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**Datasheet for the decision  
of 10 March 2016**

**Case Number:** T 0625/13 - 3.3.06

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**Language of the proceedings:** EN

**Title of invention:**  
Copper-aluminum mixed oxide catalyst, its preparation and use thereof

**Applicant:**  
BASF Catalysts LLC

**Headword:**  
Cu/Al oxide catalyst / BASF

**Relevant legal provisions:**  
EPC Art. 123(2)  
RPBA Art. 12(4), 13(3)

**Keyword:**

Added subject-matter (auxiliary requests 3 to 10) (yes)  
Admissibility of auxiliary request 11 filed during oral proceedings (no)

**Decisions cited:**

T 0962/98, T 0714/00, T 0979/07

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

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Case Number: T 0625/13 - 3.3.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.06**  
**of 10 March 2016**

**Appellant:** BASF Catalysts LLC  
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**Representative:** V.O.  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 15 October 2012  
refusing European patent application No.  
08155700.1 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** B. Czech  
**Members:** L. Li Voti  
C. Heath

## **Summary of Facts and Submissions**

- I. This appeal lies from the decision of the Examining Division to refuse (divisional) European patent application no. 08 155 700.1.
- II. In its decision, the Examining Division found *inter alia* that the subject-matter of claim 1 according to then pending main request lacked novelty and each claim 1 according to then pending first, second and third auxiliary requests was not inventive.
- III. With its statement of grounds of appeal dated 25 February 2013 the Appellant filed nine sets of amended claims as main request and auxiliary requests 1 to 8, respectively.

It submitted *inter alia* that the amended claims complied with the requirements of Articles 123(2) and 76(1) EPC and that their subject-matter was novel and involved an inventive step over the cited prior art.

- IV. Third party observations were filed by letter of 31 October 2013, raising issues under Articles 123(2), 76(1), 83 and/or 84 EPC, as well as regarding novelty and inventive step, with regard to all the Appellant's pending requests.
- V. The Appellant was summoned to oral proceedings. In a communication pursuant to Article 15(1) RPBA dated 24 September 2015, the Board expressed its provisional opinion that the claims according to all pending requests appeared to be objectionable under Articles 123(2), 76(1) and 84 EPC and that their subject-matter appeared to lack novelty and/or inventive step.

As regards Article 123(2) EPC, the Board remarked *inter alia* the following:

*"5.1.5 Generally speaking, it appears to be undisputed that **neither the claims nor the description contain an explicit disclosure of the combinations of features defined in the claims according to the main request.** Therefore, the compliance of the claims at issue with the requirements of Article 123(2) EPC prima facie appears to be rather questionable."*

Moreover, the Board indicated the following:

*"12.1 In case the Appellant intends to file amended claims in order to overcome the above objections, they should reach the Board at least one month before the date of oral proceedings.*

*...*

*12.3 New requests in the form of amended claims and/or description pages may, however, be disregarded by the Board, even when filed within the deadline set above... In this respect, the Appellant's attention is drawn to the provisions of Articles 114(2) EPC and Article 12 and 13 RPBA."*

- VI. The Appellant reacted to the Board's communication by letter dated 8 February 2016, enclosing amended versions of the previously submitted auxiliary requests 1, 2, 4 and 5, as well as new auxiliary requests 9 and 10. Moreover, it rebutted most of the objections raised by the Board.
- VII. During the oral proceedings held on 10 March 2016 the Appellant withdrew its then pending main request and auxiliary requests 1 and 2.

Moreover, it filed a further auxiliary request, labelled "Last Auxiliary Request" and consisting of a single claim.

VIII. The Appellant ultimately requested that the decision under appeal be set aside and a patent be granted on the basis of the set of claims according to one of the auxiliary requests 3 and 6 to 8, filed by letter of 25 February 2013, or of the auxiliary requests 4, 5, 9 and 10, filed by letter of 8 February 2016, or of the auxiliary request 11, labelled "Last Auxiliary Request", filed during oral proceedings, the auxiliary requests to be taken in their numerical order.

IX. Claim 1 according to **auxiliary request 3** reads as follows:

*"1. A Cu-Al-O bulk catalyst free of chromium having an aluminum content expressed as Al<sub>2</sub>O<sub>3</sub> greater than 20% by weight, wherein the copper content expressed as CuO is less than 80% by weight, wherein the catalyst comprises a spinel structure, has been calcined above 700°C and has less than 5% copper ions leachable as determined by reacting 100 ml 10% acetic acid with 10 g of powder catalyst for one hour with continuous stirring."*

Claim 1 according to **auxiliary request 4** differs from claim 1 according to auxiliary request 3 in that the claimed catalyst "... has **at most 3.9%** copper ions leachable ... " (emphasis added).

Claim 1 according to **auxiliary request 5** differs from claim 1 according to auxiliary request 3 in that the claimed catalyst "... has **at most 3.9%** copper ions leachable **and at most 1.90% aluminum ions leachable ...**"

The wording of claim 1 according to **auxiliary request 6** differs from that of claim 1 according to auxiliary request 3 in that it comprises the appended features

*"... , and which is either formed as a tablet, having a pore volume greater than 0.25 ml/g and a bulk density of 0.8 g/ml to 1.5 g/ml, or as an extrudate, which has a bimodal pore size distribution centering around 100 Å and around 1000 to 2000 Å."*

Claim 1 according to **auxiliary request 7** reads as follows (differences as compared to claim 1 of auxiliary request 3 made apparent by the Board):

*"1. A Cu-Al-O bulk catalyst free of chromium, **which is formed as a tablet**, having an aluminum content expressed as Al<sub>2</sub>O<sub>3</sub> greater than 20% by weight, wherein the copper content expressed as CuO is less than 80% by weight, **having a pore volume greater than 0.25 ml/g and a bulk density of 0.8 g/ml to 1.5 g/ml**, wherein the catalyst comprises a spinel structure, has been calcined above 700°C and has less than 5% copper ions leachable as determined by reacting 100 ml 10% acetic acid with 10 g of powder catalyst for one hour with continuous stirring."*

Claim 1 according to **auxiliary request 8** reads as follows (differences as compared to claim 1 of auxiliary request 3 made apparent by the Board):

*"1. A Cu-Al-O bulk catalyst free of chromium, **which is formed as an extrudate**, having an aluminum content expressed as Al<sub>2</sub>O<sub>3</sub> greater than 20% by weight, wherein the copper content expressed as CuO is less than 80% by weight, **which has a bimodal pore size distribution centering around 100 Å and around 1000 to 2000 Å**,*

*wherein the catalyst comprises a spinel structure, has been calcined above 700°C and has less than 5% copper ions leachable as determined by reacting 100 ml 10% acetic acid with 10 g of powder catalyst for one hour with continuous stirring."*

Claim 1 according to **auxiliary request 9** and claim 1 according to **auxiliary request 10** are identical and differ from claim 1 according to auxiliary request 3 in that they comprise the appended features

*" ... , whereafter the solution is separated, filtered and washed and the cation content in the solution is quantitatively analyzed."*

**Auxiliary requests 3 to 9** all contain an identical use claim (claim 7 according to auxiliary requests 3, 4, 5 and 9; claim 4 according to auxiliary requests 6 and 8, and claim 3 according to auxiliary request 7) having the following wording:

*"Use of a catalyst according to any of the previous claims in alkylation reactions, dehydrogenation reactions, hydrogenation reactions, reductive amination, hydrogenation of nitriles to unsaturated secondary amines, oxidation or reduction reactions, in particular for the alkylation of phenol with alcohols; amination of alcohols; dehydrogenation of alcohols; hydration of nitrile; hydrogenation of aldehydes; hydrogenation of amides; hydrogenation of fatty acids via esterification and hydrogenolysis; selective hydrogenation of fats and oils; hydrogenation of nitriles; hydrogenation of nitroaromatic hydrocarbons; hydrogenation of ketones; hydrogenation of furfural, hydrogenation of esters; hydrogenation of carbon monoxide to methanol; oxidation/incineration of carbon monoxide; oxidation of vapor*



*organic compounds (VOC); oxidation of SO<sub>2</sub>; oxidation of alcohols; decomposition of nitric oxide; selective catalytic reduction of nitric oxide; and purification of a gas stream by the removal of oxygen."*

**Auxiliary request 10** contains a use claim 2 differing from the use claim quoted above only in that "according to any of the previous claims" is replaced with "according to claim 1".

The sole claim according to **auxiliary request 11** (labeled "LAST AUXILIARY REQUEST") reads as follows:

*"1. A Cu-Al-O bulk catalyst free of chromium having an aluminum content expressed as Al<sub>2</sub>O<sub>3</sub> greater than 20% by weight, wherein the copper content expressed as CuO is less than 80% by weight, wherein the sodium content expressed as Na<sub>2</sub>O is less than 1% by weight, wherein the catalyst comprises a copper aluminate spinel and cupric oxide crystal phases, has less than 3.9% copper ions and less than 1.90% aluminum ions leachable, as determined by reacting 100 ml 10% acetic acid with 10 g of powder catalyst for one hour with continuous stirring, has a particle size distribution characterized by dv,10% of less than 2.7 micron, dv,50% of less than 8.9 micron and dv,90% of less than 28.3 micron, has a surface area of less than 73 m<sup>2</sup>/g, wherein the catalyst is prepared by the method comprising the steps of coprecipitation from a solution consisting of copper nitrate and sodium aluminate, and wherein sodium carbonate is used as the precipitation agent added to the solution to maintain the pH at about 7.4, subjecting the precipitate formed in the previous step to filtering, washing and drying,*

*calcining the dried product obtained in the previous step at a temperature of above 700°C."*

X. The arguments submitted by the Appellant as regards the compliance of the amended claims with the requirements of Article 123(2) EPC can be summarised as follows:

- The wording of claim 1 according to auxiliary request 3 found support in the application as filed (having the same description as the parent application published as WO 97/34694 A1) in example 8, page 12, line 7 to 8, taken in combination with the method of measuring the leachable cations content disclosed on page 11, as well as in parts of description of pages 7 and 13 (example 9).

- In this respect, neither the other features of the catalysts disclosed in example 8 and listed in table 1, nor the Na<sub>2</sub>O contents of the catalysts reported in example 16 were inextricably linked to the leachable copper ions content and, hence, did not need to be included into amended claim 1.

- Moreover, even though the particular method used for preparing the catalyst had an influence on the leachable cations content, more features of said method did not need to be incorporated into a product claim which was already sufficiently characterized by product features.

- The additional features of claim 1 according to auxiliary requests 4, 5, 9 and 10 also found basis in example 8, table 1, on page 12, and in the description of the measuring method on page 11.

- The additional features of claim 1 according to auxiliary requests 6, 7 and 8, concerning catalysts in

the form of tablets and/or extrudates, were supported by examples 18 and 22, respectively, and page 8 of the description.

- The use claims according to auxiliary requests 3 to 10 found support on page 39 of the description and in the applications of the catalysts specifically indicated in the examples.

As regards the admissibility of auxiliary request 11, filed during oral proceedings, the Appellant submitted that it was filed in order to take account of the detailed discussion of deficiencies under Article 123(2) EPC during the oral proceedings. All amendments made found basis in the description of the application as filed. Moreover, the sole claim of this request incorporated upper limits for all the characteristics of the catalysts disclosed in examples 8 and 16, the structural features of the catalyst disclosed in example 9 and also the main features of the method of preparation disclosed in example 1. Therefore, this claim overcame at first sight the objections raised under Article 123(2) EPC and should be admitted into the proceedings.

## **Reasons for the Decision**

### *Auxiliary Requests 3 to 10 - Admissibility*

1. These amended claim requests were filed with the statement of grounds or in response to the Board's communication of 24 September 2015.
  - 1.1 Their filings are considered as legitimate attempts to overcome the objections having led to the refusal of the

application and/or the deficiencies identified later in the Board's communication. Their filing did not raise further issues.

- 1.2 The Board thus decided to admit these claim requests into the proceedings (Article 12(4) and 13(3) RPBA).

*Auxiliary Request 3 to 10 - Allowability (Article 123(2) EPC)*

Except for the claims, the divisional application as filed, upon which the patent in suit was granted, is identical in content with the parent application as filed, published as WO 97/34694 A1. This was not in dispute. Therefore, in the following, reference is made to the description of the parent application WO 97/34694 A1 in the analysis of the disclosure of the (divisional) application as filed of relevance here.

*Auxiliary Request 3*

2. **Claim 1** according to auxiliary request 3 concerns a Cu-Al-O bulk catalyst free of chromium characterised in that

- it has "an aluminum content expressed as  $Al_2O_3$  greater than 20% by weight" and "a copper content expressed as CuO of less than 80% by weight",

- it "comprises a spinel structure" and "has been calcined above 700 °C"; and

- it "has less than 5% copper ions leachable as determined by reacting 100 ml 10% acetic acid with 10 g of powder catalyst for one hour with continuous stirring".

- 2.1 It is undisputed that, according to page 7 (lines 1 to 8) of the description of the application as filed, preferred catalysts of the invention are homogenous compositions having an aluminum content expressed as  $\text{Al}_2\text{O}_3$  greater than 20% by weight, a copper content expressed as CuO of less than 80% by weight and comprise a spinel structure when calcined above 700°C.
- 2.2 However, this part of the description does not address the leachable copper ions content of the catalysts.
  - 2.2.1 According to the Appellant, support for the leachable copper ions content would be provided by example 8. This example discloses (page 12, table 1) the properties of the catalysts prepared by the method of example 1 and calcined at different temperatures (see page 11, lines 11 to 12 and 21 to 22). Moreover, on page 12, lines 7 to 8, the following is indicated: "*The leachable Cu dropped to <5% if the catalyst is calcined at a temperature higher than 700° C (Example 5-7)*".
  - 2.2.2 The leachable copper ions content is measured in this context as indicated on page 11, lines 16 to 20, said passage providing support for the determination steps recited in claim 1 at issue.
- 2.3 The subject-matter of claim 1 at issue thus consists of a combination of features disclosed in the general description of the invention with an isolate feature disclosed only in working examples 5 to 7.
- 2.4 According to the case law of the Boards of Appeal, a feature taken from a working example and incorporated into the claim may be combined with other features disclosed in a more general context in the application as filed without contravening the requirements of

Article 123(2) EPC, provided the skilled person can recognize without any doubt that the feature isolated from the example is not closely related or inextricably linked to the other features thereof, and applies directly and unambiguously also to the more general context (see, for example, T 962/98 of 15 January 2004, Reasons, 2.5; T 714/00 of 6 August 2002, Reasons, 3.3 to 3.5).

2.5 In the present case, the method of example 1, described on page 10 of the application as filed, was used in the preparation of the catalysts of examples 5 to 7, i.e. those examples involving a calcination temperature of 800°C, 900°C and 1000°C, respectively (see page 11, lines 7 to 9) and according to which "[t]he leachable Cu dropped to <5%".

2.5.1 However, the method of Example 1 also explicitly requires the following (page 10, lines 18 to 20; emphasis added):

*"Do the following testing and characterization on this calcined powder: particle size distribution, acetic acid soluble **cations**, surface area, x-ray diffraction (XRD), thermal gravimetric analysis (TGA)..."*

From this passage of the description, the skilled person gathers that the catalysts prepared by the described method are also characterized by the indicated features (catalyst properties).

2.5.2 Said properties, including particle size distribution, surface area, leachable cation content (including e.g. leachable aluminum cations), are in fact reported in table 1 for all the products of examples 1 to 7 together with the content of leachable copper ions. Moreover,

examples 9 and 10 (page 13, lines 1 to 6 and 12 to 13) disclose that the XRD and TGA data characterizing the catalysts obtained by using a calcination temperature above 700° C (i.e. those of examples 5 to 7) reveal the presence of a crystalline CuO phase and of a spinel crystalline copper aluminate phase.

- 2.5.3 Furthermore, example 16 shows that catalysts prepared by the method of example 1 with three or four washes before calcination and calcined at 800° C (i.e. above 700° C), have also a measurable content in Na<sub>2</sub>O beside CuO and Al<sub>2</sub>O<sub>3</sub> (see page 18, lines 8 to 11; page 19, lines 1 to 5; catalysts ID 014 and 015 in table 6.)
- 2.5.4 However, claim 1 at issue neither mentions any of the particle size distribution, surface area, leachable aluminum ions content and Na<sub>2</sub>O content of the catalyst, nor its crystalline phases. Claim 1 thus encompasses catalysts having properties and structures differing substantially from those of the catalysts according to examples 5 to 7.
- 2.5.5 The Board remarks that the Appellant also stated in its letter of 8 February 2016 (page 8, lines 14 to 18) that *"[t]he calcination temperature and the spinel structure are not the only variables determining the low cation leachability. Particularly, the use of co-precipitation as the preparation method, the pH used during the co-precipitation, the specific precipitation agents used - all these can influence the final catalyst characteristics, including the cation leachability."*
- 2.5.6 For the Board, it is thus apparent that the leachable copper ions content disclosed in connection with examples 5 to 7 is closely related and inextricably linked to other features of the working examples and

cannot be considered to generally apply directly and unambiguously to the broader teaching on page 7 of the description.

- 2.6 Therefore, the Board concludes that claim 1 at issue results from an unsupported generalization of the specific catalysts disclosed in table 1 of example 8 and extends to products having different structures and properties than those disclosed in the indicated passages of the application as filed.
- 2.7 Claim 1 at issue thus does not meet the requirements of Article 123(2) EPC.
3. Independent Claim 7 (wording under IX, *supra*) concerns the use of the catalysts according to the previous claims in various types of chemical reactions.
- 3.1 The Board remarks in this respect that the only use specifically mentioned in the application as filed as regards the specific catalysts of table 1 of example 8, including the catalysts of examples 5 to 7 discussed above, is the hydrogenolysis of coconut fatty acid (see page 10, line 21, as well as examples 24 to 28).
- 3.2 All the other applications listed in claim 7 at issue, for example alkylation reactions, reductive amination, oxidation reactions, are not disclosed in the original application in combination with these specific catalysts. In fact, the generic text contained on page 39, lines 3 to 21, reading "*...it will be appreciated that the novel Cu-Al-O catalysts of the present invention may be employed in a large number of applications not specifically discussed herein...*", only indicates possible fields of application for a generic Cu-Al-O catalyst, but not for the more specific



catalysts of table 1 of example 8, let alone for those of examples 5 to 7.

3.3 In the Board's judgement, use claim 7 is thus directed to subject-matter extending beyond the content of the application as filed.

3.4 Therefore, claim 7 at issue does also not meet the requirements of Article 123(2) EPC.

#### *Auxiliary Requests 4 and 5*

4. The independent claims 1 according to auxiliary requests 4 and 5 differ from claim 1 according to auxiliary request 3 insofar as they require "*at most 3.9% copper ions leachable*" or "*at most 3.9% copper ions leachable and at most 1.90% aluminum ions leachable*", respectively.

4.1 These features are based on the disclosure of the leachable copper or copper and aluminum ions content values of example 4 (calcination temperature 700 °C) in table 1.

However, also in this case the respective claims 1 do not impose any limitations as regards the other characteristics of the catalyst disclosed in this example, such as its particle size distribution and surface area, the crystal phases present in the catalyst, and its Na<sub>2</sub>O content.

4.2 Hence, these claims also contravene the requirements of Article 123(2) EPC for reasons analogous to those given under 2.5ff., *supra*.

- 4.3 The respective use claims according to auxiliary requests 4 and 5 are identical in wording to claim 7 according to auxiliary request 3. Therefore, they also contravene the requirements of Article 123(2) EPC for the reasons given under 3ff., *supra*.

*Auxiliary Request 6*

5. Claim 1 according to this request differs from that of claim 1 according to auxiliary request 3 in that it additionally requires that the catalyst " *is either formed as a **tablet**, having a pore volume greater than 0.25 ml/g and a bulk density of 0.8 g/ml to 1.5 g/ml, or as an **extrudate**, which has a bimodal pore size distribution centering around 100 Å and around 1000 to 2000 Å*" (emphasis added).
- 5.1 The Board remarks that example 8 of the original application, discussed above, concerns catalysts in **powder** form (prepared by the method of example 1) and not in an extrudate or tablet form.
- 5.2 Moreover,
- neither the only example relating to an extrudate (example 22), which concerns catalysts calcined at a temperature of **500 °C** (page 26, line 15) and not at more than 700 °C as required by claim 1 at issue,
  - nor the generic part of the description disclosing preferred properties of the **extrudates** of the invention (page 7, lines 18 to 19 and page 8, lines 1 to 8),
- disclose the content of leachable copper ions of these catalysts.

5.3 Therefore, in the Board's judgement, a catalyst extrudate having all the features of claim 1 at issue in combination is not directly and unambiguously disclosed in the application as filed.

5.4 Catalysts in tablet form are disclosed in examples 18 to 21. However, the content of leachable copper ions of these catalysts is neither mentioned in these examples nor in the generic part of the description disclosing preferred properties of the tablets of the invention (page 7, lines 18 to 19 and page 8, lines 9 to 10).

Moreover, even though one of the specific tablets disclosed in example 18 (namely that prepared from powder ID 025, table 8 on page 22) is prepared from a catalyst powder calcined at a temperature higher than 700°C as required by claim 1 (and could thus have a leachable copper ions content of less than 5% as suggested in example 8), this specific tablet is disclosed to have a comparatively poor side crush strength (see page 22, lines 7 to 9). Possibly for this reason, other properties of this tablet, e.g. the pore volume and bulk density are not even indicated. The Board thus sees no reason for assuming that such a less preferred tablet would necessarily have the pore volume and bulk density mentioned in the generic part of the description for preferred tablets and required by claim 1 at issue.

5.5 Therefore, the application as filed does also not directly and unambiguously disclose a catalyst in tablet form with the combination of features of claim 1 at issue.

5.6 Claim 1 at issue thus contravenes the requirements of Article 123(2) EPC.

5.7 Use claim 4

5.7.1 The application as filed does not disclose any use of the specific extrudates of example 22 or of the tablet prepared from powder ID 025. It merely discloses the use in oxoalcohol finishing (example 23) or in the hydrogenolysis of methyl laurate (example 29) for some other specific tablets.

5.7.2 Hence, for reasons analogous to those given under 3ff., *supra*, the uses, according to claim 4, of the catalyst defined in claim 1 of the request at issue, in extrudate or tablet form, in all the various reactions listed in claim 4 (having the same wording as claim 7 according to auxiliary request 3; see IX, *supra*), are not directly and unambiguously disclosed in the original application either.

5.8 Therefore, this claim 4 does also not meet the requirements of Article 123(2) EPC.

#### *Auxiliary Requests 7 and 8*

6. Claim 1 according to auxiliary request 7 is limited to the catalyst in tablet form, and claim 1 according to auxiliary request 8 is limited to the catalyst in extrudate form (wordings under IX, *supra*).

These two embodiments are those claimed as alternatives in claim 1 according to auxiliary request 6. Therefore, for the same reasons given under 5ff., *supra*, with respect to product claim 1 and use claim 4 of auxiliary request 6, each claim 1 at issue here and the respective use claims 3 and 4 (which also have the same wording as claim 7 according to auxiliary request 3), do not comply with the requirements of Article 123(2) EPC.

*Auxiliary Requests 9 and 10*

7. Claim 1 according to both auxiliary requests 9 and 10 (wording under IX, *supra*) is more generic than claim 1 according to auxiliary request 3, since it does not require that the catalyst has to comprise a spinel structure and that it has been calcined at a temperature higher than 700°C. This claim comprises additional features specifying in more detail steps of the method to be used for measuring the leachable ions contents, as disclosed in example 8, page 8, lines 16 to 20, which features are not present in claim 1 according to auxiliary request 3.

However, since the reasons given under 2.5ff., *supra*, apply *mutatis mutandis*, this claim 1 also contravenes the requirements of Article 123(2) EPC.

8. Moreover, the respective use claims 7 and 2 are identical in ambit with claim 7 according to auxiliary request 3. Hence, for the reasons given under point 3ff., *supra*, these use claims 7 and 2 also contravene the requirements of Article 123(2) EPC.

*Auxiliary Request 11 - Admissibility*

9. The Appellant filed auxiliary request 11 during oral proceedings before the Board. The admittance of this claim request is thus subject to the the Board's discretion (Articles 12(4) and 13(1), (3) RPBA).
- 9.1 As submitted by the Appellant, the only claim according to this request (wording under IX, *supra*) differs from claim 1 according to auxiliary request 3 insofar as it contains additional features taken from the description, in particular,

- numerical upper limits for leachable copper ions and leachable aluminum ions contents, based on the data given for the catalyst of example 4 (table 1);
- numerical upper limits for particle size distribution parameters, also based on the data reported for example 4 (table 1);
- a numerical upper limit for the surface area also based on the data reported for example 4 (table 1);
- an upper limit of "*less than 1 % by weight*" for the sodium content expressed as Na<sub>2</sub>O, based on example 16, page 19, lines 4 to 7;
- the presence of "*copper aluminate spinel and cupric oxide crystal phases*", based on page 13, lines 1 to 3; as well as
- features taken from the description of the method used for the preparation of the catalyst, as disclosed in example 1 (in particular from page 10, lines 9 to 18 and page 11, lines 1 to 9).

9.2 According to Article 13(3) RPBA "amendments sought to be made after oral proceedings have been arranged shall not be admitted if they raise issues which the Board ... cannot reasonably be expected to deal with without adjournment of the oral proceedings."

9.2.1 This applies even more so to amended claim requests filed for the first time during oral proceedings.

9.2.2 Moreover, in the present case the Board had indicated in its communication that amended claims, if any, had to reach the Board at least one month before the date of the oral proceedings (see point V, *supra*).

9.3 The Board remarks that none of the new features taken from the description and incorporated into amended claim 1 had been present in the claims considered by the

Examining Division, and most of them, with the exception of the upper limits for leachable copper and aluminum ion contents, were also not present in the claims submitted in writing during the appeal proceedings.

- 9.3.1 Therefore, neither the Examining Division nor the Board ever had either the opportunity or reasons to consider and form an opinion on the potential patentability of a claim comprising said new features. For the Board, the filing of auxiliary request 11 thus amounts to presenting a fresh case.
- 9.3.2 More particularly, considering the number of features incorporated into claim 1, and not addressed in the preceding proceedings, the Board was not in a position to decide on the patentability of the claimed subject-matter without a thorough examination of all the issues potentially arising from the amendments in question, including a thorough review of the prior art.
- 9.3.3 Therefore, it was not possible for the Board to deal with this request without an adjournment of the oral proceedings.
- 9.4 Consequently, the Board decided not to admit auxiliary request 11 into the proceedings (Article 13(3) RPBA; see in this respect also T 979/07 of 15 October 2009, Reasons, 2.3).

#### *Conclusion*

10. None of the Appellant's request is both admissible and allowable.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed

The Registrar:

The Chairman:



D. Magliano

B. Czech

Decision electronically authenticated