

Vinyl Acetate

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Q. What does Leap stand for?

A. Leap® is a registered trademark referring to the new method of manufacturing vinyl acetate developed by BP. It is the most significant development in this field for more than 30 years and builds upon BP's reputation for developing leading edge technology.

Q. How does the Leap process differ from the traditional Vinyl Acetate Process?

A. The fixed bed vinyl acetate monomer process has been the dominant technology for the last three decades. Over 90% of the world's vinyl acetate is produced using this technology, with the majority of the manufacturing units being over 20 years old.

The Leap process is a novel fluid-bed reaction process based on a new reactor and catalyst design, rather than the traditional fixed bed system. This radical design reduces capital expenditure on a new plant build by up to 30%. This is primarily due to the fact that a fluid bed reactor system is easier and cheaper to construct than a fixed bed reactor. Due to engineering constraints most world scale fixed bed plants utilize two reactors. For fluid bed, only a single reactor is required leading to a major cost saving. In addition, the nature of a fluid bed allows the feeds to be processed in a completely different manner, which eliminates a number of pieces of equipment.

Q. What raw materials does the process use?

A. The Leap process uses the same raw materials as the current process: Acetic acid, ethylene and oxygen.

Q. How will product quality/specifications be affected?

A. Since the new process will use the same feedstocks and employ the same chemistry, the products and by-products coming out of the reactor will be the same as those from a conventional plant – this has been confirmed by our pilot plant operation.

Q. Why is the level of Hydroquinone inhibitor in product from the EuroVAM plant going to be 3-5 ppm instead of 8-12 ppm, when the majority of customers require 8-12 ppm?

A. We need to produce Vinyl Acetate with a Hydroquinone level of 3-5 ppm to meet the needs of a small number of new accounts. All other producers supply vinyl acetate with different levels of Hydroquinone, and we felt that we needed to be more flexible with product from the new EuroVAM plant. We have always been able to add Hydroquinone to the existing product containing 8-12 ppm, but we have been unable to supply customers that require a lower level.

Q. What is the difference in catalyst design?

A. Fixed bed reactors have the catalyst contained in thousands of small tubes inside the reactor. Leap is the first fluid bed process to use a supported precious metal catalyst, which has catalyst held on the shell side. The active catalyst components are based on those we are familiar with in this process to maximize the benefit of our existing expertise in vinyl acetate chemistry and catalysis.



Q. What is the miscibility of Vinyl Acetate

A. Vinyl Acetate is miscible with organic solvents such as hydrocarbons, alcohols, ketones and esters. It is miscible with water at 20°C in the composition ranges 0-2% mass and 99-100% mass.

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