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**Datasheet for the decision
of 30 October 2007**

Case Number: T 0676/05 - 3.3.10

Application Number: 94907332.4

Publication Number: 0682683

IPC: C09K 5/04

Language of the proceedings: EN

Title of invention:

Compositions of hydrofluorocarbon and a hydrocarbon

Patentee:

E.I. DU PONT DE NEMOURS AND COMPANY

Opponents:

- (1) Ineos Fluor Holdings Ltd.
(2) Solvay (Société Anonyme)

Headword:

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Relevant legal provisions:

EPC Art. 100(c), 123(2)

Keyword:

"Amendments (not allowable): combination of features resulting from amendments not originally disclosed"

Decisions cited:

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Catchword:

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Case Number: T 0676/05 - 3.3.10

D E C I S I O N
of the Technical Board of Appeal 3.3.10
of 30 October 2007

Party as of right:
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Decision under appeal:

Interlocutory decision of the Opposition
Division of the European Patent Office posted
18 March 2005 concerning maintenance of
European patent No. 0682683 in amended form.

Composition of the Board:

Chairman: R. Freimuth
Members: P. Gryczka
P. Schmitz

Summary of Facts and Submissions

- I. The mention of the grant of European patent 0 682 683, in respect of European patent application No. 94907332.4, which is based on the International application PCT/US94/00937, was published on 22 May 2002.
- II. Two notices of opposition were filed in which revocation of the patent in its entirety was requested on the grounds of lack of novelty and inventive step, insufficiency of disclosure and added subject-matter (Article 100(a), (b) and (c) EPC).
- III. In an interlocutory decision issued in writing on 18 March 2005, the Opposition Division found that the European patent could be maintained in amended form on the basis of claims 1 to 8 of the second auxiliary request. Claim 1 of said request read as follows:
- "1. A refrigerant composition which is a non-flammable azeotropic or azeotrop-like mixture of at least one fluorine-containing molecule selected from the group consisting of 1,1,1,2-tetrafluoroethane (HFC-134a) and 1,1,2,2-tetrafluoroethane (HFC-134) and an effective amount of 2-methylbutane, wherein said amount is greater than 0 and less than 6% by weight, at a temperature from 0 to 65.6°C and a pressure from 207 to 3103 kPa (30 to 450 psia) and wherein the atmospheric boiling point of said fluorine-containing molecule and said hydrocarbon differ by at least 37°C."
- The Opposition Division came to the conclusion that the amended claims fulfilled the requirements of

Articles 123(2) and (3) EPC, that the invention was sufficiently disclosed and that the claimed compositions were novel and involved an inventive step.

- IV. The Opponent 02 (Appellant) lodged an appeal against the above decision.

According to the Appellant the application as filed excluded from the claimed subject-matter compositions containing HFC-134a and more than 3,3% 2-methylbutane as well as compositions containing HFC-134 and more than 2,6% 2-methylbutane since these compositions were described as being flammable whereas the claimed subject-matter was restricted to non-flammable compositions. However, since the amended claim 1 as maintained by the opposition division concerned mixtures of HFC 134 and/or HFC 134a with up to 6% of 2-methylbutane which were excluded in the application as filed in view of their flammability, it comprised added subject-matter and did not fulfil the requirements of Article 123(2) EPC.

- V. The Respondent considered that the indication in the application as filed that compositions containing HFC-134a and more than 3,3% 2-methylbutane as well as compositions containing HFC-134 and more than 2,6% 2-methylbutane were flammable was only in contradiction with the claimed subject-matter and did not restrict it in any way. This contradiction between the description and the claims was, however, not to be objected under Article 123(2) EPC.

VI. The Opponent 01 (Party as of right) did not make any submissions or file any request in the present appeal proceedings.

VII. The Appellant requested that the decision under appeal be set aside and that the patent be revoked.

The Respondent requested that the appeal be dismissed.

VIII. At the end of the oral proceedings which took place on 30 October 2007 in the absence of the duly summoned Party as of right, the decision of the Board was announced.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1 Claim 1 as maintained by the opposition division comprises substantial amendments in that the fluorine-containing molecule is selected from a list which has been restricted to two compounds, namely HFC 134 and HFC 134a and in that the hydrocarbon has been restricted to a single compound, namely 2-methylbutane. As a result of this amendment claim 1 now relates, *inter alia*, to non-flammable compositions of at least a fluorine containing molecule selected from HFC 134 and HFC 134a and 6 % by weight of 2-methylbutane. Non-flammable compositions combining HFC 134 and/or HFC 134a with 6% by weight 2-methylbutane as now claimed, are however not disclosed in the application as filed.

In fact, since the compositions encompassed by figures 1 to 4 are not described as being non-flammable, the non-flammable compositions containing HFC 134a and/or HFC 134 with the highest amount of 2-methylbutane disclosed in the application as filed contain respectively 3,3% or 2,6% of that hydrocarbon (page 9, lines 16 and 17). In addition, according to the application as filed, the above mixtures establish the flammability line for mixtures of HFC-134a and HFC 134 with 2-methylbutane, in other words, mixtures containing more than 3.3% weight 2-methylbutane are believed to be flammable (page 9, lines 19 to 22). Thus, the application as filed not only fails to provide a support for non-flammable compositions containing 6% by weight of 2-methylbutane as now claimed but, on the contrary, teaches explicitly that such mixtures are flammable with the consequence that they cannot fall under the original subject-matter which is restricted to non-flammable compositions.

- 2.2 According to the Respondent, the indication in the application as filed that mixtures of HFC-134a with 3.3% 2-methylbutane and HFC-134 with 2,6% 2-methylbutane established the flammability line for mixtures of HFC-134a and HFC-134 with 2-methylbutane was merely an inconsistency with the claimed subject-matter but did not restrict it to compositions containing less than 3.3 % 2-methylbutane.

However, since the application as filed, in particular its claim 1 was not restricted to compositions containing only HFC-134 and/or HFC-134a as sole fluorine-containing molecules, nor was it restricted to 2-methylbutane as sole possible hydrocarbon, this

passage of the description was not inconsistent with the subject-matter then claimed. In fact, a content of 6% by weight of hydrocarbon was not excluded in the context of the application as filed since even in the light of the restrictions set out by the description on page 9, lines 16 to 22, this amount of hydrocarbon could nevertheless be fulfilled in composition containing other fluorine compounds and hydrocarbons than HFC-134, HFC-134a and 2-methyl-butane. For these reasons, the passage on page 9 of the application as filed cannot be seen solely, as argued by the Respondent, as an inconsistency with the claimed subject-matter. Therefore, this line of argumentation must be rejected.

- 2.3 Hence, the amendments to claim 1 as maintained by the opposition division represents subject-matter which is not clearly and unambiguously derivable from the content of the application as filed, contrary to the requirements of Article 123(2) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

P. Cremona

R. Freimuth