Internal distribution code:
(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [X] To Chairmen
(D) [-] No distribution

Datasheet for the decision of 24 March 2015

Case Number: T 0450/13 - 3.3.09

Application Number: 07254468.7

Publication Number: 1923441

IPC: C09J7/02

Language of the proceedings: EN

Title of invention:
Emulsion based adhesive

Patent Proprietor:
ROHM AND HAAS COMPANY

Opponent:
Synthomer Deutschland GmbH

Headword:

Relevant legal provisions:
EPC Art. 83, 54, 56
RPBA Art. 12(2), 12(4), 13(1)
EPC R. 99(2)

Keyword:
Sufficiency (yes)
Novelty (yes)
Inventive step (yes)
Admissibility of public prior use
Admissibility of new novelty attack
Admissibility of new inventive step attack

Decisions cited:
G 0009/91, G 0004/93, G 0001/99, T 0220/83, T 0213/85, T 0328/87, T 0145/88, T 0169/89, T 0922/05, T 1404/05, T 0390/07, T 0608/07, T 1581/08, T 0473/09, T 0495/10, T 1525/10, T 2542/10, T 2532/11

Catchword:
1. Submitting new documents together with the statement of grounds of appeal without discussing them may obscure any argument the appellant may have intended to make in the statement of grounds of appeal.

It is in particular not acceptable if it is then necessary for the board and any other party to read the new documents, to identify the possibly relevant passages in them and then to knit them together to understand why, in view of these documents, the decision of the opposition division was in the appellant's view wrong (see in particular point 4.4 of the Reasons).

2. Not substantiating a public prior use in opposition proceedings but attempting to substantiate it in the statement of grounds of appeal may lead to the inadmissibility of this attack under Article 12(4) RPBA (see point 3 of the Reasons).

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0450/13 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 24 March 2015

Appellant: (Opponent)	Synthomer Deutschland GmbH Werrastrasse 10 45768 Marl (DE)
Representative:	Schupfner, Georg Müller Schupfner & Partner Patent- und Rechtsanwaltspartnerschaft mbB Schellerdamm 19 21079 Hamburg (DE)
Respondent: (Patent Proprietor)	ROHM AND HAAS COMPANY 100 Independence Mall West Philadelphia, Pennsylvania 19106-2399 (US)
Representative:	Buckley, Guy Julian Patent Outsourcing Limited 1 King Street Bakewell Derbyshire DE45 1DZ (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 21 December 2012 concerning maintenance of the European Patent No. 1923441 in amended form.**

Composition of the Board:

Chairman	W. Sieber
Members:	M. O. Müller
	K. Garnett

Summary of Facts and Submissions

I. This decision concerns the appeal filed by the opponent against the interlocutory decision of the opposition division that European patent No. 1 923 441 as amended met the requirements of the EPC.

II. The opponent had requested revocation of the patent in its entirety on the grounds that the claimed subject-matter was neither novel nor inventive (Article 100(a) EPC), and that the patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) EPC).

The documents submitted during the opposition proceedings included:

D1: Y. Liu et al, "Herstellung von acrylatbasierten Haftklebstoffdispersionen mit hohem Festgehalt und geringer Viskosität", German Translation;

D2: US 6,620,870 B1;

D3: EP 0 081 083 A2;

D4: DE 102 03 885 A1;

D5: DE 196 42 762 A1;

D6: Stefan Roeber, "Packaging Tapes", Handbook of pressure sensitive adhesive technology, pages 786 to 801 and 813 to 813;

D8: Analysis of the particle size distribution of Neocryl™ A45;

D9: Analysis of the particle size distribution of Primal™ PS83D;

D10: G. Pedala, European Adhesives & Sealants, December 1993, page 29;

D18: "Integrating Sound Level Meters", 2 pages;

D19: Test report on the influence of the position of the sound meter on the noise level;

S05: Report of S. Martina of her visit to Straptech-Maillis (1 February 2005);

S10a: "BI-DCP Distribution Table" of sample BASF DS 3547X;

S10b: Weight Distribution Job 28/Run 128 of sample BASF DS3547X;

S10c: Volume distribution of Acronal™ DS3457X; and

S12c: "Herstellvorschrift: Plextol D260".

III. The opposition division's decision, announced orally on 8 November 2012 and issued in writing on 21 December 2012, was based on a sole request filed as "NEW MAIN

REQUEST" during the oral proceedings before the opposition division.

The independent claims of the new main request read as follows:

"1. A low noise adhesive product comprising an adhesive layer formed by the drying of an emulsion polymer on a polyolefin film; wherein the emulsion polymer comprises:

a) a fine mode comprising 5-95% by weight, based on a total weight of polymer, of first particles having a weight average diameter of less than or equal to 250 nanometers and a calculated Tg less than -10°C; and

b) a large mode comprising at least 5% by weight, based on a total weight of polymer, second particles having a weight average diameter of greater than 250 nanometers; and

further wherein the overall calculated Tg of the emulsion polymer is less than -20°C."

"6. A process of making a low noise adhesive product comprising

a) coating a treated surface of a polyolefin film with an emulsion polymer wherein the emulsion polymer comprises:

i) a fine mode comprising 5-95% by weight, based on a total weight of polymer, of first particles having a weight average diameter of less than or equal to 250 nanometers and a calculated Tg less than -10°C; and

ii) a large mode comprising at least 5% by weight, based on a total weight of polymer, second particles having a weight average diameter of greater than 250 nanometers; and further wherein the overall Tg of the emulsion polymer is less than -20°C;

b) drying the emulsion polymer on the polyolefin film after coating and

c) treating the uncoated side of the polyolefin film."

IV. The opposition division's decision can be summarised as follows:

The invention as defined in claim 1 was sufficiently disclosed. Firstly, the feature "low noise" in this claim was not a limiting feature and therefore could not give rise to any insufficiency of disclosure. Secondly, the opponent's assertion that the problem of providing adhesives with a low noise was not solved by the claimed subject-matter was relevant for assessing inventive step rather than for sufficiency of disclosure. Furthermore, all tapes made from the emulsion polymers prepared in the examples of the patent had a noise level below 100 dB, which qualified them as low noise adhesive products according to the patent. Thirdly, the patent provided sufficient indications regarding the preparation of the adhesive product as defined in claim 1.

The subject-matter of claims 1 and 6 was novel over D1 since it was not directly and unambiguously derivable from this document that the polymer emulsion used to prepare the adhesive tape of D1 comprised two different

particle types as defined in claim 1, and since furthermore the glass transition temperatures of the fine mode and of the overall polymer were not disclosed.

The subject-matter of claims 1 and 6 was furthermore novel over each of D2 and D4 since these documents did not disclose a glass transition temperature of the fine mode as required by these claims.

The claimed subject-matter was also novel over the public prior uses Fabo, Straptech and BASF (for details, see points 3 and 4 below).

Finally, inventive step was acknowledged. The subject-matter of claim 1 differed from the teaching of the closest prior art document D4 in that the glass transition temperature of the fine mode was less than -10°C. No effect due to this difference had been shown so that the objective technical problem was to find an alternative adhesive product that was cost effective to produce and a low noise product. None of the cited documents addressed this problem. There was in particular no incentive to combine D4 with either D1, D2 or D5. Moreover even if such combinations had been made, the result would not have led to the subject-matter of claims 1 and 6, in particular because nowhere in D1, D2 or D5 was there a disclosure of the feature that the overall glass transition temperature of the emulsion polymer was less than -20°C.

V. On 21 February 2013, the opponent (hereinafter: the appellant) filed an appeal. The statement setting out the grounds of appeal was filed on 30 April 2013 including the following documents:

A01: Overview of documents and evidence;

A02a: Overview of the documents filed with regard to the public prior uses Fabo, Straptech and BASF;

A02b: Overview of the documents filed with regard to the public prior use MAC;

A03: Test report "Messergebnisse Geräuschentwicklung";

D3a: US 4,456,726 A;

D26: R. Jovanovic et al, Macromol. Symp., vol. 206, 2004, pages 43 to 56;

D27: M. do Amaral et al, Journal of Colloid and Interface Science, vol. 281, 2005, pages 325 to 338;

D28: DE 101 28 512 A1;

D29: EP 1 342 762 A2;

D30: WO 03/031488 A1;

D31: WO 02/10304 A1;

D32: US 2003/0055150 A1;

D33a: JP 63-238179 A;

D33b: Abstract of JP 63-238179, Patent Abstracts of Japan;

D34: Affidavit of D. Wolters, signed on 25 April 2013;

D35: Affidavit of H. Wessel, signed on 17 April 2013;

D36: Affidavit of G. Steuernagel, signed on 25 April 2013;

D37: Test report "AFM PeakForce QNM/tapping mode characterisation and particle size distribution calculation of acrylic based adhesives", dated 24 April 2013;

D38: Test report "Auswertung PL-PSDA Daten" of Plextol^{TM} D261, dated 29 November 2012;

Supplementary evidence concerning the prior use "Fabo"

F12: Way bill "KVO-Frachtbrief für den Güterfernverkehr";

F13: "Speditions-Übergabeschein-Nr IE/ 00103056/0001";

F14: International way bill, signed on 12 July 2006;

F15: Delivery note, dated 12 July 2006;

F16: "Attestato di controllo specifico" for 0602B0008, dated 16 April 2013;

F17: "Attestato di controllo specifico" for 0607B0037, dated 5 November 2009;

F18: Copies of data base entries concerning deliveries to Fabo, delivery date 7 March 2006;

F19a: Affidavit of M Fagni, signed on 26 March 2013;

F19b: Invoice for 1000 kg Plextol™ D260, material code 900916084, dated 3 March 2006;

F19c: Invoice for 1000 kg Plextol™ D260, material code 900916084, dated 12 May 2006;

F19d: Invoice for 20000 kg Plextol™ D260, material code 900916084, dated 12 July 2006;

F19e: Invoice for 2000 kg Plextol™ D260, material code 900916084, dated 5 October 2006;

F19f: Test certificate dated 22 June 2006, control number 889;

F19g: Test certificate dated 20 July 2006, control number 907;

F19h: Test certificate dated 20 July 2006, control number 908;

F19i: Test certificate dated 30 August 2006, control number 965;

F19j: Test certificate dated 29 August 2006, control number 947;

F19k: Invoice Nr. 936, dated 21 July 2006;

F19l: Invoice Nr 937, dated 21 July 2006;

F19m: Invoice Nr 4071, dated 1 September 2006;

F20: Affidavit of S. Menegato, signed on 30 April 2013;

F21: "Materialkalkulation", delivery number 83135495;

F22: "Materialkalkulation", delivery number 83144046;

F23: "Kunststoffanalytik", sample "Fabo Anlage 03; transparent";

Supplementary evidence concerning the prior use "Straptech"

S10d: Analysis of PL-PSDA data of Acronal™ DS 3457 X Pr.0403200501;

S14: Inspection certificate for Plextol™ X4500CA.57% IBC, dated 16 April 2013;

S15: E-mail of G. Steuernagel to D. Wolters and K. Greiner, dated 7 March 2013;

S16: "Kunststoffanalytik", sample "Straptech Anlage S08";

S17: "Materialkalkulation", delivery number 83109838;

S18: "Materialkalkulation", delivery number 83114463;

Supplementary evidence relating to prior use "Mac"

M1: Invoice for 1000 kg Plextol™ X4500CA.57% IBC, material code 900915694, dated 28 January 2005;

M2: Delivery note dated 28 January 2005;

M3: "Attestato di controllo specifico" for 0411A0622, dated 29 January 2013;

M4: "Referenzen Abfüllungen/Lieferungen zu internen Chargennummern MacFralex", dated 25 January 2005;

M5: "Weight Distribution Job 95/Run 96";

M6i: Test report "Su Adesivo: Polymer Latex Plextol X4500" by of A. Capaccioli, signed on 8 March 2005;

M6e: English translation of M6i;

M7i: Test report "Relazione Prove Su Adesivo: Polymer Latex Plextol X4500" by A. Capaccioli, signed on 19 December 2005;

M7e: English translation of M7i;

M8: "Materialkalkulation", delivery number 83112387;

M11: Invoice for 6000 kg Plextol™ X4500 CA.57% IBC, material code 900915694, dated 22 March 2005;

M12: Delivery note dated 22 March 2005;

M13: "Attestato di controllo specifico" for 0503A0142, dated 29 January 2013;

M14: "Referenzen Abfüllungen/Lieferungen zu internen Chargennummern MacFralex", dated 25 January 2005 (seems to be identical to M4);

M15: "Kennzeichnung des Prüfstatus" dated 10 March 2005;

M16: "Weight Distribution Job 30/Run 130";

M17: Sample "avena adhesive tape";

M18: Sample "transparent adhesive tape";

M19: "Materialkalkulation", delivery number 83115780;

M21: Invoice for 24000 kg Plextol™ X4500, material code 900915693, dated 16 January 2006;

M22a: Shipping order from 12 January 2006;

M22b Way bill for Rinnen GmbH & Co KG, dated 12 January 2008;

M23: "Attesto di controllo specifico" for 06/M002A, dated 7 February 2013;

M24: "Referenzen Abfüllungen/Lieferungen zu internen Charbennummern MacFralex", dated 27 November 2006;

M25: Filtration analysis ("Filtrationsblatt") on Plextol™ D260, dated 14 January 2006;

M26: "Weight Distribution Job 44/Run 44";

M27: "Materialkalkulation", delivery number 83132822;

M31: Invoice for 23600 kg Plextol™ D260, material code 900916083, dated 24 January 2006;

M32a: Shipping order dated 20 January 2006;

M32b: Way bill for Rinnen GmbH & Co KG, dated 20 January 2006

M33: "Attesto di controllo specifico" for 06/M004A, dated 24 January 2006;

M34: "Referenzen Abfüllungen/Lieferungen zu internen Charbennummern MacFralex", dated 26 January 2006;

M35: Filtration analysis ("Filtrationsblatt") on Plextol™ D260, dated 21 January 2006;

M36: "Weight Distribution Job 43/Run 43"; and

M37: "Materialkalkulation", delivery number 83133281.

VI. With its letter of 6 June 2013, the appellant filed:

M38: Affidavit of R. Lastrucci, signed on 8 May 2013.

VII. With its letter of 19 July 2013, the appellant requested that Ms Antonella Capaccioli, Ms Sonia Menegato and Mr Martin Conrads be heard as witnesses as regards the alleged public prior uses and furthermore filed:

D33c: German translation of JP 63-238179.

VIII. With its letter of 2 December 2013, the proprietor (hereinafter: the respondent) requested, as its main request, that the appeal be dismissed, and filed auxiliary requests 1 to 16 as well as:

D4a: US 6,706,392 B2;

D39: Blank sheet;

D40: Blank sheet;

D41: First declaration of W. B. Griffith signed on 6 December 2013 (only announced and filed with letter of 6 December 2013); and

D42: Second declaration of W. B. Griffith signed on 26 November 2013.

IX. With its letters of 2 December 2013 and 17 January 2014, the appellant filed:

D43: Report by D. Kainer and N. Deutsch, signed on 19 November 2013;

D44: Supplementary affidavit by D. Wolters, signed on 27 November 2013;

D45: "Adhesive Lab report SBU Functional Polymers", "Geräuschmessung PSA Tapes", dated 14 May 2009;

F01-u: Invoice for 1000 kg Plextol™ D260, material code 800916084, dated 3 March 2006;

F01a-u: Invoice for 20000 kg Plextol™ D260, material code 900916084, dated 12 July 2006;

S03a-u: Invoice for 3000 kg Plextol™ X4365, material code 900915812, dated 3 December 2004;

S04a-u: Invoice for 2000 kg Plextol™ X4500CA. 57% IBC, dated 23 February 2005;

D46: Report by N. Deutsch, signed on 11 December 2013; and

D47: IR spectrum for PP (isotactic).

X. Further comments were filed by the respondent with its letter dated 14 March 2014.

XI. On 17 October 2014, the board communicated its preliminary opinion to the parties. As regards sufficiency of disclosure, the board *inter alia* observed that the appellant's assertion, namely that the particle size distribution of the emulsion polymer used to prepare the claimed adhesive product was no longer visible in this product, touched upon clarity or infringement of the claim rather than insufficiency. The board furthermore commented in detail on the admissibility of the various public prior use attacks as well as the appellant's novelty attacks on the basis of D28 and D29. In this respect the board addressed the question whether these attacks could have been filed during the opposition proceedings, and in particular whether the public prior uses were substantiated such that it was possible to understand why, in the appellant's view, the opposition division's decision was wrong. As regards the remaining novelty attacks based on D1 and D4, the board was of the preliminary opinion that novelty could be acknowledged. Concerning inventive step, the board emphasised that in its preliminary view it was D4 rather than D5 that constituted the closest prior art.

XII. With its letter dated 23 December 2014, the appellant filed a copy of its letter dated 17 February 2014 submitted in the case T 460/13 together with:

D25: WO 2007/012616 A1;

D48: Supplementary Affidavit by D. Wolters, signed on 17 February 2014;

D49: "Adhesive Lab report SBU Functional Polymers", dated 14 February 2014; and

D50: Experimental report No. A140002400.

The appellant requested that Mr Wolters and Ms Greiner be heard as technical experts or witnesses.

XIII. With its letter of 26 January 2015, the appellant filed:

D51: "Joint Environmental Statement for the Marl Chemical Park and the PolymerLatex Centre", 2007, 5 pages; and

F24: Affidavit of D. Giudici, signed on 26 January 2015.

XIV. With its letter of 24 February 2015, the respondent submitted:

D52: Third declaration of W. B. Griffith, signed on 24 February 2015 (denoted D53 by the respondent).

XV. By its communication dated 19 March 2015 the board informed the parties of the number convention to be

applied for the documents filed during the appeal proceedings.

XVI. On 24 and 25 March 2015, joined oral proceedings were held in the present case and in T 460/13. During the oral proceedings:

- The appellant maintained its request that the decision under appeal be set aside and the patent be revoked.

- The appellant also maintained its request made during the written proceedings that Mr Wolters be heard as a technical expert. In the event, this request was allowed during the oral proceedings in the absence of any objection from the respondent. The further requests made during the written proceedings that Ms Antonella Capaccioli, Ms Sonia Menegato and Mr Martin Conrads be head as witnesses and Ms Greiner as technical expert or witness, were not pursued.

- As regards the public prior uses Mac and Straptech, the appellant relied on its written submissions.

- The appellant withdrew its novelty attack on the basis of D29 made in the written proceedings. As regards its novelty attack on the basis of D4, the appellant relied on its written submissions.

- The appellant no longer relied on the inventive step attacks made during the written proceedings on the basis of D26, D28 and D29 as closest prior art documents.

- The respondent maintained its requests that the appeal be dismissed (corresponding to the maintenance of the patent in the form of the main request submitted during the oral proceedings before the opposition division - see point III above), alternatively that the patent be maintained on the basis of any of auxiliary requests 1 to 16 filed with its letter of 2 December 2013;

- The respondent furthermore maintained its requests that none of the new documents filed by the appellant in the appeal proceedings be admitted into the proceedings and that the public prior use Mac be not admitted into the proceedings.

- The respondent finally maintained its request that the appellant's letter dated 17 February 2014 submitted in the case T 460/13 and attached to the letter dated 23 December 2014 submitted in the present appeal proceedings be not admitted into the proceedings.

XVII. So far as relevant to the present decision, the appellant's arguments can be summarised as follows:

- The main request was insufficiently disclosed since (i) the feature "low noise" in claim 1 was unclear, (ii) the weight percentages of the fine and large modes could not be determined if the fine and large modes had similar particle sizes, (iii) the glass transition temperature of the fine mode could not be calculated, and (iv) the particle size distribution in the adhesive

product, if present at all, would be different from the particle size distributions present in the emulsion polymer used to prepare the adhesive product (for the appellant's detailed arguments, see point 2 of the Reasons below).

- The public prior use attacks:

  - The public prior use BASF should be admitted into the proceedings. It was in this respect not correct that the grounds of appeal did not address the opposition division's decision. The main reason why the opposition division did not find this public prior use to be relevant was that the composition of the prior used product was unknown. This was addressed by S10d and D25 in the grounds of appeal, with S10d giving the particle size distribution and D25 the composition of this product.

  - The public prior use Fabo should be admitted into the proceedings. It was in this respect not correct that the grounds of appeal did not address the opposition division's decision. The reason why the opposition division had considered this public prior use not to be relevant was that S12c was not sufficient proof for the composition of the prior used product and in particular the glass transition temperature of the fine mode. In response thereto, D34 had been filed with the grounds of appeal, which gave this composition and the glass transition temperature. The glass transition temperature of the fine mode was furthermore disclosed in table A02a and in F23. In this respect, the sentence in the ground of

appeal starting with "*D34 ist eine Blindanalyse*" was erroneous and should actually have referred to F23. In fact, S12c was replaced by D34 such that the opposition division's objections with regard to S12c were no longer relevant. Finally, the problem which the opposition division had identified with regard to the SAP number in S12c was addressed by D35 in the grounds of appeal.

- One could expect that the board and the other party would read any document filed with the grounds of appeal even if it was not discussed therein.

- The respondent had brought forward its arguments concerning the public prior uses only during the oral proceedings before the opposition division and had submitted new auxiliary requests at the last second during opposition proceedings. Therefore the further evidence filed with the grounds of appeal in reaction to the respondent's arguments and auxiliary requests should be admitted.

- The novelty attack in view of D2 should be admitted since it was *prima facie* relevant. More particularly, the bimodal particle size distribution, the polyolefin film and the glass transition temperature of the claimed adhesive product were disclosed in column 5, lines 46 to 52, column 6, lines 46 to 50 and column 2, lines 55 to 58 of D2, respectively. Further, in column 5, line 54 of D2, reference was made to D3, where the claimed particle sizes were disclosed.

- D28 should be admitted since it was *prima facie* novelty-destroying. Page 3, line 56 of this document disclosed the glass transition temperatures required by claim 1, and page 7, line 10 disclosed the polyolefin film. Furthermore, D28 referred to D3, where the bimodal particle size distribution as required by claim 1 was disclosed.

- The subject-matter of claim 1 lacked novelty over D1. This document disclosed the use of an emulsion polymer with a particle size distribution and an amount of fine and large mode as claimed to prepare BOPP adhesive tapes. The glass transition temperature disclosed in D1 was also as claimed. In this respect, the skilled person would know that polymers in adhesive tapes always had a negative glass transition temperature below 0°C, as evidenced by column 2, line 55 to 58 of D2. It would thus be evident that the upper limit of 55°C given for the glass transition temperature in D1 was wrong and actually had to read -55°C.

- The subject-matter of claim 1 furthermore lacked novelty over D4. It was true that the specific adhesive product of trial B described in this document differed from the claimed one in terms of the glass transition temperature of the fine mode. However, D4 allowed for the fine mode to have a monomer composition consisting of specific amounts of ethylacrylate units, methylmethacrylate units, acrylic acid units and propylene imine units and this composition had a glass transition temperature of -10.2°C, which was within the range claimed.

- D42 should not be admitted into the proceedings since it was filed late and could have been filed during the opposition proceedings. D48 and D49 should be admitted into the proceedings since they represented a response to the respondent's filing of D42.

- The subject-matter of claim 1 lacked inventive step in view of D4 as the closest prior art document. Contrary to the respondent's assertion, D42 did not prove that the adhesive tape as claimed developed lower noise than that of D4 since instead of applying the commercial products used in D4, D42 applied self-made products that only allegedly replicated the two commercial products of D4. It was thus more than uncertain whether D42 was a faithful reworking of D4. In fact, it was shown by D49 that the adhesive tape as claimed resulted in a higher rather than lower noise. More specifically, the adhesive tape as claimed exhibited a noise of 97 dB according to D42 while the adhesive tape of D4 resulted in a noise as low as 71 dB according to D49. This was confirmed by A03, which showed that the glass transition temperature of the fine mode had no influence on the noise level. The objective technical problem was thus the provision of an alternative adhesive product and the solution was obvious in view of D4 itself.

- The subject-matter of claim 1 furthermore lacked inventive step over D5. In this respect, the respondent's assertion that D5 did not represent the closest prior art was wrong. This document disclosed all features of claim 1 except for the

polyolefin film. It furthermore concerned adhesive tapes and thus was in the same technical field.

- Finally, the claimed subject-matter lacked inventive step in view of D1 as the closest prior art. This attack should be admitted since it had already been referred to in the grounds of appeal.

XVIII. So far as relevant to the present decision, the respondent's arguments can be summarised as follows:

- The main request was sufficiently disclosed.

  - Contrary to the appellant's assertion, there was no ambiguity as regards the measurement method for determining the noise of the adhesive tape upon unwinding. Firstly, the results obtained in D19 for different positions of the noise level meter lay consistently around 101 and 103 dB. Secondly, as evidenced by D18, the skilled person knew which frequency scale to use for the measurement. Thirdly, the skilled person knew that he had to condition the sample before the measurement as described in paragraph [0035] rather than [0038] of the patent since the latter did not refer to any concrete measurement results that were qualified as being "low noise". Fourthly, the appellant's argument that the noise level depended on the pH during the preparation of the emulsion polymer and the type of corona treatment was irrelevant since these parameters were not part of the measurement method.

  - The appellant's assertion that the weight percentages of the fine and large modes could

not be determined if both modes had similar particle sizes was not correct. Possibly it was difficult but it was not impossible to determine these weight percentages. Furthermore, any ambiguity, if present, related to the clarity of the claim rather than sufficiency of disclosure.

- Also the appellant's argument that it was not possible to determine the weight percentages of the comonomers used to prepare the fine mode and that therefore the glass transition temperature of the fine mode could not be calculated was incorrect. The skilled person preparing the adhesive product of claim 1 would know what amounts of comonomers he used to prepare the fine mode such that he could calculate the glass transition temperature of this fine mode according to the Fox equation. This was true also for high solids-contents since it was possible to pre-fabricate the fine mode at low solids-contents and to mix it with the large mode and thereafter to de-water the resulting adhesive product to the desired high solids-content.

- Finally, also the appellant's fourth argument that after drying at high temperature and/or after a longer time period, the particle size distribution of the fine and large modes of the emulsion polymer initially used changed or even disappeared was not correct. It had in particular been proven experimentally that individual particles were still visible in the final adhesive product.

- The public prior use attacks:

  - As regards the alleged Mac public prior use, no documentation or proof of any kind had been submitted during the opposition proceedings. This public prior use attack in fact had been made for the first time during the appeal proceedings and therefore should be held inadmissible.

  - The opposition division had decided that the public prior use BASF was not relevant since the composition of the allegedly prior used product Acronal™ DS3547X (product mentioned in S05) was unknown. This public prior use attack should not be admitted into the proceedings since no reasons had been given in the grounds of appeal why the opposition division's decision was wrong. The reference to D25 in the grounds of appeal did not address the opposition division's objections since this document referred to Acronal™ DS3547 rather than the allegedly prior used product Acronal™ DS3547X.

  - The opposition division had considered the public prior use Fabo and Straptech not to be relevant since (a) it was not possible to derive the composition of the allegedly prior used product from S12c, including the glass transition temperature of the fine mode and (b) the SAP number mentioned in S12c was not the one of the allegedly prior used product such that it was not clear what the link was between the product in S12c and the allegedly prior prior used product. These public prior use attacks should not be admitted into the proceedings

since no reasons had been given in the grounds of appeal why the opposition division's decision was wrong. D34 did not address the opposition division's objections since it did not mention S12c and did not disclose any glass transition temperature of the fine mode. The same applied to A02a and F23 which did not provide the information the opposition division had asked for. D35 could not establish any link between the product of S12c and the allegedly prior used product since the SAP number in D35 was different from that in S12c.

- The number of documents filed with the grounds of appeal completely obscured the value of any argument that the appellant might have had in mind when filing the grounds of appeal. Furthermore, the grounds of appeal did not specify any passages in these documents such that it was not possible to know where to look in these documents to understand why the opposition division's decision on the public prior uses was wrong.

- The appellant's novelty attack on the basis of D2 should not be admitted into the proceedings. The question of novelty over D2 was not straightforward, since D3 had to be read into D2, and since specific particle sizes had to be selected from within the ranges disclosed in D3 and had to be combined with specific passages of D2 in order to arrive at the claimed subject-matter. D2 therefore represented a change of case made at the last moment during the appeal proceedings.

- D28 should not be admitted into the proceedings since the document and the novelty attack based thereupon could have been filed during the opposition proceedings. Furthermore it was not *prima facie* relevant. In the same way as for D2, D3 had to be read into D28, and specific particle sizes had to be selected from within the ranges disclosed in D3 and had to be combined with specific passages of D28 in order to arrive at the claimed subject-matter.

- The claimed subject-matter was novel over D1. It was not clearly and unambiguously derivable from D1 that the emulsion as disclosed on page 3 was the same as that described on page 5 for the application on the BOPP adhesive tape. In fact the opposite had to be assumed since the bimodal emulsion on page 3 was prepared by mixing two monodisperse emulsions, whereas that on page 5 was prepared by sequential copolymerisation. Furthermore, the appellant's argument that the skilled person would consider the disclosure of a glass transition temperature of 55°C in D1 not to be correct on the ground that the glass transition temperature would have to be a minus value, so that he would therefore correct it to -55°C, was wrong. More particularly, D2 clearly allowed for glass transition temperatures above 0°C, such that even if the value of 55°C was wrong, the skilled person could equally well correct it to +5.5°C rather than -55°C.

- The claimed subject-matter was also novel over D4 since the glass transition temperature of the fine mode in trial B was not as required by claim 1. In this respect, the specific monomer composition

used by the appellant to argue that the glass transition temperature was as claimed was artificially constructed and not disclosed in D4.

- D42 should be admitted into the proceedings since it was filed as a direct reaction to the opposition division's decision. D48 and D49 should not be admitted into the proceedings since these documents were filed late and could have been filed during opposition proceedings.

- The claimed subject-matter was inventive over D4 as the closest prior art document.

  It was proven by D42 that the adhesive tape as claimed exhibited much less noise when being unwound than a tape that came close to that of D4. In this respect the appellant's results in D49 should not be given more evidential weight than D42 since, when reworking D4, D49 used a self-made product rather than the Neocryl product of D4 and since furthermore D49 did not apply the weight ratio of fine and large mode as disclosed in D4. Finally the appellant's referral to A03 was not relevant since A03 did not compare an adhesive tape as claimed with that of D4. The problem solved was thus the provision of an adhesive tape which gave less noise when being unwound.

  Neither D4 nor any of the further prior art documents suggested that in order to reduce the noise of an adhesive tape, the fine mode of the emulsion polymers used to prepare this tape had to have a glass transition temperature of less than -10°C.

- D5 did not represent the closest prior art. It did not concern adhesive tapes and did not address the problem of providing adhesive tapes with low noise.

- The appellant's inventive step attack on the basis of D1 as the closest prior art should not be admitted into the proceedings. This attack had been made for the first time during the oral proceedings and thus represented a change of case at the last possible moment.

XIX. The final requests of the parties were as follows:

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

The respondent requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

Main request

2. Sufficiency

2.1 The main request is identical to the main request found allowable by the opposition division. Claim 1 of this request refers to a low noise adhesive product comprising an adhesive layer formed by the drying of an emulsion polymer on a polyolefin film;
wherein the emulsion polymer comprises:

a) a fine mode comprising 5-95% by weight, based on a total weight of polymer, of first particles having

a weight average diameter of less than or equal to 250 nanometers and a calculated Tg less than -10°C; and

b) a large mode comprising at least 5% by weight, based on a total weight of polymer, second particles having a weight average diameter of greater than 250 nanometers; and

further wherein the overall calculated Tg of the emulsion polymer is less than -20°C.

2.2 The appellant raised an insufficiency objection as regards the requirement that the adhesive product of claim 1 had to be a "low noise" adhesive product.

2.2.1 The patent specifies in paragraph [0035] the feature "low noise" to mean a decibel level under 100 dB when unwinding the adhesive product at 60 m/min. According to the patent (paragraph [0035]), this decibel level is to be determined as follows:

"Rolls of tape are prepared and then aged for 1 week at 50°C. The tapes are removed from the oven and then equilibrated in an environmental room which is set at 23°C and 50% relative humidity. After at least 24 hours equilibration, noise was then measured under these conditions by placing standard commercial sound level meter from Bruel & Kjear (type 2226) 8 cm from the tape as it was being unwound."

2.2.2 The appellant argued that the distance between the sound-level meter and the tape of 8 cm as specified in the patent was unclear. In this respect it referred to D19 in which six different positions of the sound level meter are shown, all meeting the requirement of being

positioned 8 cm from the tape (positions 2 to 7 in the figure on page 4 of D19). According to the appellant, depending on the position chosen, different sound levels were measured so that it was not clear what "low noise" in claim 1 meant. Therefore, the claimed subject-matter was insufficiently disclosed.

The board acknowledges that the definition "8 cm from the tape" in paragraph [0035] of the patent leaves the skilled reader with some freedom as to the specific position of the sound level meter. The board furthermore agrees with the appellant that D19 shows that for different positions, but all meeting the requirement of being spaced 8 cm from the adhesive tape, different noise levels are obtained. However, the variation in the noise level ranges only from 95 to 103 dB (table on page 3 of D19). Such a variation, if not within the experimental error range, at most implies an ambiguity at the edge of claim 1. For an insufficiency arising out of ambiguity it is, however, not enough to show that an ambiguity exists at the edges of the claims (T 608/07, point 2.5.2). In the absence of any evidence that the ambiguity is such that it leads to insufficiency of disclosure, the appellant's argument must therefore fail.

The appellant argued in this respect that according to decision T 1404/05, a vaguely formulated claim led to insufficiency of disclosure and that in the light of this decision, sufficiency had to be denied in the present case as well.

The board acknowledges that the case underlying T 1404/05 is comparable to the present one in so far as in that case an ambiguity was also present in claim 1. However, in that case it was undisputed that due to

this ambiguity, the claim covered embodiments that could not be put into practice (see in particular point 3.4 of the decision). It was for this reason that the board denied sufficiency of disclosure. This is different from the present case where it has not been argued, let alone been proved, that due to the alleged ambiguity of the feature "low noise", the claim covers embodiments that cannot be carried out.

2.2.3 The appellant argued that the specification of the measurement method in paragraph [0035] of the patent left it open which frequency scales had to be used during the measurement. Also for this reason the feature "low noise" was unclear, such that the invention underlying claim 1 was insufficiently disclosed.

This is however not correct since for the sound-meter "Bruel & Kjear 2226" specified in paragraph [0035] of the patent, frequency scale A has to be used (entry "2226" in the table on the bottom of page 2 of D18). There is thus no uncertainty as regards the frequency scale and, linked thereto, the feature "low noise".

2.2.4 The appellant further argued that the conditioning of the adhesive product prior to the measurement of the noise level as specified in paragraph [0035] of the patent was different from that applied in the examples of the patent (paragraph [0038]). Apparently the measured noise levels depended on the type of conditioning, so that also for this reason the feature "low noise" in claim 1 was unclear.

The appellant's argument is however of no relevance since the definition of the feature "low noise" is given only in paragraph [0035]. Hence, the skilled

person, having to decide on whether an adhesive tape satisfies the requirement "low noise" of claim 1, would apply the conditioning as specified in this paragraph rather than that in paragraph [0038].

2.2.5 The appellant finally argued that the noise level depended on the pH used during the preparation of the emulsion polymer and the type of corona treatment of the film onto which the emulsion polymer was applied.

The board does not see how this argument can lead to insufficiency of disclosure as regards the feature "low noise". The preparation of the emulsion polymer and the corona treatment are not part of the measurement of the noise level but are steps during the preparation of the adhesive product. Therefore, even though it is true that the way the emulsion polymer is prepared and treated has an impact on the noise level, this does not imply that the noise level is unclear, let alone leads to insufficiency.

2.2.6 For the above reasons, the feature "low noise adhesive product" in claim 1 does not lead to any insufficiency of disclosure.

2.3 The appellant's second insufficiency attack related to the weight percentages of the fine and large modes of the emulsion polymer used to prepare the adhesive product of claim 1. In particular, it argued that for a fine and large mode with similar particle sizes, the weight percentages of these modes could not be determined.

However, in the same way as for the feature "low noise adhesive product" (point 2.2.2 above), this at most implies that there is an ambiguity at the edge of

claim 1, namely for embodiments where the fine and large modes have similar particle sizes around 250 nm. The appellant has however not shown that this ambiguity is such that it leads to insufficiency of disclosure.

2.4 The appellant's third insufficiency attack concerned the requirement in claim 1 that the fine mode has a glass transition temperature (Tg) of less than -10°C. This Tg is calculated according to the Fox equation as the sum of the quotients of the respective weight percentages and glass transition temperatures of the comonomers present in the copolymer of the fine mode (paragraph [0007] of the patent).

The appellant argued that it was not possible to determine these weight percentages of the comonomers and that therefore the glass transition temperature of the fine mode could not be calculated.

The board does not agree. The skilled person preparing the adhesive product of claim 1 knows what amounts of comonomers he uses to prepare the fine mode such that he can calculate the glass transition temperature of this fine mode according to the Fox equation.

The appellant in this respect argued that for adhesive products with high solids contents, it was not possible to pre-fabricate the fine mode and mix it with the large mode. Rather than by mixing, the fine and large modes had to be prepared *in situ* by sequential copolymerisation. The skilled person would thus not know the amounts of comonomers in the fine mode. However, even if this were to be true, it would be possible to prepare an emulsion polymer with a high solids content by pre-fabricating the fine and large modes at low solids contents, mixing them and

thereafter de-watering them to the desired high solids content. Consequently, by applying this method, the skilled person would still know the weight percentages of the monomers he uses to prepare the fine mode and thus would be able to calculate the glass transition temperature.

The appellant's third insufficiency attack must therefore fail.

2.5 The appellant's fourth insufficiency attack related to the particle size distribution in the claimed adhesive product.

According to the patent (claim 6), the claimed adhesive product is prepared by coating the surface of a polyolefin film with the emulsion polymer comprising the fine and large modes. The appellant argued that after drying at high temperature and/or after a longer time period, i.e. for older adhesive products, the particle size distributions of the fine and large modes of the emulsion polymer initially used changed or even disappeared. Hence, the particle size distribution in the adhesive product, if present at all, would be different from the particle size distributions present in the fine and large modes of the emulsion polymer used to prepare the adhesive product.

However, claim 1 merely requires that the low noise adhesive product is **formed by** drying of an emulsion comprising two different modes of particles. In other words the mode requirement concerns the starting material and not the **final** product. The board accepts that such a product-by-process feature leads to a broad claim. The broadness of a claim does not however mean

that the invention defined by this claim is insufficiently disclosed.

Apart from that, the proprietor even contested that the particle size distributions of the emulsion polymer used to prepare the adhesive product would no longer be visible in the final product and provided evidence in this respect.

2.6 Therefore, the ground under Article 100(b) EPC does not prejudice the maintenance of the patent in the form of the main request.

3. The public prior use attack Mac

3.1 According to the statement of grounds of appeal, the public prior use Mac Autoadesivi s.r.l. ("Mac") destroys the novelty of the claimed subject-matter.

3.2 The respondent requested that this public prior use attack not be admitted into the proceedings, because no documentation or proof of any kind had been submitted during the opposition proceedings as regards the alleged Mac public prior use. In fact, this objection had been raised for the first time during the appeal proceedings.

3.2.1 It is established case law (see, e.g., decision T 328/87) that in order to substantiate a public prior use, information must be provided as to what was made available, when it was made available, where it was made available, by whom it was made available and, finally, how it was made available.

3.2.2 The public prior use Mac was mentioned in the notice of opposition under the heading *"8.3. Weitere offenkundige*

Vorbenutzungen" on the last page, together with the following information:

Delivery date: 24 March 2005
Client name: MAC AUTOADESIVI srl
Article: PLEXTOL X 4500 CA.57.

This information does not address at all the questions "what, when, where and how", needed for the substantiation of a public prior use. At no point during the opposition proceedings did the opponent provide any such substantiation and, accordingly, this public prior use was not dealt with in the decision of the opposition division at all.

Therefore, the attack on the basis of the public prior use Mac in the statement of grounds of appeal constituted a new attack, made for the first time in the appeal proceedings.

3.3 The essential nature of appeal proceedings is to determine whether the decision reached by the department of first instance was correct (G 9/91, point 18; G 4/93, point 5; G 1/99, point 6.1). Appeal proceedings are not a means of continuing the first instance proceedings whereby a party is free to improve or repair holes in its case by filing additional material. In this respect, it lies within the discretion of the board to hold inadmissible evidence which could have been presented in the first instance proceedings.

As set out above, the alleged public prior use Mac was mentioned in the opposition proceedings but not pursued by the opponent: it is not even mentioned in the decision of the opposition division. It is not

acceptable to substantiate the alleged public prior use Mac for the first time with new evidence in the appeal proceedings, i.e. the numerous documents submitted under the heading "Supplementary evidence relating to prior use Mac" (point V above). The board therefore saw no reason to admit new evidence relating to the alleged public prior use Mac and the novelty attack associated therewith into the proceedings.

3.4 The present board is aware that in exceptional cases, a new novelty objection based on a new document in appeal proceedings has been admitted on the ground that it was *prima facie* relevant (see, e.g., T 2542/10, point 2.2.2). However, in the present case, all that is contained in the statement of grounds of appeal with regard to the alleged public prior use Mac is a reference to tables A02a and A02b, without further explanation. Table A02b, which deals with four public prior uses relating to Mac, namely Mac-1, Mac-2, Mac-3 and Mac-4 does not contain any information as regards, e.g., the questions of when, where, by whom and how the adhesive tape mentioned in this table ("avana" (M17) and "transparent" (M18)) had been rendered accessible to the public before the priority date of the patent. Consequently, the alleged public prior use Mac is not *prima facie* relevant.

3.5 In the exercise of its discretion under Article 12(4) RPBA, the board therefore decided not to admit the public prior use attack Mac into the proceedings.

4. The further public prior use attacks

4.1 The statement of grounds of appeal relied on three further public prior use attacks, namely:

- the alleged public prior use of the product Acronal™ DS 3547 X from BASF, which was handed over to PolymerLatex (see S05), hereinafter referred to as the public prior use "BASF";

- the alleged public prior use based on the delivery of the product Plextol™ D260 to Fabo, hereinafter referred to as the public prior use "Fabo"; and

- the alleged public prior use based on the delivery of the product Plextol™ X4365 to Straptech, hereinafter referred to as the public prior use "Straptech".

Unlike the public prior use Mac, these three public prior uses were to at least some extent discussed in the notice of opposition and were all dealt with in the decision of the opposition division. Hence, the above considerations made with regard to the public prior use Mac do not necessarily lead to the conclusion that the three public prior uses BASF, Fabo and Straptech are inadmissible.

As set out above when discussing the public prior use Mac, appeal proceedings aim at contesting a decision. This implies that reasons must be given in the statement of grounds of appeal why the decision under appeal should be reversed, amended or upheld (Rule 99(2) EPC and Article 12(2) RPBA). The submissions in the statement of grounds of appeal must be such as to enable the board (and any other party) to understand immediately why the decision is alleged to be incorrect, without first having to make investigations on their own (T 2532/11, points 2.2.1 and 2.2.5 and decisions cited therein: T 220/83, OJ EPO 1986, 249, headnote; T 213/85, OJ EPO 1987, 482,

points 2 and 3; T 145/88, OJ EPO 1991, 251, headnote; T 169/89, points 2 and 3 and T 1581/08, point 3). Even assuming that laborious sequences of exercises would tell the reader what the appellant's case against the decision might be, such conjecture is exactly what the statement of grounds of appeal is designed to prevent (T 2532/11, point 2.5.1). It cannot be expected that a board fills in the missing links of the chain of reasoning of an appellant and thereby establishes a coherent and complete chain of argument for the appellant, no matter how straightforward it may seem in light of the particulars of the specific case (T 922/05, point 16).

4.2 The public prior use: BASF

4.2.1 Turning now to the present case, the opposition division considered the claimed subject-matter to be novel over the public prior use BASF, which consisted of the handing over of the product Acronal^{TM} DS3547X as specified in S10a-c to PolymerLatex (see S05).

The opposition division based its decision on the grounds that, firstly, the composition of Acronal^{TM} DS3547X referred to in S05 was not mentioned anywhere in the file, secondly, that the nature of the film used for preparing the adhesive product, i.e. onto which the Acronal product was applied, was not mentioned in any document on file and, thirdly, that there were several gaps in the chain linking the public availability of the product Acronal^{TM} DS3547X and the analysis sheets S10a-c.

4.2.2 The only argument in the statement of grounds of appeal as regards this public prior use was the following:

"*Auch der Verkauf des Klebebandes BASF Acronal DS 3547 zerstört die Neuheit der Patentansprüche. Hierzu wird eine detailliertere TGV (S10d) des Nassmusters vorgelegt. Die Zusammensetzung von Acronal DS 3547 ist aus der D25 ersichtlich*."

4.2.3 This argument leaves the board at a loss as to the appellant's case about the opposition division's first point, namely what the composition of the product Acronal™ DS3547X was. It is to be noted in this respect that any explanation is missing in the grounds of appeal as to why document D25 shows the composition of this product. For instance, the appellant did not specify any passage in D25 where in its opinion Acronal™ DS3547X is disclosed. Even if one searches in D25 for such a passage - an exercise that should not be necessary if the appellant's attack is admissible - one does not find any relevant text. All that one can identify in D25 is a reference to the product Acronal™ DS3547, which is not the one of the alleged public prior use (Acronal™ DS3547X), and for which no glass transition temperature of the fine mode is given (first paragraph on page 17).

The appellant's line of argument furthermore is entirely silent as regards the opposition division's second point, namely what the nature of the film used for preparing the adhesive product was.

Finally the appellant's line of argument does not address the opposition division's third point. It is in particular not explained at all what is the link between Acronal™ DS3547X having been the subject of the alleged public prior use according to S05 and the analysis sheets S10a-d.

4.2.4 Prior to referring to the public prior use BASF in the statement of grounds of appeal, the appellant referred to certain tables ("*Die Tabellen detaillieren die Beweismittel anhand von 8 Vorgängen*"). One of the tables filed with the grounds of appeal, namely table A02a, contains some information on the public prior use BASF but does not however address the opposition division's reasoning. In particular, there is no information contained in the table as regards the composition of the Acronal product, the nature of the film and the link between the product referred to in S05 and that of the analytical sheets S10.

4.2.5 Consequently, the statement of grounds of appeal leaves the board and the respondent at a loss as to why in the appellant's view the opposition division's decision on the public prior use BASF is not valid. The appellant's statement of grounds of appeal is therefore not sufficiently substantiated with regard to this public prior use attack.

4.3 The public prior uses: Fabo and Straptech

4.3.1 In the same way as for the public prior use BASF, it needs to be decided whether the statement of grounds of appeal is sufficiently substantiated as regards the remaining two public prior uses, namely that based on the delivery of the product Plextol™ D260 to Fabo (public prior use "Fabo") and the delivery of the product Plextol™ X4365 to Straptech (public prior use "Straptech").

4.3.2 The opposition division's first ground for not considering the alleged public prior uses Fabo and Straptech to be relevant was that it was doubtful

whether the allegedly prior used product, namely the batches sold to Fabo and Straptech, had been prepared with the recipe given in S12c (which the appellant had relied upon as regards the composition of the allegedly prior used batches). These doubts were based on the fact that the SAP-number "900916083" in S12c did not correspond to any of the delivery numbers of these batches.

All that the statement of grounds of appeal contains in this respect is that declaration D35 takes account of the SAP numbers and declaration D36 of the charge number, batch number, delivery number and mixing number and that F20 concerns the issue of public availability ("*Die eidesstattliche Versicherung D35 nimmt sich der SAP-Nummern an, die eidesstattliche Versicherung D36 der Verwendung der Chargennummer, Ansatznummer, Auslieferungsnummer und Mischungsnummer. F20 macht nochmal Ausführungen zur Öffentlichkeit und zur Monomerzusammensetzung*"). However, the SAP numbers mentioned in D35 and the numbers referred to in D36 are all different from the SAP number in S12c. Furthermore, no explanation is given and none is contained in F20 how the product referred to therein is related to the recipe disclosed in S12c.

The appellant furthermore referred to tables A02a and A02b in the grounds of appeal ("... , *insofern wird auf die nunmehr weiter ergänzten Tabellen A02a und A02b verwiesen... Die Tabellen detaillieren die Beweismittel anhand von 8 Vorgängen*."). However, these tables do not mention S12c, let alone they explain the relation between the product described in S12c and that of the alleged public prior use.

Hence, reading the statement of grounds of appeal, it is not possible to understand why the opposition division's decision that it was doubtful whether the batches sold to Fabo and Straptech had been prepared with the recipe given in S12c, is said to have been wrong.

4.3.3 The opposition division's second ground for not considering the alleged public prior uses Fabo and Straptech to be relevant was that the monomer composition and thus the glass transition temperature of the fine mode of the product resulting from the recipe of S12c was unknown, due to the fact that several data in S12c were blackened, while others were coded with acronyms (such as NAPS) without definition of their meanings, and at least one line had been deleted at the bottom of the table in S12c, thereby creating doubt as to the presence or not of other constituent(s).

In the statement of grounds of appeal, the appellant referred to D34, D38 and F20 with regard to the monomer composition ("*D34 und D38 weisen nun zweifelsfrei die Monomerzusammensetzung der Klein- und Großpartikelfraktion nach und die Einheitlichkeit des Tg. D34 ist eine „Blindanalyse" eines Dritten, die nachweist, dass der Tg und die Monomerzusammensetzung für Dritte durch Erwerb der Klebebänder nachweisbar war... F20 macht nochmal Ausführungen zur Öffentlichkeit und zur Monomerzusammensetzung*").

In the declaration D34, Mr Wolters states that the composition of the comonomer feed for the product Plextol^{TM} D260 remains constant during the whole time of feeding and is composed of certain amounts of butylacrylate, acrylic acid, hydroxyethylmethacrylate

and methylmethacrylate and that the bimodal particle size distribution of the product is obtained by the use of two seed portions, one being added to the feed at the beginning and one during the time of feeding. The declaration concludes with the statement that because the composition of the comonomer mixture is constant during the whole time of feeding, the fine and large modes have the same comonomer composition and thus the same glass transition temperature. D38 discloses the particle size distribution of a product denoted Plextol™ D261. In F20, Ms Menegato states that she knew in July 2006 that Plextol™ D260 consisted to a great share (> 90 wt.% of the solid content) of butyl acrylate.

No explanation is given in the statement of grounds of appeal as to how these documents D34, D38 and F20 are related to the objections of the opposition division as regards S12c. There was in particular nothing in the statement of grounds of appeal that addresses the opposition division's concerns about the blackened passages, acronyms and deletions in S12c.

During the oral proceedings, the appellant stated that D34 replaced S12c, such that the problems the opposition division had with S12c were no longer relevant. The statement of grounds of appeal does however not contain any indication that D34 was indeed intended as a replacement of S12c. That D34 is to replace S12c is in fact in contradiction to the sentence subsequent to the reference to D34, where it is stated that declaration D35 took account of the SAP numbers, which can only be the SAP number mentioned in S12c. Had the appellant had the intention to replace S12c by D34, any reference to the SAP number of S12c would not make sense. Finally, if S12c was replaced by

D34, then the link between the product referred to in D34 and that of the alleged prior use would be entirely unclear such that the opposition division's first objection would still not be addressed.

The appellant said during the oral proceedings that the second reference to D34 in the statement of grounds of appeal ("*D34 ist eine "Blindanalyse" eines Dritten, die nachweist, dass der Tg und die Monomerzusammensetzung für Dritte durch Erwerb der Klebebänder nachweisbar war.*") was erroneous and that, actually, this sentence referred to F23. However, no indication at all can be found in the statement of grounds of appeal that the sentence is erroneous and that actually F23 rather than D34 was meant.

Finally, in the same way as for the opposition division's first ground, the reference to tables A02a and A02b in the statement of grounds of appeal is not sufficient to substantiate the appellant's submissions as regards the question of what the composition of the product in S12c was.

The board and the respondent thus were left completely in the dark as to whether, and if so how, D34, D38 and F20 address the opposition division's objection that the monomer composition and thus the glass transition temperature of the fine mode of the product prepared according to the instructions contained in S12c was unknown.

4.3.4 Consequently, the statement of grounds of appeal is not sufficiently substantiated with regard to the public prior uses Fabo and Straptech.

4.4 The above lack of substantiation with regard to the public prior uses BASF, Fabo and Straptech is aggravated by the fact that with the statement of grounds of appeal, 83 new documents were submitted in relation to the public prior uses of which only 8 documents were discussed in the statement of grounds of appeal. This obscured any argument the appellant may have intended to make in the statement of grounds of appeal.

The appellant in this respect argued that one can expect that the board and the other party will read any document filed with the statement of grounds of appeal. This is however off the point. In a case as complicated as the present one, it is certainly not sufficient to just read all documents filed by the appellant and not discussed at all in the statement of grounds of appeal. On the contrary, it would be necessary to read all 83 documents filed with the statement of grounds of appeal, to identify the possibly relevant passages in them and then to knit them together to understand why the opposition division's decision on the public prior uses was in the appellant's view wrong. To ask the board to do this would mean that the board has to make up the appellant's case in breach of the principle of impartiality.

4.5 The appellant argued that the respondent had brought forward its arguments concerning the public prior uses only during the oral proceedings before the opposition division and had submitted new auxiliary requests at the last second during opposition proceedings. Therefore the appellant should be allowed to file further evidence with the statement of grounds of appeal in reaction to the respondent's arguments and auxiliary requests.

This is however of no relevance since it is the lack of argument and thus substantiation in the statement of grounds of appeal rather than the presentation of new arguments, facts or evidence (as such) that is a problem for the admissibility of the appellant's prior use attacks.

4.6 The appellant finally referred in the statement of grounds of appeal to the submissions in the opposition proceedings ("*Die Vorbenutzung gegenüber den Kunden Fabo, Strabtech und Mac ist bereits in der ersten Instanz ausführlich erörtert worden,...*"). A reference back to first instance proceedings is, however, not a sufficient reasoning to render a submission in the statement of grounds of appeal admissible (see, e.g., point 1.4 of T 473/09).

4.7 The board therefore decided not to admit the public prior use attacks BASF, Fabo and Straptech into the proceedings.

5. Request to hear witnesses

In view of the fact that the public prior uses were not admitted into the proceedings, there was no need to decide on the request made during the written proceedings that witnesses be heard on these public prior uses.

6. Novelty - Printed prior art

6.1 The appellant attacked novelty of the claimed subject-matter on the basis of D2. The respondent requested that the novelty attack on the basis of D2 be not admitted into the proceedings.

6.1.1 As acknowledged by the appellant, the novelty attack based on D2 was raised in the appeal proceedings for the first time during the oral proceedings before the board. This attack thus was not filed within the relevant time limit under Article 12(2) RPBA, i.e. when filing the statement of grounds of appeal.

6.1.2 For the admissibility of D2, Article 13(1) RPBA is therefore relevant, which stipulates that any amendment to the appellant's case after it has filed its statement of grounds of appeal may be admitted and considered at the board's discretion. Criteria to be applied in this respect include the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy.

6.1.3 In its novelty attack, the appellant relied on various passages of D2, namely (i) column 5, lines 46 to 52 (bimodal particle size distribution), (ii) column 6, lines 46 to 50 (polyolefin film), (iii) column 2, lines 55 to 58 (glass transition temperature), and (iv) column 5, line 54 of D2, where reference is made to D3 which according to the appellant discloses in the upper part of page 8 particle sizes as claimed.

In order to decide on novelty over D2, numerous issues would have had to be addressed, such as whether the combination of all the passages referred to above under (i) to (iii) would clearly and unambiguously be derivable from D2, whether the reference to D3 would incorporate the specific disclosure of particle sizes on page 8 of D3 into D2 and whether the skilled person reading this specific disclosure of D3 into D2 would arrive at the subject-matter claimed.

6.1.4 The appellant's new attack on the basis of D2 thus represented a change of case which, made at the last possible moment during the appeal proceedings, confronted the board and the respondent with complex new issues. The board therefore decided not to admit the appellant's attack based on D2 into the proceedings (Article 13(1) RPBA).

6.2 The appellant attacked novelty also on the basis of D28. The respondent requested that D28 be not admitted into the proceedings.

6.2.1 Unlike the attack on the basis of D2, D28 was cited against novelty in the statement of grounds of appeal. The filing of this document thus meets the requirement of Article 12(2) RPBA. However, such a document may be not admitted if it could have been, but was not, filed during the opposition proceedings (Article 12(4) RPBA).

6.2.2 Apart from minor editorial amendments, the present main request is identical to the claims as granted. D28 thus could have been filed during the opposition proceedings against the granted claims.

6.2.3 By not citing D28 against novelty during the opposition proceedings, the appellant has avoided a decision of the opposition division on this issue. If the board admitted this document into the proceedings, it would be obliged to give a first ruling on the novelty attack based on this document. The main purpose of appeal proceedings is, however, to review what has been decided at first instance (T 390/07, headnote 1 and points 1 to 3; T 495/10, point 2.1.7; and T 1525/10, point 2.3)..

6.2.4 In exceptional cases, a document filed for the first time with the statement of grounds of appeal may be admitted on the ground that the attack based on this document is *prima facie* relevant.

When attacking novelty, the appellant referred to the most preferred range for the glass transition temperature of D28 (page 3, line 56: -40 to -20°C), the specific adhesive tape (page 7, line 10 from the bottom: polypropylene sheet) and the bimodal particle size distribution disclosed in D3, this document being referred to in D28 on page 5, line 57.

However, firstly, these features are not disclosed in combination in D28, secondly, D28 does not specifically refer to the particle size distribution disclosed in D3 but merely mentions that particles can be produced by the addition of seeds as described in D3 (page 5, lines 56 to 57), thirdly, the particle sizes for the small particles of 50 to 500 nm and for the large particles of 200 to 4000 nm disclosed in D3 (page 8, lines 2 to 6) are not identical but only overlap with the claimed ranges, such that even if the skilled person selected the particle sizes of D3, read them into the disclosure of D2 and finally combined them with the further relevant passages of D2, he would still not necessarily arrive at the claimed subject-matter. Consequently, D28 is not *prima facie* prejudicial to novelty.

6.2.5 The board therefore decided not to admit D28 into the proceedings.

6.3 The appellant furthermore attacked novelty on the basis of D1.

6.3.1 D1 (first paragraph of point 2.2) discloses a polymerisation method in which a monomer mixture is added to a seed emulsion such that a monodisperse seed emulsion is produced. The composition of the various monomer mixtures is chosen such that the glass transition temperature Tg of the resulting polymer is "-50 ~ 55°C".

On page 3, two monomodal emulsion polymers are used to prepare an emulsion having a bimodal particle size distribution with the small particles having a particle diameter of 75 nm and the large particles having a particle diameter of 460 nm. In figure 1, the two particle types are present in the emulsion in an amount between about 5 and 55 vol%. The emulsion is used to study the correlation between particle size distribution and maximum volume fraction.

On page 5, experiments are described using a specific emulsifier mixture to generate a bimodal particle size distribution. The resulting emulsion is used to prepare BOPP adhesive tapes and the properties of these tapes are tested.

6.3.2 The two particle fractions of the emulsion described on page 3 of D1 correspond to the fine and large modes of the claimed adhesive product. However, it is not clearly and unambiguously derivable from D1 that this emulsion with these two particle fractions as disclosed on page 3 of D1 is the one used to prepare the adhesive tapes disclosed on page 5 of D1. In fact the opposite must be assumed since the bimodal emulsion on page 3 is prepared by using, i.e. mixing, two monodisperse emulsions, while that on page 5 is prepared by adding a specific amount of emulsifier during the

polymerisation, i.e. by sequential copolymerisation rather than mixing.

6.3.3 Furthermore, it is not clearly and unambiguously derivable from D1 that the glass transition temperatures (Tg) of the fine mode (particles with diameters of 75 nm) and of the overall polymer in the emulsion used for the adhesive tapes on page 5 are as required by claim 1. More specifically, two selections are needed to arrive at the claimed Tg values, namely firstly, a Tg of less than -10°C out of the range of "-50°C ~ 55°C" for the fine mode, and secondly, a Tg of -20°C out of this range for the overall polymer emulsion. No pointer to such a double selection is present in D1.

In this respect, the appellant argued that the skilled person would know that the polymer in adhesive tapes always has a negative glass transition temperature, below 0°C, as evidenced by column 2, line 55 to 58 of D2, such that it would be evident to the skilled person that the range of "-50 ~ 55°C" in D1 actually referred to -50 to -55°C.

The board does not share this view. Firstly, the passage of D2 referred to by the appellant states that the glass transition temperature of the polymer is **preferably** from -60°C to **+**10°C and this is contrary to the appellant's assertion that glass transition temperatures of polymers in adhesive tapes are always below 0°C. Hence, even if the skilled person would consider the temperature of 55°C in D1 to be erroneous, it would not be evident at all that the correct value would be -55°C. On the contrary it could equally be a temperature above 0°C, such as 5.5°C

6.3.4 Therefore, the subject-matter of claim 1, and by the same token of all remaining claims, is novel over D1.

6.4 During the written proceedings, the appellant also relied on D4 as regards the novelty of the claimed subject-matter.

6.4.1 This document discloses an adhesive product comprising an adhesive layer formed from an acrylic dispersion on a polyolefin film (page 2, lines 3 to 4). The acrylic dispersion consists of first and second acrylic dispersions (b1) and (b2) being present in a ratio of 99:1 and 90:10 (page 3, lines 23 to 28). In the only example of D4 (trial B on page 7), the acrylic dispersion used to prepare the adhesive product consists of a mixture of Primal™ PS83D (first acrylic dispersion) and Neocryl™ A45 (second acrylic dispersion) in a weight ratio of 95 to 5.

Primal™ PS83D has an average particle size of 681 nm (see D9) and thus corresponds to the large mode of claim 1. Furthermore, as acknowledged by both parties, it has a glass transition temperature within the range claimed for the large mode. Neocryl™ A45 has an average particle size of 109 nm (see D8) and thus corresponds to the fine mode in claim 1. Neocryl™ A45 has however a glass transition temperature of 15°C which is far above the upper limit of -10°C in claim 1.

6.4.2 The appellant argued in the statement of grounds of appeal that D4 allows for the fine mode to have a monomer composition consisting of specific amounts of ethylacrylate units, methylmethacrylate units, acrylic acid units and propylene imine units and that this composition had a glass transition temperature of -10.2°C, which was within the range claimed for the

fine mode. This line of argument must however fail since the specific monomer composition used by the appellant to calculate the glass transition temperature is artificially constructed and not disclosed in D4.

6.4.3 Therefore, the subject-matter of claim 1 and by the same token of all remaining claims is novel in view of D4.

7. Inventive step

7.1 Admissibility of D42, D48 and D49

7.1.1 D42 was filed by the respondent with its response to the statement of grounds of appeal in order to show that the distinguishing feature over D4, namely the lower glass transition temperature required by claim 1 for the fine mode reduces the noise of the adhesive tape compared to the tape disclosed in D4. This is a direct response to the opposition division's decision that the effect of the difference between claim 1 and D4 had not been shown (point 4.2.2 of the decision). The board therefore decided to admit D42 into the proceedings.

7.1.2 D48 and D49 were filed as annexes of the appellant's letter dated 17 February 2014 submitted in the case T 460/13 and attached to its letter dated 23 December 2014 filed in the present appeal proceedings. The respondent requested during the written proceedings that the appellant's letter dated 17 February 2014 be not admitted into the present appeal proceedings. During the oral proceedings, the respondent specifically requested that D48 and D49 filed with this letter be not admitted.

D48 and D49 were filed by the appellant to show that the distinguishing feature over D4 does not provide a lower noise, contrary to what the respondent reported in D42. D48 and D49 can thus be considered to represent a reaction to the respondent's filing of evidence D42. The board therefore decided to admit D48 and D49 into the proceedings.

7.2 Inventive step on the basis of D4

7.2.1 The invention underlying the opposed patent relates to a low noise adhesive product, more specifically, a low noise tape containing an adhesive coating of a bimodal emulsion polymer and a process for making such a product (page 2, lines 3 to 5 and claims 1 and 6). The invention in particular addresses the problem of noisy unwind (page 2, lines 13 to 15).

7.2.2 In the same way, D4 refers to adhesive tapes and addresses the problem of noisy unwind (page 2, lines 3 to 4 and 41). Therefore, the board considers D4 to represent the closest prior art.

As set out above when discussing novelty, the claimed subject-matter differs from D4 in terms of the glass transition temperature of the fine mode.

7.2.3 The problem referred to in the patent is the provision of an adhesive tape which gives less noise when being unwound (page 2, lines 13 to 16).

7.2.4 As a solution to this problem, the patent in suit proposes the adhesive product of claim 1 characterised in that the fine mode of the emulsion polymer used to prepare this adhesive product has a glass transition temperature of less than -10°C.

7.2.5 It needs to be examined whether this problem has been credibly solved.

In D42, the noise developed when unwinding an adhesive tape as claimed (glass transition temperature of the fine mode is -53°C) is compared to an adhesive tape which comes close to that of D4 and which differs from the tape as claimed only in that the glass transition temperature of the fine mode is 7°C. As shown in the table on page 4 of D42, the adhesive tape as claimed (sample B) develops much less noise when being unwound than the tape that comes close to that of D4 (sample A).

The appellant argued that it was shown by D49 that the adhesive tape as claimed resulted in a higher noise than that of the adhesive tape of D4. The appellant's argument is based on a comparison of the adhesive tape as claimed (sample B) of D42 and the adhesive tape of D4 as reworked in D49. The appellant in particular argued that the adhesive tape as claimed developed a noise of 97 dB according to D42 while the adhesive tape of D4 resulted in a noise as low as 71 dB according to D49 (first row of the table). However, the appellant's comparison is based on two different noise measurements, namely that in D42 (from the respondent) and that in D49 (from the appellant) and these two noise measurements were not necessarily carried out under the same conditions. For instance, the distance between the sound meter and the tape is 8 cm in D42 while it is 10 or 12 cm in D49. Therefore, the appellant's argument is not convincing. Unlike the comparison between two different noise measurements made by the appellant, in D42 the respondent has compared the noise developed by two tapes under the

same measurement conditions. Hence, the respondent's result showing that the adhesive tape as claimed develops less noise than that of D4 is more convincing.

This conclusion is not changed by the appellant's argument that rather than applying the commercial products used in D4 (Neocryl™ A45 and Primal™ PS83D), D42 applied self-made products only, so that it was more than uncertain as to whether D42 had faithfully reworked D4. More specifically, if doubts indeed exist about whether D4 had been faithfully reworked in D42, at least the same level of doubt would exist as to whether D4 had been faithfully reworked in D49. Firstly, as acknowledged by the appellant during the oral proceedings, D49 also uses a self-made product rather than the commercial product Neocryl™ A45 of D4. Secondly, the ratios between Primal PS83D and the replicated Neocryl™ A45 in D49 is 95:5 on a wet basis while the ratio of 95:5 in D4 (trial B) refers to a solid basis (page 7, lines 25 to 26), such that the ratio in the experiment of D49 is different from that in D4.

The board's conclusion is not changed either by the appellant's final argument that it had shown in A03 that the glass transition temperature of the fine mode had no influence on the noise level. More specifically, A03 does not compare adhesive tapes as claimed with a tape according to D4 but with adhesive tapes based on polymers with monomodal particle size distributions. Therefore, A03 does not allow any conclusion as regards tapes prepared with bimodal particle size distributions, in particular not as regards the effect obtained by the distinguishing feature over D4.

In view of the above, it is credible, or at least more credible than not, that the above problem of providing an adhesive tape with a lower noise upon unwind is indeed solved.

7.2.6 Neither D4 nor any of the further prior art documents suggest that in order to reduce the noise of an adhesive tape, the fine mode of the emulsion polymers used to prepare this tape must have a glass addition temperature of less than -10°C. Therefore, the subject-matter of claim 1 and by the same token of all remaining claims is not obvious in view of D4 as the closest prior art.

7.3 Inventive step on the basis of D5

7.3.1 The appellant considered D5 to represent the closest prior art.

D5 discloses a process for preparing polymer dispersions with a bimodal particle size distribution (page 2, lines 3 to 5). The problem addressed in D5 is the provision of a process by which aqueous polymer dispersions can be prepared that have a high polymer volume concentration, low viscosity and a reduced amount of micro-coagulates and that are essentially independent from the type of monomers or surfactant used in the process (page 2, lines 45 to 48). The aqueous polymer dispersions can be used as binding agent for coatings, adhesives or for finishing paper, leather, and woven or non-woven fabrics (claim 16).

D5 is not concerned with adhesive tapes, let alone with the problem of noisy unwind. It is to be noted in this respect that the reference to adhesive tapes ("*Klebefilme*", page 2, line 8 of D5) referred to by the

appellant is made when discussing the prior art in D5, but not the invention. D5 thus is neither in the same technical field nor does it address the technical problem referred to in the opposed patent. D5 therefore does not qualify as the closest prior art.

7.3.2 The appellant's inventive step attack on the basis of D5 must thus fail.

7.4 During the oral proceedings, the appellant argued that the claimed subject-matter lacked inventive step in view of D1 as the closest prior art. The respondent requested that this attack be not admitted into the proceedings.

All that is contained in the statement of grounds of appeal as regards inventive step in view of D1 is the following:

> "*Der Fachmann gelangt mit den Details aus der D1 bis D6 zwanglos zu allen Ausgestaltungen und Vorteilen, wie sie die vermeintliche Erfindung offenbart. Insbesondere die D1, D2 oder D5 zusammen mit der Lehre der D4 oder D10 zeigen den [sic] Fachmann, dass er/sie mit hinreichender Aussicht auf Erfolg geräuscharme Klebbänder nach den Verfahren der D1, D2 oder D5 erwarten kann*."

This very general statement leaves entirely open what the distinguishing feature over D1 is, what effect is obtained by this feature and thus what problem is solved and why the claimed solution is obvious in view of an unknown problem. The inventive step attack based on D1 in the statement of grounds of appeal is thus entirely unsubstantiated. Consequently, the inventive

step attack in view of D1 was effectively made for the first time at the oral proceedings.

In the same way as for the appellant's novelty attack over D2 (see point 6.1 above), the appellant's new inventive step attack on the basis of D1 represented a change of case which, made at the last possible moment during the appeal proceedings, confronted the board and the respondent with complex new issues, being exactly the issues the appellant failed to address during the written appeal proceedings, i.e. what the distinguishing feature over D1 was, what problem was solved and why the claimed solution was not obvious in view of this problem. The board therefore decided not to admit the appellant's inventive step attack based on D1 into the proceedings (Article 13(1) RPBA).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Cañueto Carbajo W. Sieber

Decision electronically authenticated