

The Global Market for Biobased and Natural Microbeads to 2027

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Abstracts

Plastic microbeads are a multi-billion dollar market, with applications in markets ranging from cosmetics to oil & gas. However, their use is limited in some applications, and regulatory curbs regarding use are likely to increase.

Replacement of plastic microbeads with biodegradable and non-toxic alternatives is increasingly important and the market will grow to meet both regulatory demands and increased use of microbeads in healthcare (e.g pharmaceuticals and drug delivery), food and beverages), paints and coatings, and cosmetics and personal care sectors.

Microplastics can be separated into primary and secondary microplastics. Primary microplastics are mostly thermoset and thermoplast plastic materials that have been added to products to fulfil a certain function. For example, these synthetic non-degradable polymers are used in personal care and cosmetics for exfoliation, film formation, sorbents for delivering active ingredients, skin conditioning etc.. While some of these microbeads are clearly visible, others are in the micro- or nanometre range.

Personal care and cosmetic products since the 1990s have been increasingly formulated to include microbeads to improve their abrasive and other qualities. Many companies have curtailed their use or pivoted to natural alternatives, but it still represents a sizeable global market.

Secondary microplastics are formed by the fragmentation of macroplastics (>5 mm) by processes such as weathering of plastic litter and paint layers, as well as wear of car tyres and are the main focus of environmental concerns. However, primary microplastics also raise issues and are a target for regulation. Therefore the developments of biobased and natural alternatives has grown in recent years.

This report covers primary microplastics based on petroleum-based polymers and biobased and natural alternatives in the following markets:

Personal care.

Cosmetics.

Agriculture and horticulture.

Paints and coatings.

Oil and gas.

Medical and pharma.

Industrial abrasives.

Commercially available biodegradable plastics and natural materials used as primary microplastic alternatives covered include:

natural hard materials

starch based materials

bacteria based materials (e.g. PHA)

soy based materials

cellulose based materials

lignin based materials

natural fibers (e.g. bamboo, jute, sisal, etc.)

Data presented includes:

Markets and applications for primary microplastics including global production in tonnes 2017-2027, applications, types of microplastics added.

Markets and applications for biobased and natural microplastics alternative materials including types, applications, global production and suppliers.

Profiles of 33 producers. Companies profiled include Asahi Kasei, Calyxia, Daicel, Daito Kasei Kogyo Co., JNC, Naturbeads and Rengo.

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