

# WHITE SPIRITS – 'n relaas in drie aflewings

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## DEEL 1

Met die besoek van Dries Blignaut aan ons draaiersgroep 'n jaar of wat gelede, is die gebruik van "white spirit" weer opgehaal as verdunmiddel vir veral **Danish Oil**. "White spirit" is nie algemeen bekend nie en die naam is vir my relatief vaag omdat daar verskillende betekenis aan gekoppel word, afhangende met wie jy daarvoor praat of in watter literatuur jy daarvoor oplees. Die draaiers het 'n hele diskussie gevoer met argumente na hierdie kant toe en dan ook daardie kant toe – hoofsaaklik hul eie menings. Die term en sy betekenis het egter steeds vir my vaag gebly en ek wou meer daarvoor uitvind en duidelikheid kry, veral hoe dit dan van terpentyn sou verskil, indien wel.

Soos so baie kere al in die verlede, het ek gevind dat Google en Wikipedia tot my redding kom met baie inligting oor onderwerpe waarna ek soek. Hierdie keer was dit weereens so en ek deel dit graag met die lede van ons vereniging . Die volgende interessante uittreksel gee 'n goeie opsomming van wat "white spirit" behels asook 'n paar algemene kenmerke daarvan:

*White spirit, also known as **Stoddard solvent** in the United States and Canada, is a paraffin-derived clear, transparent liquid which is a common organic solvent used in painting and decorating. In 1924, an Atlanta dry cleaner named W. J. Stoddard worked with Lloyd E. Jackson of the Mellon Research Institute to develop specifications for a less volatile dry cleaning solvent as an alternative to more volatile petroleum solvents. Dry cleaners began using it in 1928 and it was the predominant dry cleaning solvent in the United States from the late 1920s until the late 1950s.*

*White spirits are petroleum fractions that boil between 150-220°C and consist of a mixture of saturated aliphatic and alicyclic C7 to C12 hydrocarbons with a maximum content of 25% of C7 to C12 alkyl aromatic hydrocarbons. They can have aromatics contents between 0-100%, and Shell lists eight grades with aromatics contents below 50%, and six grades with aromatics contents above 50%. The two common "white spirits" are defined by British Standard 245, which states Type A should have aromatics content of less than 25% v/v and Type B should have an aromatics content of 25-50% v/v. Therefore, the most common "white spirit" is type A, and it typically has an aromatics content of 20%, boils between 150-200°C, has an aniline point of 58°C, and is sometimes known as **Low Aromatic White Spirits**. The next most common is **Mineral Turpentine** (aka High Aromatic White Spirits), which typically has an aromatics content of 50%, boils between 150-200°C and has an aniline point of 25°C. For safety reasons, most White Spirits have Flash Points above ambient, and usually above 35°C.*

*White spirit is used as an extraction solvent, as a cleaning solvent, as a degreasing solvent and as a solvent in aerosols, paints, wood preservatives, lacquers, varnishes, and asphalt products. In western Europe about 60% of the total white spirit consumption is used in paints, lacquers and varnishes. White spirit is the most widely used solvent in the paint industry. In households, white spirit is commonly used to clean paint brushes after decorating. Its paint thinning properties enable brushes to be properly cleaned. It may also be used in conjunction with cutting oil as a thread cutting and reaming lubricant. Artists use white spirits as an alternative to turpentine, one that is both less flammable and less toxic. Because of interactions with pigments, artists require a higher grade of mineral spirits than many industrial users, including the complete absence of residual sulphur. **Odorless Mineral Spirits** are mineral spirits that have been further refined to remove the more toxic aromatic compounds, and are recommended for applications such as oil painting, where humans have close contact with the solvent. In screen printing (also referred to as silk-screening), mineral spirits are often used to clean and unclog screens after printing with oil-based textile and plastisol inks.*

*Three different types and three different grades of white spirit exist. The type refers to whether the solvent has been subjected to hydrodesulfurization (removal of sulfur) alone (type 1), solvent*

*extraction (type 2) or hydrogenation (type 3). Each type comprises three different grades: low flash grade, regular grade, and high flash grade. The grade is determined by the crude oil used as the starting material and the conditions of distillation.*

*In addition there is type 0, which is defined as distillation fraction with no further treatment, consisting predominantly of saturated C9 to C12 hydrocarbons with a boiling range of 140-200 °C.*

Dis nogal 'n mondvol, om die minste te sê. Maar wat beteken dit alles? Volgende keer word op die betekenis van sekere terme soos koolwaterstowwe en die distillasieproses om fraksies te verkry, gekonsentreer.