



EFCTC NEWSLETTER

An update on fluorocarbons and sulfur hexafluoride

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F-GAS LEGISLATION ENTER INTO FORCE

The F-gas Regulation and the MAC Directive were published in the [Official Journal](#) of the European Union on 14 June 2006.

The Regulation will enter into force on the 4 July 2006 and shall apply with effect from 4 July 2007. In addition to the legal text, additional national measures will be needed to implement, among others, its provisions on penalties for non-compliance.

The MAC Directive will have to be transposed into national law by 4 January 2008. It will phase out HFC-134a from air conditioning systems from 1 January 2011 onward for new vehicle models and from 1 January 2017 for all new vehicles.

More in the [F-GAS REGULATION PAGE](#) for details on the content of the Regulation and the Directive, and in the [GENERAL LIBRARY PAGE](#) for the texts in all website languages.

OPTIMAL SF6 DESTRUCTION IN LCD MANUFACTURING

As the share of TFT-LCD (thin film transistor-liquid crystal display) for TV screens is sharply increasing, use of NF_3 and [SF₆ as etching gases](#) is correspondingly following.

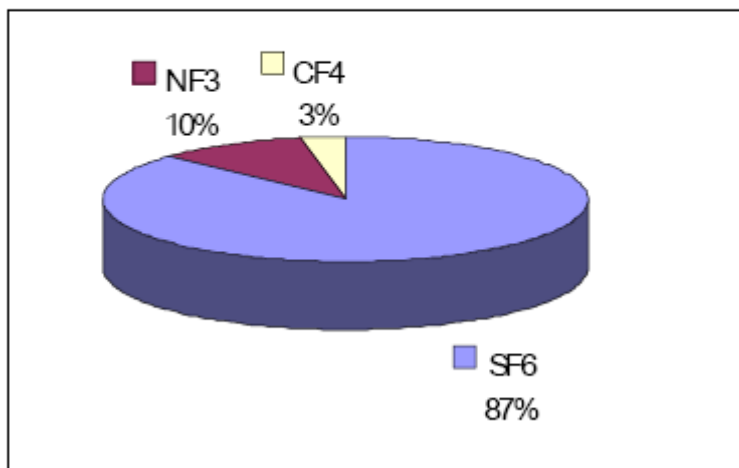
Indeed, plasma etching (PE) or reactive ion etching (RIE) make use of an [electric plasma](#) to etch material deposited on wafers, SF_6 or NF_3 being commonly used for etching silicon.

As these gases are significant [GHG \(greenhouse gases\)](#), it is notable that modern processing units, equipped with optimally configured thermal processing units, can achieve the highest level of abatement of etching gases, thereby making them able to durably expand their production.

Source: Equipment Manufacturer

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TFT-LCD Industry Use PFCs



AMMONIA TOO DANGEROUS FOR THE BOBLEIGH RUN OF LA PLAGNE (FRANCE)

Early 2006, the "syndicat intercommunal de la Grande Plagne (SIGP)" (local authorities) launched a tender for the project to replace [ammonia](#) and modernize the [refrigeration plant](#) for the Olympic bobsleigh of La Plagne, built in 1991 for the 1992 Albertville Olympic Winter Games.

The plant contains 45 tons of liquid ammonia and is therefore classified as a [Seveso plant](#), which entails each year 150 000 Euros for studies, reports and controls.

The authorities want to substitute the present ammonia cooling fluid with an "environmentally friendly but less dangerous refrigerant".

Source : http://www.luge.fr/doc/CP1_Travaux%20piste%20bob.pdf



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SCHOOLCHILDREN'S PERFORMANCE IMPROVED THANKS TO CLASSROOM AIR CONDITIONING

Present results from an [academic study](#) indicate that improving classroom conditions can considerably improve the performance of school work by children.

Danish researchers from the International Centre for Indoor Environment and Energy ([ICIEE](#)) at the [Technical University of Denmark](#), found that academic performance of schoolchildren can be improved by [decreasing summer temperatures](#) in the classroom.

Three independent experiments investigated the effects of increased outdoor air supply rates and reduced air temperatures in classrooms on the performance of schoolwork. They were carried out in classrooms with about 100 10- to 12-year-old pupils. The experiment investigating the effect of reduced temperatures was carried out in late summer using two parallel classes of 10-year-old.

The air temperatures were reduced from 23.6 C to 20 C maintained for a full week. Significant improving in performance of schoolchildren was observed with better indoor climate in the classroom.

"Productivity improvements achieved in adult workplaces by improving working conditions [...] make good economic sense [...] but this cannot be argued as easily in schools, because the benefits of better learning take time to work through the system and benefit the whole of society [...]. Parents and politicians will have to make the case, and the role of ICIEE is to provide the basis for a rational decision", says associate professor Geo Clausen.

Source : <http://www.news-medical.net/?id=17161>

NEW ON OUR SITE

[Factsheet nr 8](#) (Trifluoroacetic Acid) and [Factsheet nr 13](#) (Burning Fluoropolymers) have been updated

[F-GAS REGULATION PAGE](#) updated after the official publication of the legislative texts

[Polish Page](#) Updated with links to the F-Gas legislation and the Brochures