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Datasheet for the decision of 11 February 2020

Case Number: T 0552/18 - 3.3.05

Application Number: 07807447.3

Publication Number: 2070873

IPC: C01F7/44, C30B29/20, C01F7/02

Language of the proceedings: EN

Title of invention:
ALPHA-ALUMINA POWDER

Patent Proprietor:
Sumitomo Chemical Company, Limited

Opponents:
Sasol (USA) Corporation
Sasol Wax GmbH

Headword:
Alpha-alumina powder/SUMITOMO

Relevant legal provisions:
RPBA Art. 13(3)
RPBA 2020 Art. 13(1)
EPC Art. 83, 54, 56, 112(1)
EPC R. 106, 124(1), 144(d)

Keyword:

Late-filed evidence - adjournment of oral proceedings would have been required (yes)
Sufficiency of disclosure - (yes)
Novelty - (yes)
Inventive step - (yes)
Referral to the Enlarged Board of Appeal - (no)
Obligation to raise objections - objection dismissed
Minutes of oral proceedings - request to record statement in the minutes

Decisions cited:

G 0010/91, G 0003/14, R 0006/17, T 0628/90, T 0017/91, T 0150/93, T 0481/00, T 0151/05, T 1464/05, T 0392/06, T 0360/07, T 0724/08, T 1459/11, T 2054/11, T 2186/11, T 1085/13, T 1811/13, T 2451/13, T 0634/16, T 1597/16

Catchword:

Europäisches Patentamt
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Case Number: T 0552/18 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 11 February 2020

Appellant 1: (Patent Proprietor)	Sumitomo Chemical Company, Limited 27-1, Shinkawa 2-chome, Chuo-ku Tokyo 104-8260 (JP)
Representative:	Vossius & Partner Patentanwälte Rechtsanwälte mbB P.O. Box 86 07 67 81634 München (DE)
Appellant 2: (Opponent 1)	Sasol (USA) Corporation 12120 Wickchester Lane Houston, TX 77079 (US)
Representative:	Maiwald Patent- und Rechtsanwaltsgesellschaft mbH Elisenhof Elisenstraße 3 80335 München (DE)
Party as of right: (Opponent 2)	Sasol Wax GmbH Worthdamm 13-27 20457 Hamburg (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 22 December 2017 concerning maintenance of the European Patent No. 2070873 in amended form.**

Composition of the Board:

Chairman	E. Bendl
Members:	G. Glod
	S. Fernández de Córdoba

Summary of Facts and Submissions

I. The appeals of the patent proprietor (appellant 1) and opponent 1 (appellant 2) lie from the interlocutory decision of the opposition division finding that European patent No. 2 070 873 B1, in amended form based on auxiliary request 1, meets the requirements of the EPC. The patent as granted was found not to meet the requirements for sufficiency of disclosure (Article 100(b) EPC in combination with Article 83 EPC).

II. Claim 1 of the patent as granted is as follows:

"*1. α-Alumina powder having a purity of at least 99.99% by weight, a specific surface area of from 0.1 to 2.0 m^2/g, a relative density of from 55 to 90%, and a closed porosity of 4% or less, wherein in a weight-based particle size distribution obtained by the dry sieving test according to JIS K0069 (1992), an amount of particles having a particle size of less than 75 μm is 5% by weight or less; an amount of particles having a particle size exceeding 2.8 mm is 15% by weight or less; and at least one frequency maximum peak appears in a particle size range of 100 μm or more and to less than 850 μm, provided that the particle size is the largest mesh size of a standard sieve through which α-alumina powder particle cannot pass among the standard sieves according to JIS Z8801 (1987), wherein the relative density and the closed porosity are measured by the method which is disclosed in page 12, lines 1-12 of the application as filed and the method which is disclosed in page 12, lines 15-20 of the application as filed, respectively.*"

Claims 2 to 3 relate to preferred embodiments thereof.

III. The following documents cited in the opposition proceedings are of relevance here:

S1: Product information Ceralox®
S2: Furubayashi, T. et al., proceedings of the International Institute for the Science of Sintering, Symposium, Tokyo 4-6 November 1987, pages 357 to 362
S4: Fujiwara, S. et al., Development of New High-Purity Alumina; translation from R&D Report SUMITOMO KAGAKU, vol. 2007-I
SM3: Lot Analysis Sheet of SPA-AC Lot number C60803
SN: Declaration of Robert Shane Nolan (16 February 2016)
SN-a: Declaration of Robert Shane Nolan (26 October 2016)
SN10: Surface Area Data of C64113 SPA-AC
LS-a: Declaration of Lillie Savage (1 March 2017)
TM1: Log book HKR 06-0430-01
TM2: Particle Size Analysis SPA-AC
MC: Declaration of Maria M. Tkachenko
MC-a: Declaration of Mark Chamberlin

IV. In a communication under Article 15(1) RPBA dated 18 September 2019, the board was of the preliminary opinion that the grounds for opposition did not prejudice the maintenance of the patent as granted.

V. With a submission of 4 December 2019 appellant 2 filed the following documents:

MW1: Log Book by SASOL
MW2: Harrop Weighted Averages as Excel Data Sheet
MW3: Harrop Weighted Average Summary dated March 23, 2006
MW4: Lot Analysis Sheet dated March 24, 2006

VI. With a submission of 10 January 2020 appellant 1 filed new auxiliary requests 4, 6 and 8.

VII. On 29 January 2020 appellant 2 submitted the following documents:

MW5a: Order acknowledgement
MW5b: Instructions for the shipper
MW5c: Insurance for Ceralox SPA-AC

VIII. Appellant 1 filed an additional submission on 4 February 2020.

IX. Oral proceedings took place on 11 February 2020 during which appellant 2 filed questions to be referred to the Enlarged Board of Appeal (EBA), a statement to be attached to the minutes of the oral proceedings and an objection under Rule 106 EPC.

The questions to be referred are as follows:

"*1. Is an Appeal Board obliged to assess the prima facie relevance of late-filed evidence for a (novelty destroying) public prior use attack or is it possible for an Appeal Board to not admit the late-filed evidence without assessing the relevance of such evidence?*

2. If the first question is to be answered in that an Appeal Board is in a position not to admit such evidence without assessing the relevance, does it matter, if the legal consequence of such omission and subsequent non-admittance of the late-filed evidence would be the maintenance of a prima facie invalid patent?

3. If the second question is answered in the affirmative, is such a maintenance of an prima facie invalid patent compliant with Art. 101 (2),(3) EPC, which requires that the patent as granted or as amended complies with the requirements of the EPC - despite the better knowledge of the Appeal Board?"

The objection under Rule 106 EPC is as follows:

"*Patentee objected for the first time in the oral proceedings that in particular document MW4 has been fabricated for the present proceedings. Appellant 2 (opponent 1) offered to hear witness(es) proving the authenticity of the document MW4 submitted. Further, Appellant 2 (Opponent 1) offered to file the original documents to address the objection. With the non-admittance of document MW4 Appellant's (Opponent 1's) rights have been violated.*"

X. The arguments of **appellant 1**, which are also reflected in the reasoning below, can be briefly summarised as follows.

(a) Admissibility of MW1 to MW4 and MW5a to MW5c

Articles 12(4) and 13 RPBA 2007 applied. All of the evidence relating to the purity of lot C64113 should have been filed at the latest with the submission in preparation for the oral proceedings before the department of first instance. Since documents MW1 to MW4 had been filed so late, at the very end of the appeal proceedings, it could no longer be established whether they were in fact original documents or whether they had been "prepared" specifically for the proceedings (see also letter of 10 January 2020, pages

3 and 6). When MW2 to MW4 were compared with previously submitted documents such as SM3 or TM1, their authenticity was called into question. This also related to MW1 in view of the changes made to the weight indication. Furthermore, the contradictory information given in appellant 2's statement of grounds and in the submission of 4 December 2019 with respect to the composition of lot C64113 corroborated these concerns about credibility. In any case MW2 to MW4 did not enable the resolution of the issues raised before their submission.

MW5a to MW5c did not provide any new information relating to the contentious points since they did not contain information on purity.

(b) Sufficiency of disclosure

It was evident from the description which method was to be used to determine the particle size distribution.

(c) Novelty

The purity of lot C64113 was not proven beyond reasonable doubt. It was evident from appellant 2's subsequent submissions that the purity given on page 13 of the statement of grounds of appeal was not the purity of the complete lot C64113.

(d) Inventive step

S4 had to be considered the closest prior art since it related to the same problem as the patent (page 4, right-hand column). There was no teaching in the prior art regarding the combination of features of claim 1

that would allow the problem given in paragraphs [0006] and [0011] of the patent to be solved.

Even if one started from lot C64113, there was no motivation to change the characteristics of the particles. Furthermore, there was no teaching on how the unknown process conditions would have to be changed to arrive at the desired properties.

(e) Referral of questions to the EBA

The questions, which related to questions of fact, were irrelevant since a prerequisite for *prima facie* relevance was the credibility of the evidence. There was no conflicting case law and *prima facie* relevance was not the only criterion for admissibility.

(f) Objection under Rule 106 EPC

It was difficult to understand how the right to be heard could have been infringed when admissibility had been discussed for over two hours.

(g) Statement to be included in the minutes

It was the board's responsibility to draft the minutes. The statement provided was certainly not complete and was irrelevant to the proceedings.

XI. The arguments of **appellant 2** can be summarised as follows.

(a) Admissibility of MW1 to MW4 and MW5a to MW5c

During the digitalisation of the data, some of the original data had been misfiled, so that the detailed

purity data of the calcination batches making up lot C64113 was not readily available any more. It was only available in electronic form and had been provided as MW2. Due to the efforts of employees who had already retired, it had been possible to retrieve MW3 and MW4, which had been immediately submitted into the proceedings. MW1 was extracted from the log book by SASOL. The corrections made there did not contain a signature and/or a date since they had been made on the same date as the first entry, which had been on 15 January 2006.

MW4 had been submitted in direct response to the communication by the board and was completely consistent with the purity data provided earlier in the proceedings. MW1 to MW4 were not complex and did not raise any issues which would be surprising to the patentee. The information provided was *prima facie* relevant and the board had to consider it.

If the board did not admit these documents, various national legal proceedings would be necessary to correct the board's decision, which would not be in the interests of procedural economy.

MW2 showed the detailed values for the various parts of the calcination batches that had been transferred into lot C64113. The averages of the impurity values shown in MW2 were summarised in MW3. MW4 was the lot analysis sheet that had been provided to Monocrystal to give information on the degree of purity. The correlation between calcination batches HKD06-0109-0101 to HKD06-0109-0106 described in the statement setting out the grounds of appeal (as well as HKD06-0112-0101 to HKD06-0112-0106) and lot C64113 meant that the purity of lot C64113 had been proven beyond reasonable doubt,

as required by the board in its communication pursuant to Article 15(1) RPBA.

The set of documents MW1 to MW4 clearly showed detailed information on the production and analysis of lot C64113 and the purity analysis performed by appellant 2 on the lot for its customer.

MW5a to MW5c had been submitted in reaction to appellant 1's allegations in its submission of 10 January 2020.

(b) Sufficiency of disclosure

The appellant agreed with the finding of the opposition division that the teaching of the patent was not sufficient to determine the frequency maximum peak.

(c) Novelty

The requirements of Article 54 EPC were not fulfilled for the following reasons.

Lot C64113, which had been delivered to Monocrystal, anticipated the novelty of the subject-matter of claim 1. The surface area was disclosed in SN10, the relative density and closed porosity in SN and SN-a and the particle size distribution in TM2. The purity provided in the table on page 13 of the statement of grounds of appeal related to batches that were part of lot C64113 and representative of SPA-AC products in general. It showed a purity of at least 99.99%. In any case, it was known from MC-a that SPA-AC was advertised as suitable for sapphire production, so it had to have a purity of at least 99.99%. This was also evident from S4, which

taught that such purity grades were needed for sapphire production.

(d) Inventive step

The requirements of Article 56 EPC were not fulfilled for the following reasons.

There was case law stating that more than one document could be taken as the closest prior art.

When starting from S4 as the closest prior art, the problem to be solved could only be seen as that of providing an alternative alpha aluminium oxide because S4 already disclosed a high bulk density and the particle size distribution as claimed. The patent did not provide any proof of improvement compared to S4 with respect to sapphire production. It was even evident from the patent that examples not falling within the scope of the claim (comparative example 7) had a high loose bulk density. The solution was obvious, since such a product could simply have been purchased from Sasol.

When starting from the prior use, in line with T 1464/05 the skilled person was supposed to be aware of all the features of the prior use that had been made available to the public. It was evident from S1 that SPA-AC had the required purity. The skilled person trying to obtain the required purity for sapphire production as indicated in S4 would only have to use the process set out in LS-a (point 7).

(e) Referral of questions to the EBA

There was conflicting case law. T 151/05 (Reasons 2.2), T 481/00 (Reasons 3.12), T 628/90 (Reasons 4) and T 150/93 (Reasons 2) clearly pointed to the importance of *prima facie* relevance. On the other hand T 17/91 had not considered *prima facie* relevance. If the board was minded not to admit at least MW4, then a *prima facie* invalid patent would be maintained. This was a point of law that had to be clarified.

(f) Objection under Rule 106 EPC

The objection was clearly justified since appellant 2's right to be heard had been violated when its offer to provide witness(es) and/or to file additional evidence in the form of original documents had not been accepted. It had come as a surprise that appellant 1 had first questioned the credibility of MW1 to MW4 during the oral proceedings and indicated that the documents had been prepared specifically for the appeal proceedings. These allegations should have been raised earlier, in the submission of 10 January or 4 February 2020. Appellant 2 had to be given the opportunity to respond to this.

(g) Statement to be included in the minutes

Appellant 1's accusations could not be accepted and it was important to have the statement in the minutes.

XII. Opponent 2 is a party as of right. It did not make any submissions as to the substance of the appeals.

XIII. Appellant 1 (patent proprietor) requested that the impugned decision be set aside and that the patent be

maintained as granted, or alternatively that the patent be maintained in amended form on the basis of the set of claims of one of auxiliary requests 1 to 8:

- auxiliary requests 1 to 3, 5 and 7 as filed on 7 September 2017 before the opposition division, and
- auxiliary requests 4, 6 and 8 as filed on 10 January 2020.

Appellant 2 (opponent 1) requested that the decision under appeal be set aside and that the European patent be revoked. It also requested that questions be referred to the EBA and that a statement be included in the minutes. It filed an objection under Rule 106 EPC.

Reasons for the Decision

1. Admissibility of MW1 to MW4 and MW5a to MW5c

1.1 Rules of procedure applicable to the present case

1.1.1 The summonses to the oral proceedings in the present case were issued on 24 July 2019, i.e. prior to the entry into force of the RPBA 2020. Article 25 RPBA 2020 defines the transitional provisions in such cases. More specifically, Article 25(3) RPBA 2020 excludes the applicability of Article 13(2) RPBA 2020 only. Consequently, Article 13(1) RPBA 2020 applies to the case in hand.

1.1.2 The criteria defined in Article 13(1) RPBA 2020 concerning the admissibility of amendments to a party's case are based on established case law developed on the basis of Article 13(1) RPBA 2007. The criteria defined by Article 13(1) RPBA 2020 are therefore not in

contradiction of those required by the latter article, but mainly define to a greater degree in what circumstances amendments to a party's case may be admitted (see T 634/16, Reasons 14 and T 1597/16, Reasons 2).

1.1.3 Since, with regard to amendments made after notification of a summons to oral proceedings, the applicability of the criteria according to Article 13(2) RPBA 2020 is explicitly excluded in this case (see 1.1.1 above), the requirements laid down in Article 13(3) RPBA 2007 apply.

1.2 MW1 to MW4

1.2.1 Appellant 2 alleged prior use in the form of lot C64113 in its notice of opposition. During the opposition proceedings, the patent proprietor questioned the evidence relating to the purity of lot C64113 and the opposition division ultimately decided that no purity data was available for SPA-AC C64113 (point 7.6 of the impugned decision). In the statement setting out the grounds of appeal (page 13), appellant 2 submitted a table to show the purity of batches making up lot C64113. The board questioned the probative value of this information in its communication under Article 15(1) RPBA 2007. On 4 December 2019, appellant 2 submitted MW1 to MW4.

1.2.2 In reply and in the oral proceedings before the board, appellant 1 contested the credibility of this evidence (see letter of 10 January 2020, page 3, point (i)). It elaborated on this during the oral proceedings. In particular, it considered it dubious that MW1 contained non-signed and non-dated amendments for batches HKD 06-0112-0101, HKD 06-0112-0103, HKD 06-0112-0104 and

HKD 06-0112-0106 that had apparently been written with a different pen (see page 6, first full paragraph of appellant 1's letter). Furthermore, appellant 1 found it unclear what the basis for MW2 was supposed to be, since the date of the samples ("PROD_DATE") was 1 January 2006, but the alleged production dates of batches HKD06-0109 and HKD06-0112 were 12 and 15 January 2006 respectively (see also pages 5 and 6 of the letter of 10 January 2020). It was also not clear whether MW2 was supposed to relate to the complete composition of C64113 or whether additional batches could be present (see page 5, last full paragraph of appellant 1's letter). MW3 contained handwritten information that was neither dated nor signed. It was very surprising that MW4 was suddenly available and that its font and set-up including a stamp were so different from the lot analysis sheet SM3 that had been submitted earlier (see page 6, second full paragraph of appellant 1's letter).

1.2.3 During the oral proceedings appellant 2 rejected these submissions as unproven accusations and provided explanations why the documents had been submitted so late and about their origin. Furthermore, it offered to provide witness(es) and to file the original documents.

1.2.4 It is the board's view that appellant 1's observations made in its written submissions and in the oral proceedings raise questions that the board is not in a position to answer based on the evidence before it. These questions are a direct consequence of the very late submission of MW1 to MW4, although the issues relating to the purity of lot C64113 were known long before.

1.2.5 Documents MW1 to MW4 are not admitted into the proceedings for the following reasons.

These documents were submitted after notification of a summons to oral proceedings, i.e. at a very late stage of the proceedings, and constitute an amendment of the party's case within the meaning of Article 13(3) RPBA 2007 and Article 13(1) RPBA 2020. They raise new questions, as submitted by appellant 1 (see above 1.2.2). Although appellant 2 has provided reasons why the documents were only retrieved when they were, there is no justification why these documents could not have been retrieved earlier if sufficient effort had been made. There is no cogent reason why the evidence relating to the prior use was submitted piecemeal. The admission of MW1 to MW4 would go against the interests of procedural economy as laid down in Article 13(1) RPBA 2020 and would require the adjournment of the oral proceedings as mentioned in Article 13(3) RPBA 2007. In this context it is noted that procedural economy relates to the appeal procedure before the board and not to any possible and hypothetical national proceedings. The documents presented do not enable the resolution of the issues relating to the purity of the prior use α-alumina powder, as required by Article 13(1) RPBA 2020. These issues' pertinence was already known in the opposition proceedings.

1.2.6 In particular it should be emphasised that the communication under Article 15(1) RPBA 2007 did not raise any new issues. Additionally, such a communication is not an invitation to submit further evidence (T 1459/11, Reasons 3.3).

1.3 MW5a to MW5c

1.3.1 According to appellant 2 these documents were submitted in response to appellant 1's questioning of the delivery of lot C64112 to Monocrystal. However, during the oral proceedings appellant 1 no longer questioned the lot's delivery, and instead indicated that the documents were irrelevant with respect to purity. Furthermore, the credibility of MW5a was called into question in view of the undated handwritten indications.

These documents are not admitted for the following reasons.

1.3.2 They do not contain any information about the purity of lot C64112, so they do not help to resolve the issue that was already known (Article 13(1) RPBA 2020). Furthermore, to establish whether the information in MW5a was correct it would be necessary to conduct further investigations that would lead to an adjournment of the oral proceedings (Article 13(3) RPBA 2007), contrary to the principle of procedural economy.

2. Admissibility of the table on page 13 of appellant 2's statement of grounds of appeal

A decision does not have to be made on the table's admissibility, since in any case the information provided is not sufficient to establish the purity of (the total of) lot C64113 (see point below).

Main request - patent as granted

3. Article 100(b) EPC

This ground does not prejudice the maintenance of the patent for the following reasons.

3.1 Claim 1 relates to an α-alumina powder that is characterised by several parameters. The issue is whether the skilled person knows how to determine whether at least one frequency maximum peak occurs in a particle size range of 100 µm or more and less than 850 µm, based on the teaching of the patent and using his common general knowledge.

3.2 The patent provides some information on this in paragraphs [0036] and [0046]. The skilled person has to produce an α-alumina powder, sieve it through the indicated mesh sizes, determine the amount and distribution and see whether a maximum can be found in the distribution. This appears straightforward except that paragraphs [0036] and [0046] provide diverging information about which mesh sizes to choose. This means that there is ambiguity with respect to this feature.

3.3 It is established case law that such ambiguity can only give rise to an objection of insufficiency if the lack of clarity affects the patent as a whole (T 1811/13, Reasons 5.1). This does not apply in the present case since the skilled person can either use the method described in paragraph [0036] or the one described in paragraph [0046]. The claim covers both possibilities. For a specific powder two different results may be obtained. If at least one of the methods used provides

a frequency maximum peak then it has to be considered to fall within the scope of the claim.

3.4 Although example 9 was conducted with a mesh size of 600 µm, it cannot be concluded that the information provided in paragraph [0036] is wrong. It appears that example 9 relates to one of the two methods. The argument that the skilled person would understand that the mesh size had to be 600 µm in view of the difference between the different sieves (see paragraph 3.2 of the appealed decision) is not convincing since many of the mesh sizes provided by the JIS Z8801 standard were omitted and the skilled person would not know which ones were supposed to be used and which ones were not.

3.5 The board concludes that appellant 2's objection of insufficiency is an objection of clarity that is not open to examination (G 03/14, Reasons 81).

4. Article 100(a) EPC in combination with Article 54 EPC

This ground does not prejudice the maintenance of the patent for the following reasons.

It needs to be established whether lot C64113 has the claimed purity.

4.1 In the present case all the information regarding the alleged prior use is within appellant 2's sphere, so the standard of evidence is "up to the hilt", which means "beyond reasonable doubt" (T 2451/13, Reasons 3.2.4 and 3.2.5).

4.2 S1 shows a typical analysis of SPA-AC. However, it is not apparent from S1 that the data it contains (from

11/2000) inevitably apply to lot C64113 and that all SPA-AC samples inevitably have to have the indicated purity degree to qualify as SPA-AC. S1 is different from a product specification normally provided to a customer. T 360/07 is irrelevant to the present case, since an α-alumina powder cannot be purified by standard methods, but requires different starting materials. Reference is also made to T 1085/13 (Reasons 3.7) in this respect.

4.3 Notwithstanding the question of admissibility, appellant 2 provided on page 13 of its statement of grounds of appeal a table that provides the metal content of several lot numbers. These different lot numbers are part of lot C64113, but the complete composition of lot C64113 is not provided. Therefore, the purity of the final lot cannot be deduced from the batches presented in the table. This conclusion is also in line with appellant 2's submissions of 4 December 2019 in which it was confirmed that the table did not show the complete composition of lot C64113. It is also not recognisable from the table, and there is no proof, that the batches in it have to be considered as representative of the complete composition of lot C64113.

4.4 The board disagrees with the argument that it was implicit that lot C64113 had to have a purity of >99.99% as it was delivered to the world's largest sapphire producer. There is no evidence that lot C64113 was in fact intended to be used exclusively for sapphire production, which is also in line with MC, which does not provide any information about the lot's use. Although MC-a (point 6) indicates that S1 was used as a marketing tool for sapphire producers, there is no proof that lot C64113 was ultimately used for sapphire

production. Consequently, the information provided in S4 that high-purity alumina with a purity of more than 99.99% is useful for sapphire production does not make it possible to conclude that lot C64113 inevitably had such a purity.

4.5 Therefore, the board is not convinced that it is proven beyond reasonable doubt that the purity of lot C64113 is >99.99%.

5. Article 100(a) EPC in combination with Article 56 EPC

5.1 The patent relates to α-alumina powder suitable for producing sapphire.

5.2 It is established case law that the closest prior art is normally a prior-art document disclosing the same purpose or with the same objective as the claimed invention and having the most features in common with the claimed subject-matter. There may be cases where several prior-art disclosures are equally suited as the closest prior art. In the present case, S4 is considered to be the closest prior art, since it also relates to sapphire production and the related problems. It discloses α-alumina with the properties shown in Table 2, including a purity greater than 99.99% and a high bulk density of 2.0 g/cm^3 (page 4, right-hand column, line 7 from bottom). The particle size distribution is not unambiguously derivable from Figure 5(2) of S4, since the sample size is very small and the three-dimensional structure of the few particles is not readily recognisable.

Although lot C64113 only differs in its degree of purity, it is less suitable as the closest prior art since there is no indication of its intended use. Lot

C64113 was available as a commercial product, but no information relating to its method of production was available. Although LS-a (point 7) mentions that the process for lots C60803 and C64113 is the same, there are no details about the process, so the skilled person does not know how to produce these lots. T 1464/05, cited by appellant 2, is different in that there the suitability of the product for the intended use was recognised on the balance of probabilities (Reasons 4.5). In this case, the suitability of lot C64113 for sapphire production cannot be acknowledged since its purity is not known.

5.3 The problem to be solved is to provide α-alumina powder which can be charged in a crucible at a high bulk density and is suitable for producing sapphire having a few voids without causing the oxidation of the crucible in a heat melting step (paragraph [0006] of the patent).

5.4 The problem is solved by an α-alumina powder according to claim 1, characterised in that the relative density is from 55 to 90%, the closed porosity is 4% or less, and, in a weight-based particle size distribution obtained by the dry sieving test according to JIS K0069 (1992), the amount of particles having a particle size of less than 75 µm is 5% by weight or less; the amount of particles having a particle size exceeding 2.8 mm is 15% by weight or less; and at least one frequency maximum peak occurs in the particle size range of 100 µm or more and less than 850 µm.

5.5 It is accepted that the problem is solved for the following reasons.

The powders according to examples 1 to 16 of the patent all have bulk densities such as the one disclosed in S4 or even higher. It is credible that the combination of relative density, closed porosity and particle distribution has a positive impact on the water-absorbing properties, so that the oxidation of the crucible is reduced. Even if it is accepted that some of the water is evaporated during the heating step, it is evident from S4 that not all of the absorbed water disappears and that water is of relevance for the oxidation of the crucible (see page 4, right-hand column, second full paragraph).

In the impugned decision (point 8.1), the opposition division accepted a similar problem as the objective problem and there is no evidence on file that would cast doubt on the opposition division's conclusion in this regard. Even if some of the powder according to comparative example 7 also has a high loose bulk density of 2.4 g/cm^3, the closed porosity is above 4% (5%). This will have a negative effect on the oxidation of the crucible.

In view of the evidence presented, the board has no reason to doubt that the claimed combination of features makes it possible to solve the problem.

5.6 The solution is not obvious.

Although S4 discloses that the amount of absorbed water should be minimised (page 4, right-hand column, second full paragraph), it does not provide any information about the closed porosity and does not provide any teaching about how it could be changed and/or adapted. S2 shows closed pore volumes of alumina powders ("as received") in Figure 2, but gives no indication of the

manufacturing process. The skilled person does not have any information at his disposal that would enable him to reconcile the information in S2 and S4 so as to manufacture a product according to claim 1. The argument that the skilled person could simply have bought SPA-AC from Sasol is not persuasive, since no product with all the required properties was publicly available at the priority date of the patent. The information available on SPA-AC only concerns the properties of the particles, but there is no information about the process used to make these particles. LS-a mentions a process without giving any details of the process steps. Consequently, the skilled person would not know how to adapt the process so as to obtain all the desired properties. There is no evidence that the skilled person starting from the materials disclosed in S4 would arrive at the claimed product by simply adjusting the amounts based on the Funk and Dinger equation. The board agrees with the opposition division that the properties of the final α-alumina powder product are dependent on the manufacturing process and that the prior art does not seem to provide any guidance on how to adjust the manufacturing conditions such that the desired properties are inevitably obtained.

5.7 The requirements of Article 56 EPC are met by claim 1 and its dependent claims.

6. Referral under Article 112(1)(a) EPC

Appellant 2 requests that three questions be referred to the EBA. The request is rejected for the following reasons.

6.1 The board understands the questions to relate to the *prima facie* relevance of late-filed evidence of an alleged public prior use. In the present case, it is not the *prima facie* relevance that is crucial, but the credibility and plausibility of the documents when considering whether the prior use constitutes prior art under Article 54(2) EPC. Before the relevance of a document's content is checked, it first needs to be established whether the provided evidence relating to prior use is credible and free of inconsistencies and can be considered prior art. As indicated above, the board came to the conclusion that, taking into account the submissions of appellant 1 relating to the credibility of the late-filed evidence, it is not in a position to decide that the facts regarding the evidence submitted are proven up to the hilt. Therefore, and taking into account the principle of procedural economy, the evidence was not admitted into the proceedings. Consequently, the questions to be referred to the EBA are considered not to be relevant for deciding the present case.

6.2 For the sake of completeness it is noted that it is accepted case law that *prima facie* relevance is not the only criterion to be relied on when deciding on the admission of a document, but may be one of several criteria (R 06/17, Reasons 3.6). For documents submitted very late in proceedings, *prima facie* relevance is de facto irrelevant (see, for example, T 2054/11, Reasons 3.3). In T 724/08 (Reasons 3.4) and T 2186/11 (Reasons 2.1.6) *prima facie* relevance was not considered at the beginning of the appeal proceedings.

T 151/05 (Reasons 2.2), T 481/00 (Reasons 3.12), T 628/90 (Reasons 4), T 150/93 (Reasons 2) and T 17/91, on which appellant 2 relied, are not relevant since

these decisions were taken before the RPBA 2007, defining the criteria for admissibility of late filed amendments more uniformly, entered into force (13 December 2007).

In this context, the board also notes that in appeal proceedings fresh grounds for opposition, even if they are *prima facie* highly relevant, can only be introduced with the consent of the patentee (see G 10/91, Reasons 18). In such cases, if the patentee does not consent, *prima facie* invalid patents would be maintained.

7. Objection under Rule 106 EPC

7.1 Appellant 2 considers that its right to be heard was infringed since it was not allowed to appropriately respond to appellant 1's objection with respect to the credibility in particular of MW4. It alleged that this objection was raised for the first time during the oral proceedings before the board.

7.2 The problem relating to the proof of the purity of lot C64113 had been known since the opposition proceedings; in particular it was known from the communication of the opposition division accompanying the summons to oral proceedings that the prior use in the form of lot C64113 was not proven beyond reasonable doubt. At that time appellant 2 should have made the effort to provide all the missing information. The question relating to the purity was in the end crucial for the opposition division's decision (point 7.6).

7.3 According to Article 12(3) RPBA 2020 the statement of grounds of appeal should contain a party's complete case. Appellant 2 would thus have been expected to submit, at the latest at that stage, all data that

might fill the gaps in the decision of the opposition division, in the hope that it would not be disregarded under Article 12(4) RPBA 2007. All appellant 2 provided was the table on page 13 of the statement of grounds of appeal.

7.4 In its communication under Article 15(1) RPBA 2007 dated 18 September 2019, the board pointed out that "[t]he probative value of such a Table seems not very high without the original documents".

7.5 It was only then, i.e. on 4 December 2019, that appellant 2 submitted MW1 to MW4, albeit not the original documents.

7.6 Appellant 1 questioned the credibility of these documents in its submission of 10 January 2020 (see 1.2.2 above) and elaborated on this during the oral proceedings on 11 February 2020.

7.7 Appellant 2's objection under Rule 106 EPC is now based on the fact that it was allegedly taken by surprise by appellant 1's allegations and that it must be given the opportunity to respond by offering to provide witnesses or to file the original documents.

7.8 As is evident from the course of events, appellant 2 had plenty of opportunities to make its case and to provide all the available data. Since MW4 was submitted at such a late stage of the proceedings, it is clear that appellant 1 would respond, which it did in its letter of 10 January by stating that "the contents of the new evidence are not credible" (see in particular item (i) on page 3). This could also be understood as an invitation for appellant 2 to provide the original documents, which was also mentioned in the

communication under Article 15(1) RPBA 2007 (paragraph 6.4, last sentence), notwithstanding the question whether such documents would have been admitted when provided so late. The board cannot see why appellant 1's line of argument during the oral proceedings could be considered surprising to appellant 2 since it was in line with the written submissions of 10 January 2020. Furthermore, the board considers that appellant 2's right to be heard has not been infringed, since admissibility was discussed for over two hours.

7.9 The board's conclusion is also in line with T 392/06 (Reasons 6.3) that the board does not have to admit additional evidence to compensate for deficient evidence.

7.10 If appellant 2's logic was followed, this would mean that each time a party A submits evidence shortly before the oral proceedings, which is subsequently contested by a party B, the oral proceedings would have to be adjourned to provide party A with the opportunity to supplement its case. Party A could thereby control the course of the proceedings. This is definitely not in line with Article 13(1) RPBA 2020 and Article 13(3) RPBA 2007, which apply in the current case (see point 1.1 above).

7.11 For all these reasons the objection is dismissed.

8. Request for inclusion of a statement in the minutes of the oral proceedings

During oral proceedings appellant 2 provided a statement in writing that it asked to be added to the minutes of the oral proceedings.

8.1 According to Rule 124(1) EPC, the minutes of oral proceedings contain the essentials of the oral proceedings and the relevant statements made by the parties.

8.2 The statement by appellant 2 contains the name of appellant 1's representative, who did not subscribe to the statement as such. Furthermore, the statement does not add to what has already been submitted in the written proceedings or discussed in the present decision and does not have an impact on the board's decision. The board understands appellant 1's comments as request not to have the appellant 2's statement in the file. Therefore, the statement is excluded from file inspection in accordance with Rule 144(d) EPC, since it would not serve the purpose of informing the public about the European patent and its inspection would be prejudicial to appellant 1's interests (Article 1(2) Decision of the President of the European Patent Office dated 12 July 2007 concerning documents excluded from file inspection (originally published in OJ EPO 2007, Special edition No. 3, 125).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is maintained as granted.

3. The request for questions to be referred to the Enlarged Board of Appeal is rejected.

4. The objection under Rule 106 EPC is dismissed.

The Registrar: The Chairman:

C. Vodz E. Bendl

Decision electronically authenticated