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PU Europe[1] comments on the Proposal for a Regulation on fluorinated greenhouse gases (COM(2012) 643 final)

SUMMARY

- PU Europe supports the draft revised Regulation as proposed by the European Commission. It represents an ambitious, mainly market-based tool to substantially reduce greenhouse gas emissions stemming from F gases.
- PU foam accounts for approximately 1.5% of the total F gas emissions in CO_2 equivalents. Through its use in high performance insulation, PU foam saves far more greenhouse gases over its life cycle than is embodied in the product.
- One amendment is proposed to article 10.4:

Article 10.4

Commission proposal	PU Europe amendment
Foams that contain fluorinated greenhouse gases shall not be placed on the market unless ***the fluorinated greenhouse gases are identified with a label using the accepted industry designation or, if no such designation is available, the chemical name. The*** label ***shall*** clearly indicat***e*** that the foam contains fluorinated greenhouse gases. In the case of foam boards, this information shall be clearly and indelibly stated on the boards.	Foams that contain fluorinated greenhouse gases shall not be placed on the market unless they bear a label clearly indicat***ing*** that the foam contains fluorinated greenhouse gases ***according to Regulation XXX.*** In the case of foam boards, this information shall be clearly and indelibly stated on the boards.

Reason

The label is introduced to enable demolition / renovation contractors to identify F gas containing foam and ensure appropriate end-of-life treatment. The exact designation of the F gas is of secondary importance and may be completely unknown to the contractor.
On the other hand, system houses may use blends of different blowing agents to influence the performance parameters of the foam. As there are only two suppliers each producing one type of HFC used in PU foams, disclosing the composition of the blended blowing agent may violate competition rules. Furthermore, these blends are part of the know-how of system houses and kept strictly confidential. The Regulation should respect the confidentiality of blend compositions, as disclosure would not contribute to achieving the emission reduction targets.

[1] PU Europe represents the European polyurethane insulation industry. Polyurethane (PUR/PIR) is the high performance insulant used in a wide range of building and technical applications to comply with the most stringent efficiency requirements.

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DETAILED COMMENTS

Introduction:

- PU Europe welcomes the proposal for a Regulation as presented by the European Commission. It represents an ambitious, mainly market-based tool to drastically reduce greenhouse gas emissions stemming from F gases. The Regulation will force industry to develop alternatives to high GWP F gases while leaving the choice to phase them in according to technological maturity and economic feasibility.
- The PU industry mainly uses pentane as blowing agent for the production of a wide range of PU insulation products (boards, sandwich panels, pipe insulation etc.).
- As small part of PU insulation products are still blown with HFCs as pentane cannot be used for technical or safety reasons. This is mainly true for in-situ foam for which pentane must not be used because of explosion risks. A small part of block foam is blown with HFCs as stringent fire safety and insulation performance requirements leave no viable alternative.
- Whatever the blowing agent used, PU insulation saves far more greenhouse gases over its life cycle than are emitted through its production.

Coverage of PU insulation foam in the Regulation:

- HFC-blown PU insulation in covered by the global face-down as defined in chapter IV "Reduction of the placing on the market of hydrofluorocarbons" and in particular by the provisions of article 13.
- Furthermore, article 10.4 introduces a labelling obligation for HFC-blown foam including PU. Whilst this requirement is generally supported by PU Europe, one amendment is proposed to protect the intellectual property of producers:

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The label is introduced to enable demolition / renovation contractors to identify F gas containing foam and ensure appropriate end-of-life treatment. The exact designation of the F gas is of secondary importance and may be completely unknown to the contractor.

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Why is PU foam covered in this way?

Sector is minor user of F gases

- The preparatory study estimates cross-sector F-gas emissions in 2010 at 113,253 kt CO_2 eq. HFC-blown PU foam (spray foam and PU other) only accounts for approximately 1.5% of these total emissions[2].

Absence of technical alternatives today:

- HFCs are mainly used in spray foam (in-situ foam). For safety reasons, pentane cannot replace HFCs as blowing agent (risk of explosion during application).
  Certain in-situ foams are blown with water / CO_2. However, such a foam has a significantly inferior performance (thermal conductivity: +17%, density (material use): +25%[3], lower mechanical resistance, lower water resistance requiring additional membranes). The CO_2-blown foam is mainly suited for acoustic insulation purposes.
- Block foam blown with HFCs accounts for a minor part of HFC use in PU. Due to the significantly higher costs of HFCs compared to pentane, the former are only used when fire safety and rigorous insulation requirements leave no viable alternative.

Abatement costs

- The abatement costs for PU foam exceed the threshold of € 50 per tonne CO_2 equivalent fixed as the cost-effective pathway to decarbonise the EU economy[4].
- In its preparatory study for the European Commission, Öko-Recherche established the abatement costs for a ban of HFC use in PU spray foam (in situ foam) at 61.5 €/tCO_2eq.[5] When Öko-Recherche updated its study for the German *Umweltbundesamt*, the abatement costs for spray foam were re-established at 102 €/tCO_2eq (replacement by water / CO_2)[6]. Due to the small size of the sector, bans for PU block foam ("PU other") where not considered effective.

Effects on SMEs

- In particular the spray foam sector is dominated by SMEs and micro-businesses which would have to go out of business if a ban on HFC use was introduced.

Future technical alternatives:

- The PU insulation is actively assessing possible alternative solutions to replace HFCs in the medium term.
- So-called HFOs with a global warming potential of less than 10 could offer a viable alternative to the substances used today. PU Europe is involved in a wide test programme to establish their performance in PU foams and, if the results are positive, include them in the relevant European harmonised standards (hEN). This process should be finalised by the end of 2017.
- The pace of the market phase-in and the economic viability of HFO use in PU foam will largely depend on the number of suppliers and the price.

Brussels, 17th December 2012

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[2] European Commission Impact Assessment: Review of Regulation (EC) No 842/2006 on certain fluorinated greenhouse gases SWD(2012) 364 final – Table A_IV-3

[3] Öko-Recherche GmbH: Vorhaben für das Umweltbundesamt - Maßnahmen zur Verbesserung der Marktdurchdringung klimafreundlicher Technologien ohne halogenierte Stoffe vor dem Hintergrund der Revision der Verordnung (EG) Nr. 842/2006 (F-Gase-Verordnung) – Expertengespräch Dämmstoffe of 23rd October 2012, page 11

[4] European Commission: A roadmap for moving to a competitive low carbon economy in 2050, COM (2011)112

[5] Öko-Recherche GmbH: Preparatory Study for a Review of the Regulation (EC) No. 842/2006 - Methods and major results (2011)

[6] See footnote 3 (page 13)