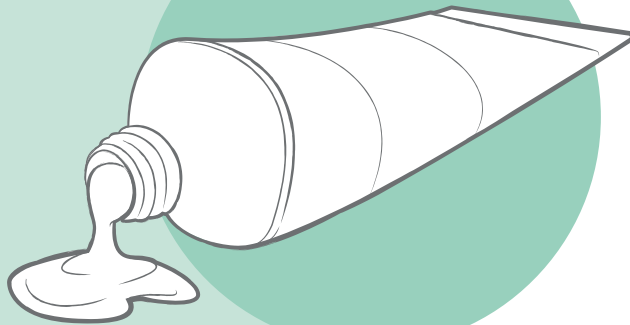


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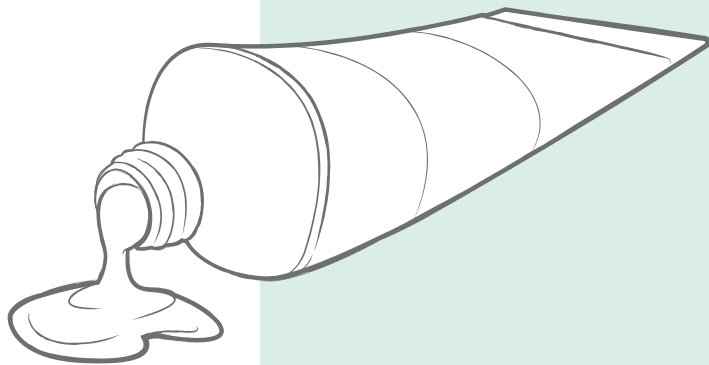
Microplastics in Cosmetic Products



We are committed to reducing the negative impact of microplastics and dissolved, liquid and gel-like synthetic and semi-synthetic polymers from cosmetic products on humans, animals and the environment.

CONTENTS

I. UNDERSTANDING AND SCOPE	4
II. ISSUES OF MICROPLASTICS	5
2.1 Microplastics and dissolved, gel-like or liquid polymers in cosmetics	7
2.2 Impacts on humans and the environment	10
III. APPROACH OF REWE GROUP FOR CREATING MORE RESPONSIBLE SUPPLY CHAINS	11
IV. REQUIREMENTS AND MEASURES	15
V. OBJECTIVES	17
VI. REPORTING AND COMMUNICATION	18
VII. LIST OF REFERENCES	19



I. UNDERSTANDING AND SCOPE

As a leading international trading and travel and tourism company, REWE Group is aware of its special role as an intermediary between manufacturers, service providers and consumers. The production of REWE Group's private label products has an impact on people (social), animals and nature (ecological). REWE Group's customers expect and should be able to trust that REWE Group, as a trading company, is aware of its responsibility in the supply chains of its private labels and addresses the effects. In its "Guideline for Sustainable Business Practices", REWE Group acknowledges its environmental and social corporate responsibility. The values described therein form the foundation for the responsible actions of the company (REWE Group 2011).

The present guideline specifies the requirements and measures of REWE Group for synthetic and semi-synthetic polymers used as microplastics or dissolved, gel-like and liquid polymers in cosmetic products. REWE Group aims at reducing the use of these substances in order to minimise negative effects on human health, the environment and animals.

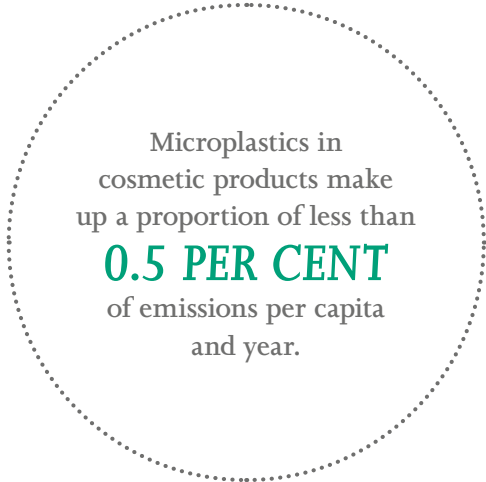
REWE Group would also like to make its employees and partners in the supply chain aware of the problems of synthetic and semi-synthetic polymers in cosmetic products and uses this guideline to point out measures and individual goals to reduce and avoid the use of these substances. The present guideline defines a binding framework for REWE Group's actions and the business relationships with contractual partners. Defined requirements and targets are consistently reviewed, and new measures and targets are agreed as required. In addition, the guideline is updated on the basis of current trends and developments.

The scope of the guidelines covers all cosmetic private labels of REWE Group, which are sold in Germany by REWE and PENNY stores. Within the scope of this guideline, microplastics as well as dissolved, gel-like and liquid synthetic and semi-synthetic polymers are considered. On the basis of the systematic sustainability commitment described here, the PRO PLANET label can be awarded to the corresponding products.

II. ISSUES OF MICROPLASTIC

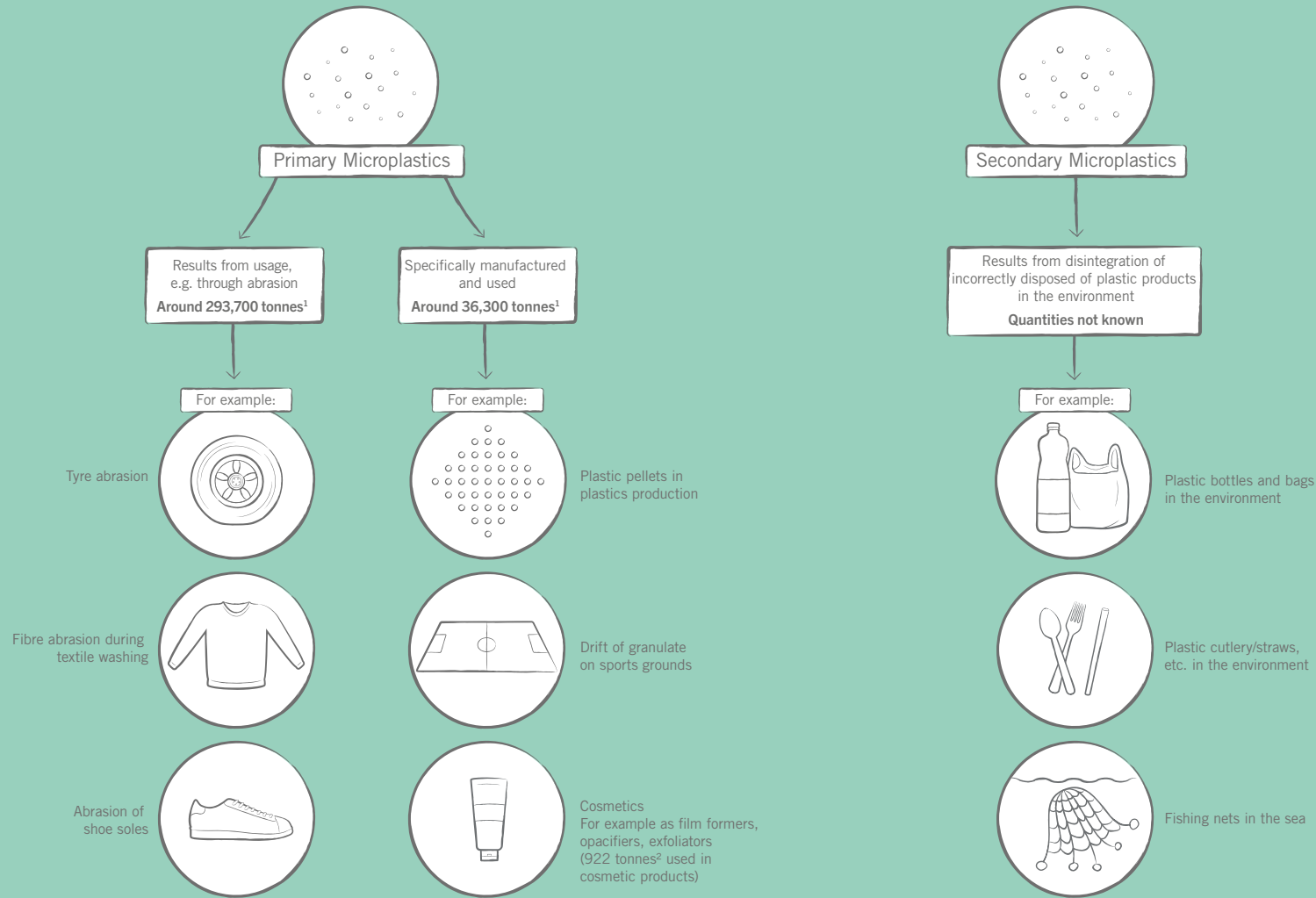
In microplastics, a distinction is made between primary and secondary microplastics. Primary microplastics are plastic particles that are specifically manufactured and used for their respective purposes or plastic particles that are released by abrasion and weathering when using plastic products. On the other hand, secondary microplastics arise when larger plastic products-so-called macroplastics - disintegrate through various mechanical, physiochemical or biological processes into microparticles. These can get into the environment, e.g. due to incorrect disposal of plastic products (Bertling, Bertling & Hamann 2018).

Basically, it should be noted that there are various sources of entry of microplastics. In Germany, abrasion of car tyres, emissions from waste disposal and asphalt abrasion are some of the main sources of primary microplastics (Bertling, Bertling & Hamann 2018). Microplastics in cosmetics, on the other hand, only make up a small proportion with less than 0.5 per cent of emissions per capita and year (Bertling, Bertling & Hamann 2018). This estimate does not include dissolved, gel-like and liquid polymers which are used in significantly higher quantities in cosmetic products, detergents and cleaning agents, for example, and which can get into the environment as well (Bertling, Hamann & Hiebel 2018).



Microplastics in
cosmetic products make
up a proportion of less than
0.5 PER CENT
of emissions per capita
and year.

Microplastics Emissions in Germany



2.1 Microplastics and dissolved, gel-like or liquid polymers in cosmetics

Microplastics as well as dissolved, gel-like or liquid polymers are used in the formulations of cosmetic products for several reasons. Microplastics are used, for example, in the form of so-called “microbeads” as exfoliators in peelings or as non-tactile ingredients that are invisible to the naked eye for clouding, film formation or as fillers. Dissolved, gel-like and liquid polymers are used in the cosmetics sector e.g. for hair fixation, in shampoos to prevent static build-up or as a colorant (Bertling, Hamann & Hiebel 2018). After their use, the substances are drained in the sink or shower and end up almost completely in the wastewater and from there in the sewage treatment plants, where they usually cannot be adequately filtered out. In this way, the polymers get into the environment and into our waters (BUND 2019).

¹: Annual quantity in Germany
Source: Bertling, Bertling & Hamann 2018

²: Annual quantity used for cosmetics in Germany
Source: Bertling, Hamann & Hiebel 2018

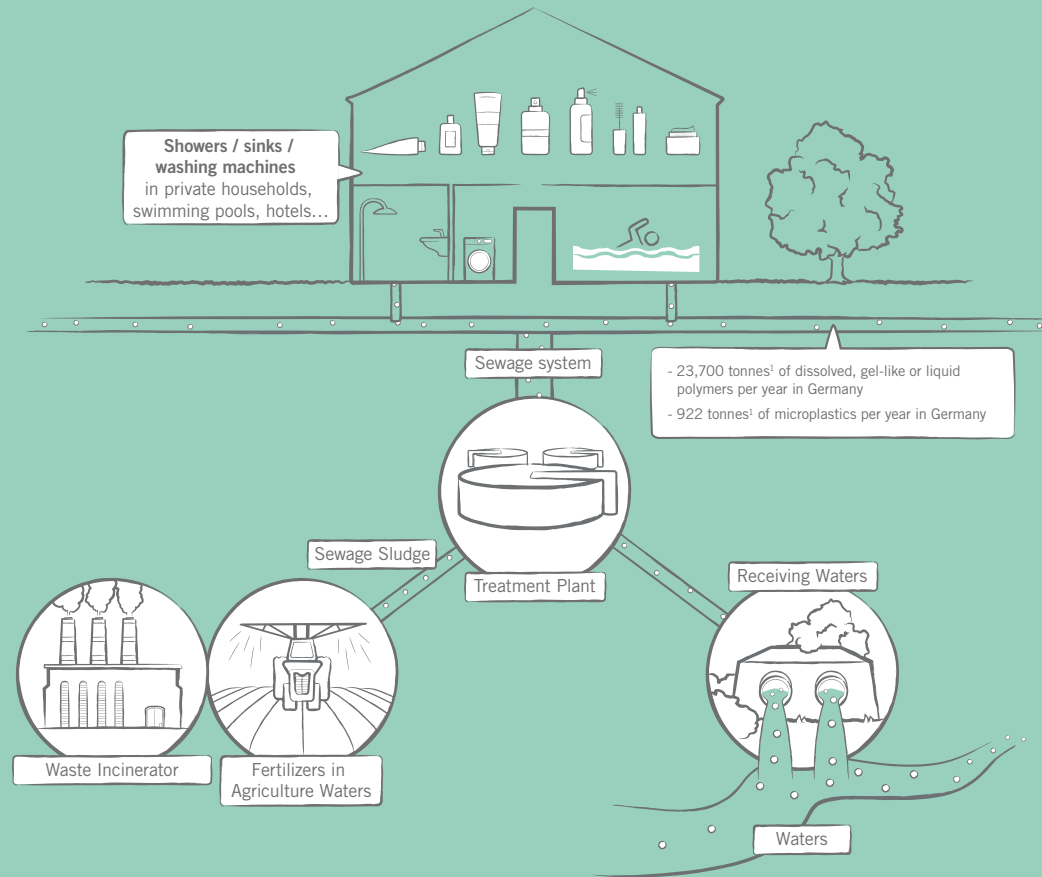
Figure 1: Microplastics Emissions in Germany



According to scientific estimates, the entry of dissolved, gel-like and liquid polymers into the environment is significantly higher than the entry of microplastics: Every year, around 23,700 tonnes of dissolved, gel-like or liquid polymers are used for cosmetic products alone. Microplastics from cosmetics make up around 922 tonnes per year (Bertling, Hamann & Hiebel 2018).

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Paths of microplastics and dissolved, gel-like and liquid polymers from cosmetic products into the environment



¹: Annual quantity used for cosmetics in Germany
Source: Bertling, Hamann & Hiebel 2018

Figure 2: Paths of microplastics and dissolved, gel-like and liquid polymers from cosmetic products into the environment

2.2 Impact on humans and the environment

Microplastics are believed to spread through both water cycles and the air. Therefore, it is assumed that the plastics will reach all areas of life and the environment or are already there. Marine animals ingest plastic particles accidentally, e.g. when searching for food. A study found microplastics less than one millimetre in size in 69 per cent of fish samples taken from the North and the Baltic Sea (German Federal Environment Agency 2017). Microplastic particles can also be found in fresh water, especially in rivers (Bertling, Bertling & Hamann 2018). In addition, microplastics can also end up on agricultural fields when sewage sludge from treatment plants is used as fertilizer instead of being burnt in waste incinerators (German Federal Institute for Risk Assessment 2019).

According to several studies, microplastics have various impacts. In marine animals, such as mussels and fish, the ingestion of solid particles may cause changes to the digestive system or inflammations (Greenpeace Research Laboratories 2016). Due to their physical and chemical properties, microplastics act like a “magnet” for pollutants. Therefore, the concentration of pollutants is often significantly higher on microplastic particles than in sea water (BUND 2019). The consequences for animals and the environment have not yet been completely investigated. However, negative impacts on the ecosystem are very likely (Bertling, Bertling & Hamann 2018).

Microplastics have not only been found in marine animals but also in food such as honey or beer as well as in potable water (Bertling, Bertling & Hamann 2018). These plastic particles are ingested and thus end up in the human body as well. The Vienna University has already demonstrated the existence of microplastics in the human organism (Schwabl et al. 2018). However, little is known about the consequences of synthetic and semi-synthetic polymers in the human body (Federal Institute for Risk Assessment 2019).

In many cases, the degradation time of microplastics is so long that it cannot be measured with today's tests. Dissolved, gel-like and liquid polymers, however, are often still inherently degradable, but can also be persistent (Bertling, Hamann & Hiebel 2018). The German Federal Environment Agency assumes that the ingestion of dissolved, gel-like and liquid polymers will cause no physical damages of the digestive system or displacement of food in marine animals since in contrast to microplastics there are no solids (Federal Environment Agency 2016). Other negative effects on organisms, however, cannot be ruled out, and dissolved polymers are not always easily degradable (NABU - Naturschutzbund Deutschland e.V. 2019).

III. APPROACH OF REWE GROUP FOR CREATING MORE SUSTAINABLE SUPPLY CHAINS

With a clear strategic commitment and appropriate measures, REWE Group aims to actively contribute to reducing and resolving ecological impacts of microplastics and dissolved, gel-like and liquid synthetic and semi-synthetic polymers in cosmetic products.

Sustainability is firmly anchored in REWE Group's corporate strategy. For REWE Group, this means: Promoting more sustainable product ranges and ensuring fair treatment of partners and suppliers, acting in an environmentally and climate-conscious manner, assuming responsibility for its employees and contributing to a sustainable society.

Within the sustainability strategy, the "Green Products" pillar bundles all activities aimed at making purchasing and production processes more sustainable and thus expanding more sustainable product ranges. The activities of REWE Group are broken down into three fields of action:

- People
- Animals
- Environment

REWE Group has developed an approach for responsible supply chains in order to identify, evaluate and process the effects of private label products on people, animals and the environment:

1. Risk analyses: REWE Group constantly assesses sustainability risks and opportunities. On the one hand, these analyses are based on external evaluations of product areas, specific products or raw material supply chains. On the other hand, the assessment and experience of the external NGO expert advisory board for sustainability as well as of other stakeholders such as producers and suppliers and also employees are included.

2. Derivation of focus topics and goals:

On the basis of the risk analyses carried out, focus raw materials and key topics as well as goals and measures were defined, which are adapted and scrutinised when new results or findings emerge.

3. Definition and implementation of measures:

Measures to achieve the goals and work on the focus raw materials and key topics are defined and implemented on three different management levels.

3.1. Internal cooperation: By raising internal awareness and providing training, continuously analysing risks and opportunities and formulating strategies and goals, REWE Group continues to integrate sustainable procurement into its purchasing processes with the aim of taking sustainability aspects into account in every supplier and/or product decision.

REWE Group supports

MORE SUSTAINABLE PRODUCT RANGES

and pays close attention to

FAIR CONDITIONS

with partners and suppliers.

It acts in an

ENVIRONMENT- AND CLIMATE-FRIENDLY MANNER,

assumes responsibility for its
employees and is committed
to a

SUSTAINABLE SOCIETY



3.2. Cooperation within the supply chain: REWE Group follows a three-step approach in its cooperation with parties involved in the supply chain, which includes the definition of requirements, control and development of suppliers and supply chains.

- a. All business partners in the supply chains of REWE Group's private labels are obliged to indicate the production sites in which the products are manufactured for REWE Group.
- b. By raising the contract partners' awareness and holding them accountable, concrete rules are created to implement sustainability throughout the supply chain.
- c. Training courses support suppliers and producers in implementing REWE Group's requirements and continuously improving their performance. In various projects, REWE Group works directly with raw material producers to meet the challenges.

In addition, transparency and the integration of sustainability are promoted as part of the supplier evaluation. Work in the supply chain also includes the establishment of effective complaint mechanisms.

3.3. Cooperation with stakeholders: In the long term, sustainability along the supply chain can only be achieved through cooperation with all relevant stakeholders. REWE Group is in continuous contact with a large number of stakeholders and is involved in various national and international initiatives, alliances and forums. Key elements include participation in external events, industry initiatives, partnerships, commitment to the further development of sustainability standards and the monitoring of relevant developments at political and regulatory level.

4. Monitoring and reporting: All activities carried out are monitored and evaluated. The findings of the monitoring are incorporated into the further development of the measures.

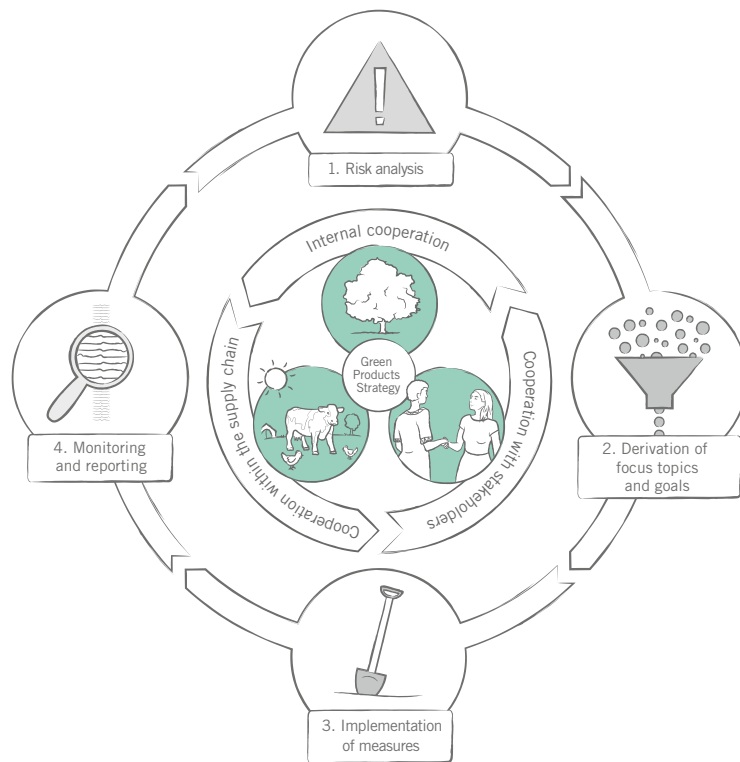


Figure 3: REWE Group's approach for responsible supply chains

IV. REQUIREMENTS AND MEASURES

REWE Group has laid down the basic values that apply to all business relations with REWE Group's contractual partners in its Guideline for Sustainable Business Practices. This includes respect for human rights, compliance with labour and social standards as well as the consideration of animal welfare and environmental protection. With the understanding and the corresponding requirements as well as measures described below, REWE Group specifies the basic principles set out in the guideline for suppliers of private label cosmetic products.

REWE Group is committed to reducing the negative impacts of microplastics and dissolved, liquid and gel-like synthetic and semi-synthetic polymers from cosmetic products on humans, animals and the environment. In a first step, REWE Group developed a definition of these polymers in order to make measures and requirements measurable and to be able to implement them together with the suppliers.

In accordance with the German Federal Environment Agency (Umweltbundesamt 2016), REWE Group regards microplastics as solid, water-insoluble synthetic and semi-synthetic polymers, i.e. plastic particles of up to five millimetres in size. It does not matter whether these polymers consist of fossil or renewable raw materials.

In addition, REWE Group addresses synthetic and semi-synthetic polymers in dissolved, gel-like or liquid form - again, irrespective of whether they consist of fossil or renewable raw materials. At this point in time, REWE Group is focusing only on all the compounds specified in the



International Nomenclature of Cosmetic Ingredients (INCI list) with the following word or word element:

- acryl (word element)
- polymer (word element)
- silane (word element)
- styrol or styrene (word element)
- polyquaternium
- nylon
- polyethylene terephthalate
- polyethylene
- polypropylene
- polyvinyl chloride
- polyester
- polyether
- polyamide
- polyimide
- polyurethane
- ethylene-vinyl acetate
- PVP
- polyvinyl alcohol
- hydroxyethyl cellulose
- carbomer

Dissolved, gel-like and liquid polymers and their individual impacts on the environment have not yet been investigated as thoroughly as microplastics. Therefore, REWE Group monitors the scientific progress very closely in order to incorporate new insights into its requirements regarding these polymers and to adapt the list of focus materials accordingly.

REWE Group communicates this understanding of microplastics and dissolved, gel-like and liquid polymers to its suppliers of private label products in order to ensure a uniform basis of understanding. In close cooperation with the suppliers, REWE Group conducts a continuous, item-specific review of the entire range of private label products in the cosmetics sector, with the goal of elaborating substitution options and new formulations together. In this way, REWE Group was able to abandon microbeads from all private label cosmetic products in 2014. Since then, only vegetable substances have been used instead of artificial peeling particles.

Suppliers of private label products must comply with the following requirements:

- The formulations of the cosmetic products must be free of microplastics as per REWE Group's definition.
- Wherever possible, but without compromising the quality of the product, the formulations of cosmetic products must be free of the focused synthetic and semi-synthetic polymers in dissolved, gel-like or liquid form as specified in the list of substances.

In order to ensure that its requirements are met, REWE Group will include the requirement of not using microplastics and its definitions of the terms as part of its contracts with the suppliers of the corresponding private label products. In addition, REWE Group's quality management will check the ingredients lists for the focused dissolved, gel-like and liquid polymers.

V. OBJECTIVES

REWE Group has set itself ambitious objectives in order to reduce negative impacts of microplastics and dissolved, gel-like and liquid synthetic and semi-synthetic polymers on human health as well as on the environment and animals. These give the trade group's commitment a clear orientation and are subject to a continuous progress review.

REWE Group has set itself the goal of abandoning the use of microplastics by the end of 2020 as per REWE Group's definition in the formulations of all private label cosmetic products of REWE and PENNY in Germany. In addition, the use of the focussed synthetic and semi-synthetic polymers in dissolved, gel-like or liquid form in the formulations of cosmetic products should be avoided wherever possible without compromising the quality of the product¹.

¹ applies to the formulations, not to carrier materials or product packaging.

REWE Group also pursues the goal of extending the abandonment of the use of microplastics and dissolved, gel-like or liquid synthetic and semi-synthetic polymers to other product groups.

In addition, REWE Group endeavours to make it transparent to the consumer which private label products are free of microplastics or free of the defined dissolved, gel-like or liquid synthetic and semi-synthetic polymers.

VI. REPORTING AND COMMUNICATION

REWE Group is convinced that transparency and the provision of comprehensive information are key components for the design of more sustainable supply chains. REWE Group reports regularly and publicly on the progress made in implementing the measures and achieving the goals outlined. This is done through press releases, via the REWE Group website or via the sustainability report of the Group. Separate reports are prepared on specific topics.



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The dialogue on the topic of microplastics is of great importance to us. Please contact us with suggestions and questions at:
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