* What are nurdles?

Plastic particle water pollution is marine debris consisting of plastic particles, including nurdles, pre-production microplastic resin pellets typically under 5 mm (0.20 in) in diameter found outside of the typical plastic manufacturing stream and an intermediate good used to produce plastic final products;[1] microbeads from cosmetics; and the breakdown products of plastic litter. Plastic particle water pollution has also been referred to as**mermaids' tears**.[2]

Environmental impact[edit]

Nurdles on a beach in southwest France, in 2011

Nurdles are a major contributor to marine debris. During a three-month study of Orange County beaches researchers found them to be the most common beach contaminant.[4] Nurdles comprised roughly 98% of the beach debris collected in a 2001 Orange County study.[5] Waterborne nurdles may either be a raw material of plastic production, or from larger chunks of plastics.[6] A major concentration of plastic may be the Great Pacific garbage patch, a growing collection of marine debris known for its high concentrations of plastic litter.

Nurdles that escape from the plastic production process into waterways or oceans have become a significant source of ocean and beach plastic pollution. Marine life is severely threatened by these small pieces of plastic: the creatures that make up the base of the marine food chain, such as krill, are prematurely dying by choking on nurdles.[7] Nurdles have frequently been found in the digestive tracts of various marine creatures, causing physiological damage by leaching plasticizers such as phthalates. Nurdles can carry two types of micropollutants in the marine environment: native plastic additives and hydrophobic pollutants absorbed from seawater. For example, concentrations of PCBs and DDE on nurdles collected from Japanese coastal waters were found to be up to 1 million times higher than the levels detected in surrounding seawater.[8]

Plastic microbeads used in cosmetic exfoliating products are also found in water.

SkimOil's floating weir skimmers (FWS) which are surface skimmers can aid in floating nurdle removal, by carrying the nurdles on the water surface, across the weir or waterfall into the skimmers sump where they are able to be pumped away with the skimmed surface water.

NURDLES THE PROBLEM

WHAT ARE NURDLES?

Nurdles are small plastic pellets about the size of a lentil. Countless billion are used each year to make nearly all our plastic products but many end up washing up on our shores.

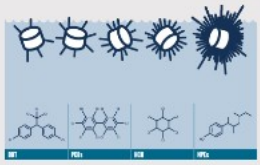
HOW DO THEY END UP AT SEA?

Spills and mishandling by industry can mean nurdles end up at sea. Our planets oceans are now accumulating nurdles in worryingly large numbers.

WHY ARE NURDLES HARMFUL?

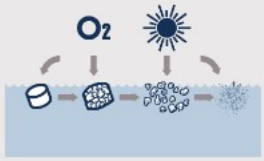
Unlike large pieces of plastic marine litter, nurdles are so small that they go largely unnoticed. However scientists are becoming increasingly concerned about their effect on our delicate marine ecosystem.

PLASTIC
A TOXIC COMBINATION



Nurdles attract and concentrate background pollutants like DDT and PCBs to highly toxic levels.

PLASTIC
SMALL, SMALLER, MICROSCOPIC



Nurdles do not go away – like other plastic over time they just fragment into smaller and smaller plastic particles.

PLASTIC
EATEN BY ANIMALS

Like other plastics nurdles are mistaken for prey by many marine animals and seabirds and enter the food chain.