

515h Propylene Purification by Applying π -Complexation Adsorbent

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In order to prepare an alternative mixed hydrocarbon refrigerant to replace the HFC, CFC, which are causing global warming and ozone depletion, high purity propylene is required. Propylene purification up to high purity by conventional distillation is not easy due to the close volatility of propylene and propane. An adsorption purification to obtain propylene of 99.95 % is tried by applying π -complexation. A silver impregnated aluminosilicate shows a quite good selectivity and adsorption/desorption characteristics. Through continuous cyclic operations with small columns (3, or 4 beds of 1 m in height, 1 inch in diameter) charged with the π -complexation adsorbent, propylene product of 99.95% could be obtained with a reasonable recovery.