



## White Paper – Microplastic Beads

Concerns regarding microplastic beads accumulating within certain parts of the ocean have led to a surge of negative publicity based on questionable research. Several environmental groups in Europe are promoting this issue, claiming that it could possibly affect the oceanic food supply. These groups have formed to put pressure on the cosmetic industry to cease the use of polyethylene microbeads which are used for applications such as exfoliation.

In response to these concerns, Micro Powders Inc. has compiled a summary of what is known about this subject as well as to how they may be properly addressed. Although the primary focus is with the use of PE plastic particles as exfoliants, in actuality a majority of the source of the PE particles is from resin pellets used as precursors in the manufacturing of packaging and other plastic products. The bulk of these beads are also created in the environment as larger plastic materials that occur as marine debris are broken down into small fragments from mechanical forces such as the oceanic current and UV light. Another large, and thought to be the biggest contributor is all the synthetic fibers in textiles that are pulled out from clothes during the wash cycle. The overall amount in the waste stream that reaches the ocean as a result of exfoliant scrubs is miniscule, especially in comparison to the sources listed above. The perceived issue is that these beads have a low density which causes them to float and accumulate. At the surface of the water, they are more exposed to UV light and other forces which cause them to break down further. Although there has been some research into the possible effects on the oceans and the oceanic food supply, the European sourced report says that the data is inconclusive and would require further investigation.

Despite the lack of definitive scientific evidence, several large multinational companies have begun to address this issue. The good news is that Micro Powders is well positioned to respond. Several years ago, we launched the ecofriendly, biodegradable **Ecoscrub®** and **Ecosoft®** product lines.

**Ecoscrub®** and **Ecosoft®** products are high molecular weight, high density powders. They are produced from 100% biodegradable polylactic acid (PLA) polymers that are naturally derived from annually renewable resources. The **Ecoscrub®** grades are designed for use as non-irritating scrub and exfoliating agents, and they provide the same high performance of polyethylene scrubs. **Ecosoft®** products are finely micronized powders designed to increase slip as well as enhance the texture of cosmetic and personal care formulations. These high density products provide the same high performance of polyethylene powders but are derived from a biodegradable and ecofriendly, “green” polymer.

The “microbead issue” will continue to be followed by Micro Powders. It should be noted that there are currently no regulations driving any changes.

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