



# Zyron®

electronic gases

## Hydrocarbon-Free Zyron® 116 (C<sub>2</sub>F<sub>6</sub>)

Recent inquiries have been made into the trace hydrocarbon content of the high-purity (>99.99995 vol%) Zyron® 116 product (C<sub>2</sub>F<sub>6</sub>) manufactured by DuPont. This information provides background and data concerning this issue.

Unlike other commercial manufacturing processes that use hydrocarbons as a feedstock, there is no source of hydrocarbons present at any time within DuPont's process.

Additionally, there is no known chemical mechanism whereby hydrocarbons could be formed and, further, no hydrocarbons would be expected to survive the conditions present in the Zyron® 116 manufacturing process. Thus, the probability of any hydrocarbon material making it out of the reactor and into the final product purification system is extremely remote. Subsequent purification steps during Zyron® 116 production add another level of assurance to the absence of hydrocarbons in the finished product.

To experimentally validate these points, a series of Zyron® 116 analyses for trace hydrocarbons were performed on random cylinders selected from manufacturing lots during an eight-month period. These analyses did not detect the presence of any Cl-C6 hydrocarbons in the Zyron® 116 product. The method used was gas chromatography with flame ionization detection, which has a lower limit of detection (approximately 1 ppmv).

Further details concerning the Zyron® 116 hydrocarbon analyses, as well as additional analytical testing results, can be found in *Micro*, Volume 16, Number 4, p. 35, April 1998 or on the DuPont Web site at [www.dupont.com/zyron](http://www.dupont.com/zyron).

Please contact your local DuPont representative or visit our Web site. We welcome your inquiries and would be glad to discuss how DuPont's family of high-purity Zyron® electronic gases can help meet your most demanding process requirements.

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