Article on Bismuth Oxychloride

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(Note: Bismuth oxychloride is an ingredient found in some mineral makeup products. Lemongrass Spa Products' Sheer Minerals Makeup does not contain bismuth oxychloride.)

Bismuth Oxychloride - this ingredient is found in most of the mainstream mineral cosmetic companies...a by-product of the lead and copper refining, rarely occurs in nature, a skin irritant, leaves an unnatural shiny finish, clogs pores and causes blemishes, in large amounts can cause cystic acne, many people are sensitive to this bulking and filler ingredient.

Does this scenario sound familiar? You've worn traditional makeup for years with little to no irritation. Upon hearing about the benefits of mineral makeup, you decide to give it a try. After all, it claims to be better for your skin and healthier overall, so what have you got to lose? And if you've never been able to wear traditional makeup without irritation, mineral makeup sounds like the answer you've been looking for. You buy your first jar and begin wearing it immediately.

Except... you're having a reaction you've never had before to makeup. Your skin may be red, irritated, itching, having small bumps or pustules, burning or looking swollen. What is this? How can mineral makeup cause such an extreme reaction?

That reaction is likely caused by the ingredient bismuth oxychloride. While bismuth oxychloride is a common ingredient in traditional makeup, as well as mineral makeup, it is used in much higher concentrations in mineral makeup. There are no fillers in mineral makeup like there are in traditional cosmetics (talc, mineral oil, aluminum powder, alcohols and parabens), so the few ingredients left, including bismuth oxychloride, make up more of the recipe.

Why Is Bismuth Oxychloride Used In Makeup?

Is it used in makeup because it gives the makeup a silky feel, good slip (this means it applies well to the skin and doesn't drag or grab on the skin) and good adhesion, which helps it stay on your skin. It feels smooth and silky when rubbed between the fingers. It is often described as a lustrous crystalline powder.

It is not the most expensive ingredient, nor is it the least expensive. It is, however, an industry standard and very common. It also gives a visible sheen to the makeup, so it's good at refracting light and that helps draw attention away from, and camouflage, fine lines, wrinkles and minor discolorations. That's a great selling point for makeup.

What Is Bismuth Oxychloride?

Bismuth oxychloride is an inorganic white pigment, and usually comes in two forms: diamond and pearl finishes. The diamond is shimmery and the pearl is more matte. Its formula is BiOCl.
If you look on the periodic table of elements, you'll notice plain old bismuth at atomic number 83, with the symbol Bi. It is the least toxic of its periodic table neighbors like lead, tin, antimony and polonium. Bismuth in itself is not safe for use in cosmetics, and must be refined and combined with other elements to produce bismuth oxychloride.

Bismuth occurs naturally, but in very small amounts. Most of the bismuth produced in the USA is as a by-product from refining lead, tin, copper, silver and gold ores.

Once the bismuth has been harvested, it is further refined through several processes to remove dangerous elements like lead. Then it is chlorinated, which gives us bismuth chloride (BiCl3). It still poses a severe risk at this point, smelling of hydrochloric acid. When bismuth chloride is combined with water, it starts to decompose and part of the chlorine is replaced by oxygen from the water. This process is called hydrolysis. The remaining compound is bismuth, chlorine and oxygen = Bismuth oxychloride.

**Is It Safe To Use?**

Bismuth oxychloride is a product that is FDA approved for use in products for the face, eyes, lips and nails. It is a very common and popular ingredient in both traditional and mineral makeup.

However, skin irritation from bismuth oxychloride is not unusual. According the MSDS (Material Safety Data Sheet) for bismuth oxychloride, there is a risk of it being a potential irritant to humans when it comes in contact with the skin or eyes.

It is also imperative that bismuth oxychloride be free from toxins when it hits the market. The FDA does have standards outlining this, and in their Electronic Code of Federal Regulations they dictate the composition must be free of impurities except lead, arsenic, volatile matter and mercury in specific amounts and must be 98% bismuth oxychloride.

Buying bismuth oxychloride from countries with less stringent laws may result in increased health risks, so it is wise for companies to buy from highly regulated countries, like the US and Canada.

**Should I Use It?**

This is a very personal question to answer. Are you are happy with your current makeup and are suffering no ill effects? Would you feel more comfortable using makeup without it? Do you find that you have to buff minerals with bismuth oxychloride into your pores or they are more obvious, and this is irritating your skin? Have you found using mineral makeup without it causes your skin relief and the reaction clears up?

These are all questions to ask yourself when deciding to purchase a brand with bismuth oxychloride as an ingredient. There are many good products available, offering the same benefits as products with bismuth oxychloride, but without the ingredient itself.