

U.S. International Trade Commission

**Hydrofluorocarbon Blends and Components Thereof from China
Inv. No. 731-TA-1279 (Final)**

Commission Hearing, June 21, 2016

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Good morning. I am Beth Sassano. I am the Refrigerants Global Business and Market Manager with The Chemours Company. I have been in the fluoro products industry for over ten years, and would like to talk a little bit about the products and our industry.

First, let me start with a quick history of refrigerants as it relates to this case. Hydrofluorocarbon (HFC) blends are a family of products that were developed in response to the phase out of ozone-depleting CFCs and HCFCs. CFCs (chlorofluorocarbons) were phased out in the 1990's, and HCFCs (hydro chlorofluorocarbons) are nearing the end of their phase out. CFCs and HCFCs contain chlorine that depletes the ozone layer, whereas HFCs, hydrofluorocarbons do not contain chlorine and therefore *have no* ozone depleting potential.

The most widely used HCFC was R22. As R22 began to be phased out, there was no single HFC that had thermodynamic properties to span all the applications like R22. The industry worked on a variety of solutions, and

ultimately converged on HFC blends as the answer. But because no single blend could be used in the varying applications in which R22 was used, the industry developed several HFC blends. U.S. producers began to build HFC component facilities to supply the necessary building block components for these blends. There is essentially no direct market for the HFC components. They were created and exist today for the HFC blends market.

Now let's discuss the product characteristics of the HFC blends starting with their physical characteristics. All of these HFC blends are non-ozone depleting, and were developed to be low toxicity, non-flammable replacements for R22. Although there are several blends, the ones within the scope of our petition overlap with each other. They are used in a wide range of low or medium temperature applications, like commercial refrigeration and residential air conditioning and each of these blends use at least two of the same four building block components. Two of the blends, R410A and R404A, account for 80% of the US blends market.

The three HFC components covered by the scope of this case, R32, R143a, and R125, are dedicated to the production of the HFC blends. Chemours does sell a very small volume of R125 for use in fire suppression, but that market is trivial. We estimate that less than one percent of the sales of any of the components is used for something other than the production of blends.

Let's move on to the manufacturing process. We consider HFC components and the blends to be one single industry producing a range of overlapping, similar products. However, there is a big distinction between the way HFC components and the HFC blends are produced.

Let's start with the components. Each component requires a dedicated production facility, an investment of hundreds of millions of dollars in equipment needed to handle these high hazard reaction and purification processes. These plants are run at very high temperatures and high pressures. The raw materials and by-products created are hazardous. Beyond the initial investment to build the facilities, there is also continued significant investment and expertise required to maintain and run them efficiently and safely over time.

Due to these significant investments, the U.S. producers are continually faced with make vs. buy decisions. For example, you've heard and read about "swaps." What that means is that you might have one company, Company A, that makes HFC component R32. And another company, Company B, that makes HFC component R125. And companies A and B swap the R32 for the R125. In addition, US producers also purchase components to meet their blends' needs. These approaches help U.S. producers to achieve economies of scale and to provide cost effective products to the market place.

Turning to HFC blending, this operation is fundamentally different from the manufacturing of pure HFC components. Compared to HFC components, which require significant capital investment, the investment to set up a blending operation is very small. Also, unlike component manufacturing plants, which must be operated 24 hours a day, seven days a week, blending facilities do not require continuous production nor have high fixed costs. HFC blends can all be made using the same blending equipment with low investment. It's a very simple mixing operation. It is not run at high temperature or high pressure, and there are no hazardous by-products.

So, where are we today? After all the innovation of HFC blends and the significant investments to produce HFC components, it is devastating that Chemours could not make a positive profit in a growing market. The low priced Chinese imports have had a substantial negative impact on our bottom line. These low-priced Chinese imports drove the low profitability of the HFC blends in the U.S. industry resulting in the shutdown of component facilities and loss of U.S. jobs.

Without duties to level the field, these negative effects will continue. China has significantly over built capacity. Its capacity is at least three times its local demand and is sufficient to supply virtually the entire global demand for these products. Clearly they are producing for export.

Among the largest markets for HFC blends have been Europe, Japan, and of course, the United States. Europe implemented a Fluoro-gas regulation, effective January 1, 2015 which requires quota to import HFCs into the European Union. As access to this market continues to contract, the practical result is that the market share that was once available for China in Europe will need to be diverted, and the largest market available for the Chinese producers to offload that diverted share is, and will continue to be, the United States.

This is why we're here. This industry has suffered for many years from dumped imports from China, produced by an overbuilt industry with excessive capacity which is in the process of being shut out from major world markets. Without your help, the domestic industry will continue to experience negative financial performance and additional US job losses. Thank you for your time and attention.