

O19. PIGMENT PRODUCTION FOR TATTOO INKS

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What are pigments? Compared to a lot of other chemical compounds, pigments are solid state matter and should not dissolve in the area where they are used. In addition to that particles are not uniform in size and the shape may also differ. And as all particles they adsorb other chemicals on their surface, arising from raw materials or from by products of the chemical synthesis. In general, the pigment user selects the pigments according to the color index and believes all pigments with the same color index are identical. However, this is not the intention of the color index, it only gives the user an idea about the color area and no information on other components like additives and/or impurities. Therefore, more attention has to be drawn to impurities arising from raw materials and impurities formed as by-products by the pigment synthesis. For most of the technical applications, like paints, printing inks and plastics these impurities do not cause any problems. However, if it comes to sensitive applications like toys, cosmetics, medical applications, food contacts and tattoo inks. For these applications the impurities and in some cases the breakdown products of the pigments, are very critical. There are several ways to come to "pure" pigments. Firstly, by a proper selection of the raw materials and by which process the pigments are synthesized; secondly by a subsequent purification of technical pigment. The right selection will depend on chemistry and physics of each individual pigment.

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