

## Tints of Nature – Further Information on Resorcinol vs. 4-Chloro Resorcinol & 2-Methyl Resorcinol

At Tints of Nature, it has come to our attention that there is a degree of confusion among our customers as to the difference between **Resorcinol**, which is **NOT** used in any of our products, and **4-Chloro Resorcinol** and **2-Methyl Resorcinol**, both of which are used in Tints of Nature permanent colors. We hope that the following information will serve to alleviate that confusion. As always, as a company we strive to manufacture our products as naturally as possible, while still allowing them to maintain their full effectiveness.

### Resorcinol:

**Resorcinol** is a sweetish crystalline phenol that is obtained from various resins and is used chiefly in treating skin diseases and in making pharmaceuticals and phenolic resins, especially for adhesives. It occurs naturally in coal shale and is reportedly present as a by-product in cigarette and wood smoke. It has peeling and exfoliating properties and is also an antiseptic, antifungal and preservative agent which is used especially in dandruff shampoos. In addition, it is an effective pigment carrier and oxidizing agent and is therefore regularly used in hair dyes. However, it is irritating to the eyes and skin, is an allergen and also a hormone-disruptor linked to reproductive effects, thyroid damage and central nervous system effects, including dizziness, nausea, altered heart beat and restlessness. In Europe, it is listed as a restricted substance and, as such, has to carry specific usage warnings. For these various reasons, at Tints of Nature, we do not consider it a safe ingredient.

### 4-Chloro Resorcinol and 2-Methyl Resorcinol:

**4-Chloro Resorcinol** and **2-Methyl Resorcinol** are also resin derived phenols, but chemically very different compounds compared to **Resorcinol**. As such their use in personal care products is considered to be of far less potential concern. When used in hair dyes they are, like **Resorcinol**, effective pigment carriers and oxidizing agents. However, unlike **Resorcinol**, they are not listed as restricted substances in Europe and therefore carry no specific usage warnings. In addition, they are much milder in use than **Resorcinol** and do not have the same high level of potential side effects. At Tints of Nature, we therefore consider their use in our permanent colors to be valid, acceptable and safe.

Please contact us if you have any questions or would like further information.

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