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Datasheet for the decision of 10 June 2026

Case Number:	T 0894/24 - 3.3.03
Application Number:	18166433.5
Publication Number:	3553096
IPC:	C08F210/06, C08F210/08, C08F210/02, C08F8/50, C08K5/134, C08K5/14, C08K5/526, C08K5/098
Language of the proceedings:	EN

Title of invention:
POLYPROPYLENE COMPOSITION

Patent Proprietor:
Borealis GmbH

Opponents:
Ineos Europe AG
Lummus Novolen Technology GmbH

Relevant legal provisions:
RPBA 2020 Art. 12(2), 12(4), 12(6)
EPC Art. 56

This datasheet is not part of the Decision
It can be changed at any time and without notice

Keyword:
Amendment within the meaning of Art. 12(4) RPBA (yes) - admitted (no) - absence of justification and lack of suitability of the amendment
Inventive step - (yes)

Decisions cited:
T 0536/88, T 0594/01

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Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0

Case Number: T 0894/24 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 10 June 2026

Appellant: (Opponent 1)	Ineos Europe AG Avenue des Uttins 3 1180 Rolle,Vaud (CH)
Representative:	Smith, Julian Philip Howard Mathisen & Macara LLP Charta House 30-38 Church Street Staines-upon-Thames, Middlesex TW18 4EP (GB)
Respondent: (Patent Proprietor)	Borealis GmbH Trabrennstrasse 6-8 1020 Vienna (AT)
Representative:	Maiwald GmbH Elisenhof Elisenstraße 3 80335 München (DE)
Party as of right: (Opponent 2)	Lummus Novolen Technology GmbH Gottlieb-Daimler-Str. 8 68165 Mannheim (DE)
Representative:	Kraus & Lederer PartGmbB Thomas-Wimmer-Ring 15 80539 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted/ electronically transmitted on 3 May 2024 concerning maintenance of the European Patent No. 3553096 in amended fo rm.**

Composition of the Board:

Chairman	D. Semino
Members:	F. Rousseau
	L. Basterreix

Summary of Facts and Submissions

I. The appeal lies from the interlocutory decision of the opposition division according to which European patent No. 3 553 096, as amended according to the claims of the Main Request submitted with letter of 28 May 2021 and a description adapted thereto, met the requirements of the EPC.

II. The following items of evidence were submitted, *inter alia*, during the opposition proceedings:

D3: WO 00/11076 A1
D4: WO 2009/019169 A1
D5: US 5,948,547
D6: EP 2 965 908 A1
D7: Polypropylene Handbook, pages 192-193, published 1996
D8: US 2005/0197456 A1
D12: Declaration of Friedrich Berger dated 26 May 2021

III. According to the reasons for the contested decision that are relevant to the appeal proceedings:

(a) Each of D8, D4 and D5 represented a suitable starting point for assessing inventive step, whereby the content of D4 and D5 was very similar, so that the same analysis could be made for these two documents.

D8 as the closest prior art

(b) The polypropylene composition of operative claim 1 differed from that of Example 1 of D8 by the

ethylene content of the propylene terpolymer which was in the range of from 0.5 to 1.5 wt%.

In view of experimental evidence D12, it was credible that this difference in ethylene content brought about not only a reduction of haze, but especially an increase in hot-tack-force (HTF), without compromising the sealing initiation temperature (SIT) or the melting temperature. The objective technical problem solved over D8 could therefore be formulated as the provision of a terpolymer enabling the skilled person to provide a film having high HTF and good optical properties without deteriorating the SIT. This, in particular an increase of HTF, was however not suggested by any of D8, D4 and D5.

D4 or D5 as the closest prior art

(c) The polypropylene composition of operative claim 1 differed from those of D4/D5 in that the propylene terpolymer was visbroken at a certain visbreaking ratio (VR).

In view of experimental evidence D12, this resulted in an improved HTF accompanied by a reduction of SIT and haze. The objective technical problem solved over D4/D5 was therefore to enhance the HTF while lowering haze and at least not compromising SIT.

This was not suggested by any of documents D3 to D7.

(d) In view of the foregoing, an inventive step was acknowledged and the patent was maintained on the

basis of the claims of the Main Request and a description adapted thereto.

IV. An appeal against that decision was lodged by opponent 1 (appellant). With the statement setting out the grounds of appeal, the following document was submitted:

D14: Test Method ASTM F1921/F1921M-12 (2018)

V. With its reply to the statement of grounds of appeal, the patent proprietor (respondent) submitted Auxiliary Requests 1 to 13.

VI. Opponent 2, party as of right pursuant to Article 107 EPC, second sentence, did not provide submissions concerning the substance of the case.

VII. In preparation of the oral proceedings, a communication pursuant to Article 15(1) RPBA conveying the Board's provisional opinion was issued.

VIII. In reply to the Board's communication, the appellant filed additional submissions by letter dated 18 May 2026. The respondent replied to these appellant's submissions and the Board's communication with letter dated 2 June 2026.

IX. Oral proceedings before the Board were held on 10 June 2026 in the annouced absence of the party as of right.

X. 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, or alternatively that the decision under appeal be set aside and that the patent be maintained on the basis of one of Auxiliary Requests 1 to 13 submitted with the reply to the statement of grounds of appeal.

No request was submitted by the party as of right.

XI. The claims relevant to the present decision are those of the Main Request submitted with letter of 28 May 2021, the sole independent claim of which is claim 1, which reads as follows:

"1. Polypropylene composition comprising
(A) at least 50.0 wt% of a propylene terpolymer comprising
(i) ethylene-derived comonomer units in an amount of from 0.5 to 1.5 wt.-% and
(ii) comonomer units derived from a C_4 to C_{10} α-olefin in an amount of from 5.5 to 15.0 wt.-%,
whereby the terpolymer has been visbroken with a visbreaking ratio (VR) as defined by equation (I)

$$VR = MFR_{final} / MFR_{start} > 1.5$$

wherein
"MFR_{final}" is the MFR_2 (230°C/2.16 kg) of the propylene terpolymer copolymer after visbreaking and
"MFR_{start}" is the MFR_2 (230°C/2.16 kg) of the propylene terpolymer copolymer before visbreaking,
whereby the MFR_{final} (230°C, 2.16kg, ISO1133) is in a range of 1.5 to 15.0 g/1 0 min and
(B) optionally one or more additives in a total amount of from 0.0 up to 5.0 wt.-%, based on the composition, selected from the group comprising slip agents, anti-

block agents, UV stabilizers, alpha and/or beta nucleating agents, antistatic agents, antioxidants."

XII. The parties' submissions, insofar as they are relevant to the present decision, may be derived from the reasons for the decision below. They essentially concerned the admittance of D14 into the proceedings and inventive step of the polypropylene composition of claim 1 over the disclosure of each of D8, D4 and D5.

Reasons for the Decision

Main request (submitted with letter of 28 May 2021)

1. The only substantive issue in the appeal proceedings is whether the subject-matter of claim 1 involves an inventive step.

The patent in suit concerns the field of polypropylene compositions useful as packaging material (paragraphs [0002] to [0005] and [00063]). Particularly demanding film applications, such as form and fill-packaging, require not only a low seal initiation temperature (SIT), but also good hot-tack properties. Hot-tack is the bonding strength measurable while the polymer in the heat-sealed portion of a film is in a semi-molten/ solidifying state (paragraph [0003]). This bonding strength is expressed in the patent in suit as the hot tack-force (HTF) needed to tear apart sealed layers. It is expressed in N (paragraph [0003] and Table 3 in paragraph [0133]).

The appellant maintained the inventive step attacks submitted before the opposition division. Having regard

to D14, the appellant disputed the probative value of experimental tests D12, which the opposition division had found to demonstrate that the claimed polypropylene composition exhibited an improved HTF in comparison with the closest prior art.

The admittance into the appeal proceedings of D14, submitted with the statement of grounds of appeal, was disputed by the respondent (rejoinder, items 3 and 28).

Admittance of D14

2. D14 is the ASTM F1921 - 12 standard, the method B of which is referred to in paragraph [0112] of the specification when explaining how the HTF was determined. In view of this, the appellant submitted that D14 and its contents are part of the disclosure of the patent in suit and were obviously known to the respondent. Moreover, this standard would constitute part of the common general knowledge (statement of grounds of appeal, page 2, first paragraph).

The appellant also submitted that D14 was clearly material to an understanding of the problem underlying the claimed invention and that, even in the unlikely event that it was considered to be a new document, it should be introduced into the proceedings as meeting the criteria set out in T 536/88, Reasons 2.1, penultimate paragraph (statement of grounds of appeal, page 2, first paragraph).

At the oral proceedings, the appellant also disputed that D14 constituted an amendment of its case, since it had always contested the relevance of the HTF values reported in D12. In this regard, the appellant submitted that D14 supported the argument already

brought forward on page 3, fourth paragraph, of its notice of opposition, namely that the variability of the HTF was not known and that significantly different HTF values had been observed for the compositions of Examples IE2 and IE3 of the specification, which were compositionally very similar. By filing D14, the appellant had merely built upon its consistent submissions before the opposition division.

2.1 In this regard, the following explanations of the relevance of D14 to the probative value of D12 were submitted with the statement of grounds of appeal:

2.1.1 Referring to Table 3 of D14, the appellant addressed the reproducibility (R) of the HTF measurements, which in its view was relevant, because it concerns measurements on identical materials analysed by different operators in different laboratories. In the present case, what would be important is whether apparent differences between values given for different materials obtained by different operators (i.e., between the patent in suit and D12) could be considered to be significant. Analysing the data in these proceedings using reproducibility (R) would be thus the most appropriate approach (statement of grounds of appeal, page 2, 3. paragraph).

2.1.2 Based on the R values indicated in Table 3 of D14, the appellant submitted that the method B of ASTM F1921-12 would not be capable of discriminating between the results of the samples compared in D12 (statement of grounds of appeal, paragraph bridging pages 2 and 3). According to the appellant, a difference in the HTF values between NEW1 (2.5 N) and NEW2 (3.0 N) of only 0.5 N, as indicated in Table 1 of D12, would not be statistically significant within the bounds of the test

method of D14 in order to acknowledge an improvement of the HTF vis-à-vis D4 or D5 as the closest prior art. On that basis, the objective problem solved over D4 or D5 would reside in the provision of an alternative polypropylene composition. The appellant submitted a similar argumentation when Example 1 of D8 was considered to represent the closest prior art, referring to the difference in the HTF values between example IE3 of the specification (3.1 N), representing the invention, and comparative example NEW3 (1.8 N) in Table 2 of D12 (statement of grounds of appeal, page 3, first three full paragraphs and page 4, third to sixth paragraphs).

2.2 For these reasons, D14 should be admitted into the proceedings.

This is not convincing.

2.3 According to Article 12 RPBA, paragraph 2, a party's appeal case shall be directed to the requests, facts, objections, arguments and evidence on which the decision under appeal was based. Any part of a party's appeal case which does not meet the requirements in paragraph 2 is to be regarded as an amendment, unless the party demonstrates that this part was admissibly raised and maintained in the proceedings leading to the decision under appeal.

The decision under appeal does not refer to standard ASTM F1921-12, described in D14, which document was first filed at the appeal stage. Nor did the appellant refer to this standard before the opposition division, so that the part of the appellant's submissions referring to that standard mentioned in points 2.1.1 and 2.1.2 does not meet the criterion of having been

admissibly raised and maintained in the proceedings before the opposition division.

Regarding decision T 0536/88 cited by the appellant, this decision of 14 January 1991 set out the general rule that "*a document indicated in the European patent as the closest or important prior art for the purposes of elucidating the technical problem set out in the description nevertheless forms part of the opposition or opposition appeal proceedings even if not expressly cited within the opposition period*" (Headnote II). However, this decision was taken having regard to the former practice of the boards of appeal, at a time when the RBPA, in a previous version which entered into force on 7 July 1989, did not contain provisions similar to those of present Article 12 RPBA. Accordingly, the general ruling of T 0536/88 expressed in its headnote cannot take precedence over the current provisions of the RPBA, which codify subsequently established case law.

Concerning T 594/01, cited by the appellant, in which it was found that an experimental value in quantitative analytical chemistry cannot be dissociated from the margin of uncertainty attached to the measurement (Catchword), that decision does not deal with the admittance in appeal proceedings of a standard from which the margin of uncertainty associated with experimental values relied upon could be derived. It is therefore not relevant to the admittance of D14.

Whether a document identified in the European patent as important prior art for the purposes of elucidating the technical problem set out in the description nevertheless forms part of the opposition or opposition appeal proceedings, even if not expressly cited within

the opposition period, must be assessed, as for any other item of evidence relied upon for the first time in the appeal proceedings, taking into account all the particularities and circumstances of the appeal case under consideration.

Accordingly, the filing of D14 constitutes, irrespective of whether D14 can be considered to form part of the common general knowledge, for which the RPBA provides no exemption, an amendment of the appellant's case within the meaning of Article 12(4) RPBA, which may be admitted only at the Board's discretion, as stipulated in the last sentence of Article 12(4) RPBA.

2.4 Pursuant to the non-exhaustive list of criteria in Article 12(4) RPBA, the boards are to exercise their discretion in view of, *inter alia*, the complexity of the amendment, the suitability of the amendment to address the issues which led to the decision under appeal, and the need for procedural economy.

According to the Case Law of the Boards of Appeal, with reference to the requirements of Article 12(4), third sentence, RPBA and Article 12(6), second paragraph, RPBA, a further criterion considered when deciding on the admittance of an amendment to a party's case within the meaning of Article 12(4) RPBA is whether it should have been filed earlier or whether it is justified as a legitimate reaction to late developments in the proceedings leading to the decision under appeal (Case Law of the Boards of Appeal, 2025, 11th Edition, V.A. 4.3.4.a))

2.4.1 First, the filing of D14 has not been shown to be the result of new developments in the first instance proceedings for the following reasons:

The appellant's original reasoning as to why the results shown in D12 were not reproducible was based on a comparison between Examples IE2 and IE3 of the specification, which, in the appellant's opinion, showed a significant difference in HTF values despite their compositional similarity (letter of 11 October 2021, page 2, third paragraph of the inventive step section).

This was contested by the respondent arguing that Examples IE2 and IE3 concerned terpolymers with a different butene content (respondent's letter of 15 December 2021, page 5, item 20). While the respondent neither filed D14, nor referred to specific passages of that document, it was indicated by that party that the HTF data had been measured three times according to method B of ASTM F1921 – 21, with reference being made to paragraph [0112] of the specification, and that the values addressed by the respondent were significant because they were mean values (respondent's letter of 15 December 2021, item 19 bridging pages 4 and 5).

Considering that the method B of ASTM F1921 – 21 was already referred to in paragraph [0112] of the specification for describing the method used for measuring the HTF, and had already been referred to by the respondent in its letter of 15 December 2021, the Board finds no valid justification for the appellant essentially repeating in a subsequent letter in opposition the submissions based on a comparison between Examples IE2 and IE3 of the specification

(letter of 5 May 2022, page 2, fourth paragraph) and waiting until the appeal proceedings to file D14 and address its content. This is all the more the case if, as alleged by the appellant during the oral proceedings, knowledge of the precision of the test method described in D14 is considered necessary in order to evaluate the significance of the test results described in D12.

2.4.2 Second, concerning the relevance of D14, and in agreement with the respondent's view, the Board is not convinced that the reproducibility values (R) indicated in Table 3 of D14, to which the appellant refers, are suitable for assessing the probative value of the comparisons shown in D12. In this respect, reproducibility (R) concerns the results obtained in different laboratories that do not use the same equipment, i.e. a testing machine originating from the same manufacturer (D14, section 12.1.2, section 6.2 "Testing Machine" and footnote 3).

However, there is no indication that the results compared in D12, which include data from the specification for IE3, originate from different laboratories. On the contrary, the results shown in D12 and in the specification were obtained in the laboratory of the same company, as submitted by the respondent (reply to the statement of grounds of appeal, page 9, item 48 and letter of 2 June 2026, item 39). The respondent also referred to paragraph [0112] of the specification where the use of a J&B Hot-Tack Tester is described and to D12, according to which the data indicated therein, including those for HTF, were measured according to the methods described in the patent in suit (D12, last paragraph). Therefore, contrary to the appellant's submissions (letter of

18 May 2026, page 1, section 1), reproducibility (R) is not the appropriate measure for assessing the probative value of the experimental data contained in the patent in suit and D12.

Furthermore, as pointed out by the respondent, Table 3 of D14 to which the appellant refers does not contain generic constants associated with ASTM F1921, but concerns the outcome of a particular inter/intra-laboratory study on a particular material and specimen set-up (letter of 2 June 2026, item 41).

The precision of the test method reported in D14 is based on a study concerning a polyethylene sealant on a flexible web, i.e. a measurement of multilayer specimens (reply to the statement of grounds of appeal, pages 8 and 9, items 43 to 45), which is consistent with the figure shown on page 3 of D14. However, the measurements made in D12 concern propylene terpolymer compositions having defined C_2/C_4 contents extruded as a monolayer cast film having a specific thickness of 50 µm (specification, paragraph [0112]), for which the HTF is measured by sealing the cast film onto itself (monolayer-on-monolayer seals on a J&B Hot-Tack Tester).

The appellant, however, did not provide evidence, let alone technical explanations as to why despite the change, in particular, in specimen to be measured from a multilayer sealant-on-web structure with a polyethylene sealant to a monolayer polypropylene terpolymer film, the skilled person would not expect a significant impact on the precision figures, including the repeatability limit (r) reported in Table 3 of D14, which designates the interval representing the critical difference between two test results for the same

material, obtained by the same operator using the same equipment on the same day in the same laboratory.

The appellant submitted that the fact that D14 reports measurements using a polyethylene sealant on a flexible web was not a relevant consideration. According to the appellant, it was a matter of fact that D14 was an appropriate test method, since it was specifically used in the patent. Had one taken the position that the test method of D14 was not suitable, then this would, in the appellant's view, call into question the probative value of all of the data in the specification and in D12 (appellant's letter of 18 May 2026, page 2, section ii)).

This argument is also not convincing.

The respondent did not dispute the suitability of method B of ASTM F1921 – 21 when determining the HTF parameter with a cast monolayer film on a J&B Hot-Tack Tester, but rather the lack of evidence that the variability in HTF measured on a different system and material in the inter/intra-laboratory study reported in Table 3 of D14 would be considered by the skilled person to be of the same magnitude for the data shown in D12.

On that basis, the Board concludes that the appellant's submissions based on D14 are not suitable for addressing the issues which led to the decision under appeal, namely for disproving that the experimental results of D12 would demonstrate an improvement of the HTF vis-à-vis the closest prior art.

2.4.3 Consequently, in the absence of an appropriate justification for filing D14 at the appeal stage, and

given the lack of suitability of that document to address the issues which led to the decision under appeal, the Board decided to exercise its discretion under Article 12(4) RPBA by not admitting D14 into the proceedings.

Assessment of inventive step

3. The appellant's submissions regarding inventive step are based on a definition of the objective problem which does not take into account the improvement of HTF, acknowledged by the opposition division in view of experimental report D12 (statement of grounds of appeal, page 1, fourth paragraph). In the appellant's opinion, independently of whether D8, D4 or D5 is taken as the closest prior art, the problem successfully solved should be formulated as the provision of an alternative polypropylene composition (statement of grounds of appeal, page 3, third full paragraph and page 4, sixth paragraph and page 5, first bullet point).

The appellant disputed the existence of such an improvement, referring in writing to D14 and the submissions based upon indicated in points 2.1.1. and 2.1.2 above. These submissions, however, cannot be taken into account, since D14 was not admitted into the proceedings.

During the oral proceedings before the Board, the appellant additionally submitted that a difference of 0.5 N in the HTF values for NEW1 and NEW2 was in any event, i.e. irrespective of whether D14 was admitted into the proceedings, not significant. This argument concerns only the definition of the problem

successfully solved over D4 or D5, as can be understood from the appellant's submissions in point 2.1.2 above.

According to the established case law of the boards of appeal, each party to the proceedings bears the burden to prove the facts that it alleges (Case Law, III.G. 5.1.1). Once it has been made credible that a technical effect is achieved over the closest prior art, here with D12 showing an improvement in HTF acknowledged in the contested decision, it is then incumbent on the opposing party to provide explanations or evidence in support of its counterarguments, i.e. the allegation that a difference of 0.5 N for a comparison between NEW1 (2.5 N) and NEW2 (3.0 N) would be within the margin of error for the measurement. Such explanations or evidence, however, were not submitted, so that the appellant's counterarguments are mere allegations which therefore cannot convince.

For these reasons, the Board sees no reason to overturn the finding of the opposition division that D12 demonstrates that the polypropylene composition of operative claim 1 exhibits an increased HTF over each of D8, D4 or D5 taken as the closest prior art.

Considering that the appellant did not dispute the existence of an inventive step if an improvement in HTF over the closest prior art is acknowledged, the Board is satisfied that the subject-matter of operative claim 1 involves an inventive step within the meaning of Article 56 EPC

4. In the absence of any further objection from the appellant, the Board concludes that the Main Request meets the requirements of the EPC.

Order

For these reasons it is decided that:

The appeal is dismissed

The Registrar: The Chairman:

D. Hampe D. Semino

Decision electronically authenticated