## **11. Are you using phthalates in your products?**

The most relevant worldwide use of phthalates is the use as plasticizer (softener), mostly in PVC.

As a PO producer, Borealis does not use phthalates as additives to soften its PE or PP products as we use a special technology of PO design. Borealis uses certain phthalates solely as component of its PP polymerisation catalyst system. No health risk has been so far raised on such use in controlled closed processes.

In any case, these phthalates are currently on the Borealis Grey List, which means that Borealis has engaged in a substitution programme of phthalates in its catalysts.

For further information consult our ["Black and Grey list"](#).

## **12. Does Borealis use BPA in its products?**

As a producer of PE and PP, Borealis does not use Bisphenol A (BPA) in any of our products nor do we produce polycarbonate.