

ISOPROPYL ESTERS OF 2,4-D & 2,4,5-T

2,4-D acid containing approximately 10% moisture is esterified with isopropyl alcohol using benzene to azeotropically distill off the water in the 2,4-D and the water formed in the reaction.

For each mol of equiv. 100% 2,4-D, 1.1 mols of equiv. 100% isopropyl alcohol is charged. The volume of equiv. 100% benzol is kept equal to the volume of isopropyl alcohol. Excess alcohol and benzene are recovered and together with fresh benzol and fresh 99% isopropyl alcohol, are charged to the next batch.

is carried out
The esterification in glass-lined, jacketed reactors with condensers and reflux separators to remove water from the azeotrope. When a titration shows that a batch is 90% esterified, the excess alcohol and benzol are distilled off for re-use.

The crude ester is washed with twice its volume of 0.5% sulfuric acid at 60°C to remove iron salts. The unreacted ^{or 2,4,5-T} 2,4-D acid is next extracted with a dilute caustic soda wash. The caustic wash is saved and the ^{or 2,4,5-T} 2,4-D acid in it is recovered and reused. The ester is then washed twice with twice its volume of hot water.

The washed ester is dried, filtered and is ready for sale as 90% technical ester or for use in formulations.

J. Burton

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