# Position Paper
# on Microplastics

Lidl Malta · Status 11/2020

**https://corporate.lidl.com.mt/sustainability**

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# 1. Our Understanding of Microplastics

There is currently no uniform definition of what exactly falls under the term 'microplastic'. This term typically refers to any plastic fragment that is smaller than five millimeters.

Microplastics can be divided into primary and secondary microplastics. Primary microplastics are industrially-manufactured plastic particles that are intentionally added to a product, such as abrasive microplastic particles in exfoliating products. These plastic particles, smaller than five millimeters, are often referred to as 'microbeads'.

Secondary microplastics, on the other hand, result from the degradation of larger plastic pieces in the environment. They may originate, for example, from tire abrasion or the degradation of plastic waste, such as packaging, bags or bottles (the so-called 'macroplastics') which end up in the environment and disintegrate into smaller and smaller plastic pieces.

Body care products and cosmetics are often at the heart of the public debate on microplastics. In 2018, the Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT published an extensive study on the main sources of micro- and macroplastics[1]. According to the research, most microplastics get into the environment due to tire abrasion. Only less than one percent of microplastics in the environment originate from cosmetic products.

Lidl takes responsibility for the product areas over which it has a direct influence.

## Ecological Implications

Plastic is a controversial material that is becoming an increasingly significant environmental problem, since plastic is non-biodegradable and therefore persists in the environment for several years. It is usually produced from the processing of crude oil (petroleum), a raw material which is becoming ever scarcer. Petroleum extraction creates substantial ecological problems through the contamination of soil and water, air pollution, habitat loss and deforestation. This process may also have social consequences, such as migrations or diseases resulting from the contamination of soil and water.

In addition to the risks posed by the manufacturing of microplastics, there are also problems concerning their release into the environment. Primary microplastics, such as those used in shower gels, usually get into sewage treatment plants through waste water. There is not enough evidence yet to determine whether sewage treatment plants are effective in filtering out most microplastic particles in waste water. This way, residual microplastic particles can enter the ocean or groundwater. Quantitatively, however, the most significant source of microplastics in the ocean is the degradation of larger pieces of plastic into secondary microplastics.

In the ocean, plastic microparticles can – depending on the size of the organism –lead to digestive tract injuries in marine animals involving both impaired digestion and blocked food intake, just like larger pieces of plastic. Microplastics can also act as a vector for the

transport of hazardous materials, invasive species and pathogens. Chemicals suspected of being harmful to health, such as plasticizers, which are used as additives in the plastic manufacturing process, can also enter bodies of water or the digestive tract of marine animals. Their actual impacts are the subject of current research.

However, microplastics can also get into the environment as sewage sludge from sewage treatment plants, which is often spread on fields as nutrient-rich fertilizer. Once there, the particles can be ingested by animals or washed into bodies of water. Discarded plastic can even be found as a residue in the air.

This means microplastics are found in the water, on land and in the air, and also get into our food supply through the food chain. They have already been found in many types of food (e.g., mussels, fish, honey, beer) and in drinking water. For the first time, microplastics were found in human stool samples of all international participants in a pilot study by the German Environment Agency and the Medical University of Vienna.[2] The actual toxicological risks for humans caused by the release of plastics and plastic particles are currently the subject of various scientific studies.

## Our Approach

We are part of the Schwarz Group, which, including the retail group companies Lidl and Kaufland, is one of the largest retail companies in the world. The Schwarz Group is conscious of its responsibility to the environment and takes it very seriously. Its REset Plastic strategy is a holistic internationally applied strategy developed to cover five action areas: avoidance (REduce), design (REdesign), recycling (REcycle), elimination (REmove), innovation and education (REsearch).

Microplastics are just one side of the public debate on plastic. Since 2015, we have been focused on this topic, believing that reducing microplastic emissions from all sources is essential. There is currently no legal ban on microplastics in cosmetic items at European level. This is why we are in favor of a uniform European legal framework in which microplastics are clearly defined.

Lidl has made the following target agreement with the suppliers of cosmetic and body care products:

**Elimination of microplastics in the formulas of cosmetic products of our own brands by 2021, provided that the elimination of synthetic polymers does not significantly limit product performance and/or product safety.**

These are **plastic particles with abrasive effect** ('microbeads') smaller than five millimeters. In this respect, we currently include polyamide (PA), polyethylene (PE), polyethylene terephthalate (PET), polyester (PES), polyimide (PI), polypropylene (PP) and polyurethane (PUR) plastics.

When we say 'Formulation without microplastics', we imply in our definition the inclusion of other non-biodegradable synthetic polymers* that are solid, dispersed, gel-like, dissolved or liquid. These include, among others, polyacrylates (e.g., acrylate copolymers, acrylate cross polymers, polyacrylates, carbomers, polymethyl methacrylate, polyacrylamides), polyquaternium, polystyrene, silicones (e.g., methicone, dimethiconol, other siloxanes and silanes), PEG > 35, PPG >50, polyvinyls, (e.g., polyvinylpyrrolidone (PVP)), polylactic acid (PLA), ethylene-vinyl acetate copolymers.

* Chemical reactions cause synthetic polymers to bond to form polymeric macromolecules from monomeric building blocks. These are to be differentiated from semisynthetic polymers, which are based on natural polymers such as cellulose and are chemically modified.

## 2. Scope

This position statement refers to all Lidl brands in the field of cosmetics and body care products.

## 3. Our Measures

In Lidl cosmetic products, solid microplastics made of polyethylene (PE), polypropylene (PP), polyethylene terephthalate (PET), polyvinyl chloride (PVC), polyamide (PA), polystyrene (PS) and polyurethane (PU) have largely been removed from the formulas.

For example, solid plastic particles of polyethylene (PE) and polypropylene (PP) have been replaced by pumice stone particles (Perlite) in shower scrubs and by bamboo particles (Bambusa Arundinacea Stem Powder) in exfoliating cleansers.

We are now going a step forward. In close collaboration with our suppliers, we are working hard to find an appropriate replacement for the so-called 'other synthetic polymers'. For example, these include polymethyl methacrylate (PMMA)

and polytetrafluoroethylenes (PTFE), which can still be found as texturing materials in foundation formulas, as well as styrene/acrylate copolymers that are used as opacifiers in countless products. Alternative materials must now be analyzed and assessed for various complex factors such as safety, environmental compatibility, effectiveness and technological applicability.

Lidl Malta features a selection of own-brand items labeled with the NATRUE certification in its assortment. This label is a certification for natural and organic cosmetics. Ingredients derived from mineral oils, and therefore microplastics, are not allowed. We plan to expand this product range in the future.

Lidl suppliers are bound by contract to comply with the requirements on microplastics.

Lidl will inform customers about progress and innovations regarding the topic of microplastics in sustainability publications, such as the sustainability report and the company website.

## 4. Organizations and Labels

### NATRUE Label

The NATRUE label for natural and organic cosmetics was launched in 2008. Products certified in accordance with the NATRUE label criteria meet high natural and organic cosmetic standards. Aside from water, NATRUE-certified products only contain natural substances, derived natural substances and nature-identical substances.

### Formulation without Microplastics

In order that Lidl customers can quickly identify all products with a microplastic-free formula, Lidl is introducing the seal 'Formulation without microplastics' for products from the cosmetic and body care sector. Many products in this area are already microplastic-free; the seal will thus offer more transparency to our customers.

## 5. Sources

[1] Fraunhofer Institute for Environmental, Safety, and Energy Technology (UMSICHT): Kunststoffe in der Umwelt: Mikro- und Makroplastik.
It can be found at:
https://www.umsicht.fraunhofer.de/content/dam/umsicht/de/dokumente/publikationen/2018/kunststoffe-id-umwelt-konsortialstudie-mikroplastik.pdf

[2] Assessment of microplastic concentrations in human stool – Preliminary results of a prospective study – Philipp Schwabl, Bettina Liebmann, Sebastian Köppel, Philipp Königshofer, Theresa Bucsics, Michael Trauner, Thomas Reiberger, presented as part of UEG Week 2018 in Vienna on October 24, 2018.