



EFCTC NEWSLETTER

An update on fluorocarbons and sulfur hexafluoride

ISSUE n° 50 – October 2007

IMPROVED MOBILE AIR CONDITIONING PROGRAM (I-MAC) HAS MET ITS FOUR TARGETS

The [I-MAC](#) program (Improved Mobile Air Conditioning Cooperative Research Program) which was started in 2005, aimed to reduce dramatically the environmental impact of HFC-134a in [MAC](#). It has announced that it successfully met its 4 targets.

1. **Reduction of direct system refrigerant leakage by at least 50 percent:** it was demonstrated that this is feasible by using better parts.
2. **Improvement of the system efficiency by at least 30 percent:** it was demonstrated that energy used by the vehicle air conditioner could be reduced by over 30 percent using commercially available technology.
3. **Reduction of system cooling loads by at least 30 percent:** it was found that the inside temperature could be reduced by more than 6° C by using solar-reflective paints and ventilation.
4. **Reduction of the Refrigerant Loss during Servicing and at the End of life by 50 percent:** recommendations were presented that could cut refrigerant emissions in half (see the [recommendations and full report](#)); new refrigerant recovery, recycling, and leak-detection technology was introduced.

Combined these achievements save globally 2.4 million kg HFC-134a, and reduce overall greenhouse gas emissions by 22 million tonnes CO₂-equivalent.

Source : <http://www.epa.gov/cppd/mac/#partnership>

HFCs AT THE BEIJING 2008 OLYMPICS

In order to avoid the use of [HCFCs](#), which are Ozone Depleting Substances, the Beijing Organizing Committee for the Games of the 29th Olympiad ([BOCOG](#)) has announced that most venue owners have chosen refrigerants ranging from [HFC-134a, R-410a, and R-407c](#) to lithium bromide.

China's State Environmental Protection Administration and UNEP in co-operation with the BOCOG – are addressing stratospheric ozone protection as part of the 2008 Beijing Olympic Games. BOCOG has issued environmental guidelines to prevent unnecessary use of ODS in construction, marketing and catering services.



EFCTC NEWSLETTER

An update on fluorocarbons and sulfur hexafluoride

2008 is the year chosen for China's accelerated phase out of CFCs, in advance of the 2010 deadline required by the Montreal Protocol.

Source : <https://www.iifiir.org/en/news.php?rub=2&page=1&id=1611>

HFCs EMISSIONS PREDICTED TO REPRESENT ONLY 2% OF GLOBAL GREENHOUSE GAS EMISSIONS BY 2015

Global emissions of HFCs, which represented 1.1% of total GHG emissions in 2004, are projected to reach 2.2% in 2015, despite significant growth in their use.

Referring to the IPCC 4th Assessment [Working Group III Report Climate Change 2007](#), released in May 2007, the [IIR](#) confirms this [previous estimate](#).

The IPCC Report provides very useful figures on greenhouse gas emissions, including fluorinated gases (CFCs, HCFCs and HFCs).

In 2004, the global emissions of the 6 gases covered by the [Kyoto Protocol](#) (CO₂, CH₄, N₂O, [HFCs](#), [PFCs](#) and [SF₆](#)) 49000 million tonnes CO₂-equivalent, compared with 28700 million tonnes CO₂-eq in 1970 (+70%).

Among them, HFC emissions were 550 million tonnes CO₂-eq (1.1% of total GHG emissions) in 2004 and are projected to be 1200 million tones CO₂-eq by 2015.

CFCs and [HCFCs](#), ozone-depleting substances (ODS) covered by the [Montreal Protocol](#), are also greenhouse gases. Emissions of these decreased from some 20% of total GHG emissions by 1975, down to 4 % in 2000, due to the phase-out of CFCs – a [significant contribution](#) to the reduction of GHG emissions.

Source : <https://www.iifiir.org/en/news.php?rub=2&page=1&id=1607>

HFC-134a DRIVEN MEDICAL AEROSOLS HAVE A BETTER ANTI-INFLAMMATORY EFFECT

HFC-134a driven [MDI](#) (metered dose inhalers) formulations for medical aerosols could significantly decrease the particle size of the [asthma treating corticosteroid powder](#), according to a recent report. Finer particles are better as they should treat the whole airway. They also give less oral and laryngeal deposition with fine particles, resulting in less local side effects.

The effect was demonstrated to be more pronounced than with earlier CFC-based formulations.



EFCTC NEWSLETTER

An update on fluorocarbons and sulfur hexafluoride

While not addressed in the report, it would be interesting to compare the particle size of MDIs with [dry powder inhalers](#) (DPIs) working without propellant.

Source :

<http://www.therapeuticsdaily.com/news/article.cfm?contentValue=1413221&contentType=sentryarticle&channelID=29>

NEW ON OUR SITE

[EFCTC PR](#) on the September 2007 Montreal Agreement.

NEW LINKS ADDED

<http://www.un.org/climatechange/>

UN NEW CLIMATE CHANGE WEBSITE - "Gateway to the UN System's Work on Climate Change." The new website provides information on the work of various parts of the UN system with regard to climate change. It includes links to work under the UN Framework Convention on Climate Change (UNFCCC), Intergovernmental Panel on Climate Change, UN Environment Programme, and other relevant programmes and agencies.

<http://www.nature.com/climate/index.html>

NATURE SCIENTIFIC JOURNAL free-access website dedicated to in-depth coverage of climate change.