Issue #1

MYTHBUSTING with CRODA

Mythbusting with Croda

Nano myths explained

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Myth #1

Nano UV filters are small

In the world of UV filters, nano **TiO2 and ZnO are BIG UV filters.** Most chemical/organic sunscreens have a typical molecular weight of less than 300 Daltons, which would correlate to a size of less than 1nm. Mineral/inorganic UV filters are much larger than this, even 'nano' TiO2 and nO are typically around 30nm, so are **30 times** the size!

Myth #2

Nano TiO2/ZnO penetrates the skin.

This myth ties into the first one, people assume as 'nano' is small it will penetrate the skin and they are unaware of the **extensive safety data** that exists. Evidence shows that 'nano' and 'non-nano' TiO2 and ZnO shows they largely **do not penetrate the skin**. This is confirmed by the EU Scientific Committee on Consumer safety and the US Food and Drug Administration.

Myth #3

Nano TiO2 is carcinogenic

The controversy is linked to the fact that in Europe it is classified as a category 2 carcinogen **by inhalation** when the particles are a certain aerodynamic diameter. This is because it is fine particle that could be inhaled.
Croda's Solaveil TiO2 range however are not classified as carcinogenic.
The vast majority of sunscreen are applied dermally, and in Europe
TiO2 is not allowed in formats where they could be inhaled anyway.

Myth #4

If I use a nano UV filter I have to register my finished product

The Cosmetic Product Notification Portal (CPNP) states that products containing nanomaterials must be specifically notified under six months prior to placing on the market, unless it:

- is a UV filter, colorant or preservative (in this case it must be listed in the respective positive list in its nano form)
- is listed in Annex III in its nano form.