



FACT OR FICTION: WHAT IS THE TRUE MEANING OF BEING ECO-FRIENDLY?

"Well, I read it on the internet, so it must be true!" Just because Google and sunscreen competitors say something is true does not make it so.

Titanium Dioxide and Zinc Oxide are not biodegradable nor are they renewable nor sustainable, yet sunscreen brands containing 15 - 25% of either or combinations of both claim to be 100% biodegradable. Titanium dioxide and zinc oxide are both deemed Ocean Pollutants by their own manufacturers and so stated on Material Safety Data Sheets. Both are strip mined from our earth - so how is this eco-friendly! Note: neither titanium dioxide nor zinc oxide come from the ocean. As you can see in the following picture this is not a very eco-friendly process. Check out reasons why in the following link:

<http://lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?article=1500&context=iclr>



Based upon common sense and high school chemistry neither of these metal ores, titanium dioxide nor zinc oxide should be used in ocean environments as you are polluting and littering the ocean.

Why? Because they are neither oil soluble nor water soluble, so it is difficult to make them stay on your skin, so they wash off easily. In addition, both typically leave you looking like Casper the ghost.

Does the picture below look eco-friendly to you?



Titanium Dioxide and Zinc Oxide are just not dug up, hit with a hammer, and put into sunscreens, they undergo several chemical, yes, I said chemical processes prior to being allowed for use in sunscreens. This process includes reactions with sulfuric acid or olamine, which cause significant waste runoffs. For more information see following links: www.rsc.org/learn-chemistry/resource/download/res00001267/cmp00002617/pdf

<https://ourworld.unu.edu/en/community-consent-and-scarce-commodities>



Titanium dioxide and zinc oxide are not renewable sustainable. The exploitation of titanium dioxide and zinc oxide results in millions of acres of unproductive land, which can never be used again. In addition, the pits are a hazard to humans and wildlife.

So why are these ingredients considered to be natural?

We are not sure. The reason could be the simple fact that these ingredients are minerals, however being a mineral does not mean that they are natural, nor does it mean they will biodegrade. Be aware of so called "naturals", as they can be misleading to consumers and not so natural after all.

There are hundreds of items that are natural, but they are highly poisonous to humans. A few that come to mind are asbestos, arsenic and numerous plants.

Once we have exhausted our planet of all of its natural resources then what? The clock is ticking, please do what you can to help preserve our planet while we still can!



**Biodegradable Sunscreen
That Won't Harm Our Oceans**

**Reef Safe
SUN[®]**

reefsafesun.com

The advertisement features three bottles of Reef Safe Sun sunscreen against a background of a vibrant coral reef. The bottles are labeled with 'Biodegradable', 'Reef Safe', 'SPF 30+', 'Original Formula', 'Water Resistant (80 Minutes)', 'Sunscreen Lotion', and 'Non-Toxic to Sealife'. The central bottle is blue and labeled 'Broad Spectrum SPF 30', 'Water Resistant (80 Minutes)', 'Sunscreen Lotion', and 'Non-Toxic to Sealife'. The rightmost bottle is light blue and labeled 'Broad Spectrum SPF 30', 'Water Resistant (80 Minutes)', 'Sunscreen Lotion', and 'Non-Toxic to Sealife'. The text 'reefsafesun.com' is prominently displayed at the bottom in a large, bold, yellow font with a black outline.