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### Datasheet for the decision of 8 November 2016

Case Number: T 1238/13 - 3.3.03

Application Number: 07856576.9

Publication Number: 2094783

IPC: C08L23/10, C08L23/12,

> C08L23/14, C08L23/16, C08F10/06, C08F210/06, C08F297/08, C08K5/00

Language of the proceedings: EN

#### Title of invention:

IMPROVED HIGH MELT FLOW HETEROPHASIC POLYPROPYLENE COPOLYMERS

#### Patent Proprietor:

Borealis Technology OY

#### Opponent:

Total Research & Technology Feluy

#### Headword:

#### Relevant legal provisions:

EPC Art. 83, 56

# Keyword:

Sufficiency of disclosure - (yes)
Inventive step - unexpected improvement shown

Decisions cited:

Catchword:



# Beschwerdekammern Boards of Appeal Chambres de recours

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Case Number: T 1238/13 - 3.3.03

DECISION
of Technical Board of Appeal 3.3.03
of 8 November 2016

Appellant: Total Research & Technology Feluy

(Opponent) Zone Industrielle C 7181 Seneffe (BE)

Representative: Raboin, Jean-Christophe

Total Research & Technology Feluy

Zone Industrielle C 7181 Seneffe (BE)

Respondent: Borealis Technology OY

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Decision under appeal: Decision of the Opposition Division of the

European Patent Office posted on 21 March 2013 rejecting the opposition filed against European patent No. 2094783 pursuant to Article 101(2)

EPC.

#### Composition of the Board:

Chairman M. C. Gordon
Members: F. Rousseau
R. Cramer

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# Summary of Facts and Submissions

- The appeal by the opponent lies against the decision of the opposition division posted on 21 March 2013 to reject the opposition against European patent No. 2 094 783 comprising fourteen claims, whereby claims 1, 8, 11 and 13 read as follows:
  - "1. A polypropylene composition comprising a heterophasic propylene copolymer comprising:
    a) a matrix phase (A) comprising a propylene homopolymer and/or a propylene copolymer, and
    b) a disperse phase (B) comprising a propylene copolymer rubber dispersed in matrix phase (A), wherein
  - (i) the polypropylene composition has a melt flow rate  $MFR_2$  of 50 g/10min or higher,
  - (ii) the propylene copolymer rubber of the disperse phase (B) has a comonomer content of 40 wt.% or higher, (iii) the intrinsic viscosities IV of the disperse phase (B) and the  $MFR_2$  of the matrix phase (A) fulfil the following relationship:

$$\frac{\log_{10}\left(MFR_2(A)\right)}{IV(B)} \ge 0.60,$$

and

- (iv) the propylene homopolymer and/or copolymer of the matrix phase comprises at least 75 mol% propylene units.
- 8. Process for preparing the heterophasic polypropylene copolymer contained in the polypropylene composition according to any one of the preceding claims,

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comprising the following stages (i) and (ii) in any sequence:

- (i) preparation of the matrix phase of the heterophasic copolymer of the polypropylene composition, wherein stage (i) comprises the following steps:
  - B2) polymerisation of propylene to afford a polypropylene homopolymer, or the copolymerisation of propylene with an olefin comonomer to result in a polypropylene copolymer, step B2 being conducted in at least one slurry phase reactor, and B3) polymerisation of propylene to afford a polypropylene homopolymer, or the copolymerisation of propylene with an olefin comonomer to result in a polypropylene copolymer, step B3 being conducted in at least one gas phase reactor.
- (ii) preparation of the disperse phase of the
  heterophasic copolymer of the polypropylene
  composition, wherein stage (ii) comprises the following
  step:
  - B4) copolymerisation of propylene with an olefin comonomer to result in an olefin-propylene copolymer, step B4 being conducted in at least one gas phase reactor, and wherein:
- a) the process B2 is conducted at a reactor temperature of between 70 and 110  $^{\circ}\mathrm{C}$  and
- b) the process B3 is conducted at a reactor temperature of higher than or equal to 90  $^{\circ}\text{C}$ ,
- c) the process B4 is conducted at a reactor temperature of higher than 75  $^{\circ}\text{C}\textsc{,}$  and
- d) the comonomer ratio CR between the ethylene to propylene feed in the reactor of process step B4 is greater than  $500 \, \text{mol/kmol}$ .
- 11. Use of a polypropylene composition according to any one of claims 1 to 7 for the production of moulded articles, preferably injection moulded articles.

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- 12. Use of a polypropylene composition according to any one of claims 1 to 7 for the production of thin-walled packaging articles, preferably plastic cups.
- 13. Article comprising a polypropylene composition according any one of claims 1 to 7."

Claims 2 to 7, claims 9 and 10, claim 14 were dependent on claim 1, claim 8 and claim 13, respectively.

II. The following documents, *inter alia*, had been cited during the first instance proceedings:

F5: GB-A-2 345 290,

F6: WO 00/66640

F7: EP-A-1 598 377

F10: E.P. Moore, "Propylene Handbook", 1996, pages 245-249)

F12: ASTM D2463-95 "Standard Test Method for Drop-Impact Resistance of Blow-Molded Thermoplastic Containers"

III. According to the reasons of the contested decision, document F12 concerning the test method used in the patent in suit had been submitted late and appeared irrelevant to the decision to be taken. Accordingly, it was not admitted into the proceedings. The claimed subject-matter met the requirement of sufficiency of disclosure. Novelty over F5, F6 and an alleged public prior use concerning the sale of the product "PPC 12642" was acknowledged. As to inventive step, the closest prior art was most suitably represented by the copolymer of Working Example 1 in F6, but not by F7, because the latter did not address either injection moulding or thin walled articles. The problem to be

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solved by the patent in suit was defined as being to provide heterophasic propylene copolymer compositions for injection moulding of thin-walled articles that could be fabricated faster and that retained or even improved their impact properties at low temperatures. To solve that problem with a heterophasic propylene copolymer compositions that met the requirements (i) and (iii) of claim 1 was obvious in view of the composition of example 8 of F7, whose ethylene content of the rubbery phase, however, was only of 33 wt.%. However, it was not obvious, not even in the light of F10, to increase the ethylene content of the rubbery phase (requirement (ii)). Therefore, the subject-matter of the patent involved an inventive step (Article 56 EPC).

- IV. An appeal against that decision was lodged by the opponent. Together with the statement of grounds of appeal a further document:
  F32: WO 00/68315
  was submitted.
- V. The rejoinder of the respondent (patent proprietor) filed with letter of 15 November 2013 included an auxiliary request 1 and auxiliary requests 2 to 6, the latter each comprising a first set A and a second set B. A further written submission was made with letter of 23 June 2016.
- VI. A summons to oral proceedings and a communication of the board was issued.
- VII. With letter of 20 October 2016 the respondent submitted new auxiliary requests 2A and 2B in addition to the auxiliary requests already on file, which were consequently renumbered Requests 3A/3B to 7A/7B.

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- VIII. The oral proceedings took place on 8 November 2016.
- IX. The submissions of the appellant, as far as they are relevant for the decision, can be summarized as follows:
  - (a) The composition defined in claim 1 or the composition obtained with the process of claim 8 did not necessarily exhibit the sought properties in terms of compression integrity. Therefore the subject-matter of those claims could not be seen to solve the problem formulated in paragraph [0007] of the patent in suit. Accordingly, the patent lacked sufficiency of disclosure.
  - (b) The extent of monopoly conferred by a patent should correspond to and be justified by its technical contribution to the art. However, an analysis of the examples and comparative examples contained in the specification showed that the technical effects allegedly achieved with the claimed composition or the claimed process were not obtained over the whole scope of the claims, meaning that no problem was solved. In particular it was not shown that an improvement of the drop height values at low temperature for partially filled containers was associated with the combination of features claimed. Moreover, it had to be taken into consideration that the test for partially filled containers was a self-invented modification of the standard method F12 referred to in the patent in suit. Accordingly the subject-matter of claims 1 and 8 lacked an inventive step

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- (c) F7 did not explicitly mention injection moulding or thin walled cups, but addressed moulding or thin walled-articles. In view of the MFR values disclosed in F7 the skilled person would recognize them as suitable for injection-moulding and even recognize that they were dedicated to such processing. In addition example 8 of F7 referred to F32, which document disclosed the suitability of the compositions described therein for the manufacture of articles by injection moulding. This, however, was not decisive, because the present claims were not restricted to injectionmoulding or thin walled cups and thus only defined compositions that might be suitable for injectionmoulding or thin-walled cups. Moreover, F7 provided compositions balanced with respect to stiffness and impact properties, achievable even for high comonomer content. In addition, F7 contrary to F6 addressed impact properties at low temperature. The closest prior art was therefore represented by F7, in particular the embodiment disclosed in its example 8.
- (d) Comparative example 1 of the opposed patent was close to example 8 of F7 and its comparison with example 1 according to the present invention showed that no technical effect arose from the use of a higher content of ethylene for the copolymer disperse phase. Having regard to F7, the technical problem solved by the subject-matter of claim 1 of the main request was therefore the provision of a further heterophasic propylene copolymer composition.
- (e) The selection of an ethylene content in the disperse phase of at least 40 wt.% was arbitrary

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and therefore obvious to the skilled person. Moreover, F10 taught that an increase of the ethylene content of the disperse phase improved the impact properties, the main reason for the development of polypropylene heterophasic copolymers being the improvement in the lowtemperature impact strength. In particular, F10 indicated on page 248 that an increase in the ethylene content resulted in an improvement of impact properties, the maximum in improvement occurring within the range of 50 to 60% of ethylene in the rubber phase. Irrespective of whether that range was meant in F10 to be in weight % or in mole %, it was clear that the amount of ethylene had to be raised to improve the impact performance. Furthermore, F7 confirmed in paragraph [51] that amounts of ethylene in the rubber component up to 70 wt.% were accessible. Hence, even if the problem formulated by the respondent were considered to be successfully solved, the claimed solution would still be obvious to the skilled person.

- X. The submissions of the respondent, as far as they are relevant for the decision, can be summarized as follows:
  - (a) The patent in suit described in paragraphs [42] to [94] how the compositions according to claim 1 as granted could be produced. In table 1 specific production conditions were provided. Furthermore the specification taught which features to vary (e.g. comonomer content, amount of disperse phase) to arrive at the desired properties. Accordingly, the requirements for sufficiency of disclosure were met.

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- (b) F7 was silent as regards injection moulding, thinwalled articles or compression resistance, whereas F6 inter alia in working example 1 expressis verbis related to thin-walled packaging, including experimental results concerning injection moulding. It was not disputed that high melt flow rates were desirable for injection moulding purposes, but the presence of high melt flow rate values alone did not allow it to be concluded that the material necessarily was an injection moulding material. It was also important that the intrinsic viscosity of the rubber and the matrix were adjusted to each other. F7 was mainly concerned with processing problems, i.e. avoiding the production of sticky materials. Moreover, the reference to F32 in example 8 of F7 concerned the modification of the catalyst employed in F7 according to the procedure of F32, but did not relate to the catalyst of F32 itself. The mere indication in F32 that injection moulding could be used as one of the other moulding methods described therein did not lead to the conclusion that the modification of the catalyst according to the procedure of F32 necessarily resulted in the use of injection moulding. Taking Example 8 of F7 as closest prior art required hindsight, because compared to other examples of F7 it did not provide the best starting point having regard to the balance between stiffness and impact properties. Example 8 of F7 appeared to be a separate embodiment having higher stiffness at lower impact with the surprising absence of stickiness. Accordingly, only F6 and not F7 represented the closest prior art.
- (c) If F7 was considered to represent the closest prior art, the technical problem solved by the subject-

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matter of claim 1 of the main request was, as demonstrated by the experimental data contained in the patent in suit, the provision of a heterophasic propylene copolymer composition having sufficient stiffness and improved compression resistance at 0°C for filled cups. This was demonstrated by a comparison of the inventive examples with comparative example 2, which closely resembled the process of example 8 of F7. The fact that the test for partially filled cups was not described in F12 was irrelevant, because the specific test conditions and methodology employed were completely and sufficiently described in the contested patent.

(d) Resistance to mechanical compression at low temperature did not correspond to an artificially chosen property, but to the practical need to obtain food containers exhibiting mechanical resistance when subjected to an impact, such as occurs upon falling out of the refrigerator. None of the documents, in particular not F10, referred to the influence of the ethylene content of the disperse phase on the resistance to mechanical compression. Moreover, that property did not vary proportionally with "classical" impact resistance addressed in F10, which typically was determined by the Charpy notch test. This lack of proportionality was demonstrated in the experimental part of the patent in suit. Furthermore, F10 did not teach that a range of ethylene content of the disperse phase as suggested in that document was applicable to each and every heterophasic composition. Hence, the cited prior art could not suggest the claimed solution to the skilled person. An inventive step was therefore to be acknowledged.

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- XI. The appellant requested that the decision under appeal be set aside and that the patent be revoked.
- XII. The respondent requested that the appeal be dismissed, or alternatively that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of auxiliary request 1 filed with letter of 15 November 2013, or on the basis of auxiliary request 2A or 2B filed with letter of 20 October 2016, or on the basis of any of auxiliary requests 3 to 7, comprising a first set A and a second set B, auxiliary requests 3 to 7 corresponding to auxiliary requests 2 to 6 filed with letter of 15 November 2013.

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#### Reasons for the Decision

Sufficiency of disclosure

Assessment of sufficiency of disclosure of the 1. invention is made for the invention for which protection is sought, i.e. the invention as defined by the claims in terms of the technical features of the invention (see Rule 43(1) EPC). This means in the present case examining whether the patent in suit makes available to a person skilled in the art the combination of features defining the composition of claim 1 and the process of claim 8. The objection of lack of sufficiency of disclosure against product claim 1 and process claim 8 of the patent in suit was however not raised in respect of the features specified in the claims. The objection was instead raised because the compositions defined in claim 1 or the composition obtained with the process defined in claim 8 did not necessarily exhibit the sought properties in terms of compression integrity. In view of this it was objected that the subject-matter of those claims could not be seen to solve the problem formulated in paragraph [0007] of the patent in suit. This objection might be of relevance to the question of inventive step, not sufficiency of disclosure. In particular, neither claim 1 nor claim 8 requires any result in terms of compression integrity, so that the achievement of a particular result in terms of that property is immaterial to the assessment of sufficiency of disclosure. Under these conditions, no valid case has been made for lack of sufficiency of disclosure.

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#### Inventive step

#### Closest prior art

- 2. The parties took differing views as to whether document F6 or F7 represented the closest prior art. The closest prior art for the purpose of objectively assessing inventive step is generally that which corresponds to a similar use requiring the minimum of structural and functional modifications (Case Law of the Boards of Appeal of the European Patent Office, 8th edition, 2016, I.D.3.1). Thus, this involves not only comparing the claimed compositions with those of the prior art, but also giving consideration to the particular properties which render the compositions suitable for the desired use.
- 2.1 As indicated by paragraphs [2] and [11] of the patent in suit there was a need for polypropylene-based compositions for injection moulded articles, in particular for thin walled packaging applications such as food packaging and plastic cups, which compositions should have good processability, but still result in a material of high stiffness, and an excellent compression stability, in particular at low temperatures. Stiffness of the articles should be sufficient that they can be stacked and can hold foodstuffs. Concerning the "compression stability", that wording denotes resistance to mechanical compression, which is frequently incurred by e.g. dropping the articles (paragraph [0002], final sentence).
- 2.2 The fact that F7 is primarily concerned with addressing processing problems i.e. avoiding the production of sticky materials as specified in paragraph 19 of F7,

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does not mean that the skilled person would disregard that document as a potential starting point for the present invention. In fact both documents, F6 on page 5, lines 21-24 and F7 in paragraph [22] formulate similar objectives, namely providing compositions having uniform quality and desired stiffness and impact strength, as can also be derived from the experimental results reported in the tables of those documents. Neither of those documents addresses the specific impact property, i.e. compression resistance, tested in the patent in suit, but F7 does address impact properties at low temperature (Charpy notched impact at -20°C, see Table 2 and Charpy notched impact at 0°C in example 8), whereas F6 in its examples merely reports Charpy notched impact properties at room temperature. Hence, in view of the mechanical properties of the materials addressed in F6 and F7, the skilled person would have considered F7 to be more relevant to the problem underlying the patent in suit since it explicitly addresses the problem of providing materials exhibiting adequate mechanical properties at low temperature, whereas F6 does not address that aspect. Any of the specific compositions described in that document would be taken into consideration, i.e. including all exemplified embodiments of F7, which embodiments are reported to provide uniform quality, as well as desired stiffness and impact strength, even if to different degrees.

2.3 Having regard to the suitability of the compositions of the prior art to be taken as starting point for the claimed invention when seeking to prepare injection moulded parts for thin-wall packaging applications, the Board notes that, as set out in paragraph [0001] of the patent, the use of the claimed compositions for producing injection moulded articles or preparing thin-

walled packaging articles are preferred embodiments of the patent in suit, as is confirmed by the subjectmatter of claims 11 and 13 which extends to any type of production method or any type of article using the compositions of claim 1. Accordingly, there is no reason to disregard F7 as the closest prior art for the sole reason that it does not mention that the compositions disclosed therein could be processed by injection moulding or employed for the production of thin-wall articles. Moreover, in view of the requirement that the compositions obtained preferably should be suitable for the production of articles by injection moulding the skilled person would consider compositions which exhibit melt flow rate values that are generally desirable for the production of articles by this means. Accordingly, considering the problem addressed by the present invention there is no reason to conclude that F7 constitutes a more remote state of the art than F6.

However, having regard to the structural definition of 2.4 the claimed compositions, the sole distinguishing feature of the claimed compositions over that obtained in example 8 of F7 is that the comonomer content is required to be at least 40 wt.% (requirement (ii) in present claim 1) whereas it is 33 wt.% in example 8 of F7. In contrast working examples 1 and 4 of F6 do not meet the requirements (i), (ii) and (iii). Therefore, from a structural point of view, example 8 of F7 represents the embodiment which is closest to the subject-matter defined in present claim 1, while that embodiment also concerns a composition which is reported as having uniform quality, desired stiffness and impact strength. In addition it exhibits a melt flow rate value of 90 g/10 min considered to be

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desirable for the production of articles by injection moulding.

2.5 Consequently, the disclosure of the example 8 of F7 which corresponds to a similar use to that of the patent in suit and requires the minimum of structural and functional modifications compared to the claimed subject-matter is considered to represent the closest prior art and therefore the starting point for assessing inventive step.

#### Problem and solution

- Having regard to the disclosure of example 8 of F7 and 3. in line with the indication of the properties sought to be obtained as indicated in point 2.1 above the patent proprietor/respondent submitted that the technical problem solved by the subject-matter of claim 1 of the main request was the provision of a heterophasic propylene copolymer composition having sufficient stiffness and improved compression damage resistance, i.e. compression stability at 0°C for filled cups. As indicated in section 2.1 above, "compression stability" denotes resistance to mechanical compression incurred by dropping articles, which is measured in accordance with ASTM-D 2463-95 as indicated in paragraphs [99] to [101] of the patent in suit. That standard was submitted by the appellant with its statement of grounds of appeal as evidence F12. The admissibility thereof into the proceedings was not challenged. That item of evidence is therefore to be taken into account in the appeal proceedings (Article 12 RPBA).
- 4. As to whether evidence has been provided that the claimed subject-matter provides a successful solution to the above problem, the appellant referred in

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particular to the experimental results contained in the patent in suit.

- 4.1 According to the established jurisprudence, in the case where comparative tests are chosen to demonstrate an inventive step on the basis of an improved effect, the nature of the comparison with the closest state of the art must be such that the alleged advantage or effect is convincingly shown to have its origin in the feature distinguishing the invention from the closest state of the art. In the present case the distinguishing feature is a comonomer content of the dispersed propylene copolymer rubber of 40 wt.% or higher, whereas the content of the ethylene comonomer in example 8 of F7 is of 33 wt.%. A comparison between example 1 and either comparative example 2 or comparative example 3 is appropriate to demonstrate the influence of the comonomer content of the dispersed phase on the properties of the compositions, as the formulation of the matrix phase and the content of dispersed phase can be considered to have been kept essentially unmodified. From those comparisons it can be observed that an increase of the comonomer content above the lower limit of 40 wt.% defined in operative claim 1 as requirement (ii) results in an improved compression resistance at 0°C for partially and fully filled cups, while the tensile modulus (as a measure of the stiffness according to paragraph [102] of the patent in suit) is almost unaffected, remaining in both cases above the most preferred value of 1500 MPa.
- 4.2 The appellant argued that the test results using partially filled cups were based on a self-invented test. As shown in point 5.3. of F12, the test is carried out with containers filled to their nominal capacity and allows the effect inter alia of materials

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on the impact resistance of the blown containers to be evaluated. The same obviously applies when as in the patent in suit the containers are partially filled, even if those test conditions might be considered to be less severe. Hence, the Board has no reason to disregard the test results obtained with partially filled cups for the sole reason that this test represents a modification of the test described in F12.

- 4.3 Furthermore, a comparison between the results of example 1 and comparative example 1 is not appropriate, because the compositions tested do not differ only in the ethylene content of the disperse phase, but also in the amorphous content of the matrix phase (indicated by the xylene solubles XS content), which difference cannot be considered negligeable.
- 4.4 Moreover, the observed improvement of the compression resistance obtained by increasing the content of ethylene can be correlated with the presence of larger copolymer rubber particles dispersed in the matrix phase as illustrated in Figure 1 of the patent in suit. That larger dispersed phase particles are obtained when increasing the content of ethylene of the copolymer is to be explained, according to the respondent, by the resulting decrease of miscibility between the dispersed phased and the matrix. A further indication that the dispersed copolymer rubber particles according to the invention have a larger particle size as a result of an increased content of ethylene of the comonomer is also consistent with an accompanying decrease of Charpy notched impact values, as shown by the comparison of comparative examples 2 and 3 on the one hand and example 1 on the other. Such a result is to be correlated as shown in F10 (page 247 second paragraph) with a lower concentration of rubber particles, i.e. a

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lower absolute number of individual particles, meaning that those rubber particles are necessarily of larger size when the total amount of rubber copolymer was kept constant, as in the above mentioned comparison.

- demonstrate that the advantages allegedly obtained over F7 are not achieved a comparison between comparative example 1 and example 1 of the patent in suit, arguing that comparative example 1 of the opposed patent was close to example 8 of F7. This approach however, fails to persuade at least because a comparison between example 1 and comparative example 1 cannot demonstrate any causal link between a change of properties and the ethylene content of the disperse phase due to a further difference between the compositions tested, namely the nature of the matrix phase as shown in above point 4.1.
- 4.6 In view of the foregoing and the absence of any evidence to the contrary, the Board is satisfied that the problem successfully solved over the closest prior art is the provision of a heterophasic propylene copolymer composition having sufficient stiffness and improved compression resistance at 0°C for filled cups.
- 5. As a solution, the patent in suit proposes the composition of claim 1 which is characterized by a propylene copolymer rubber of the disperse phase (B) which has a comonomer content of 40 wt.% or higher.

#### *Obviousness*

6. It remains to be decided whether the proposed solution to the problem underlying the patent in suit is obvious in view of the state of the art.

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- 6.1 The problem successfully solved over the closest prior art is not only the provision of a heterophasic propylene copolymer composition having sufficient stiffness, but also the provision of a composition exhibiting improved compression resistance at 0°C. Improving the compression resistance at such temperature means in practical terms increasing the mechanical resistance of a food container filled or partially filled with food in case that it is exposed to an impact, for example as a result of falling out of the refrigerator. The appellant did not cite any prior art dealing with this specific issue in relation to heterophasic propylene copolymer compositions. As shown in above point 2.2, F6 and F7 do not contain any indication concerning said property. F10 is concerned with heterophasic propylene copolymer compositions and as indicated by the appellant discusses the influence of the ethylene content of the disperse phase on impact properties. The sole impact properties addressed in F10 are Izod impact and drop weight impact. However, compression resistance is not mentioned, even indirectly. Moreover, no evidence has been submitted that would suggest that an improvement of Izod impact and drop weight impact would also lead to an improvement of compression resistance, so that there is no reason for the skilled person to try to apply any measure suggested in F10 to improve Izod impact or drop weight impact in the context of solving the problem of providing improved compression resistance.
- Accordingly, the solution of the technical problem provided according to the patent-in-suit does not arise in an obvious way from the cited state of the art.

  Accordingly, the subject-matter of present claim 1 involves an inventive step in accordance with the requirements of Article 56 EPC.

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For the same reason, claims 2 to 7 dependent on claim 1, the processes of claims 8 to 10 for preparing the heterophasic propylene composition of any of the preceding claims, the uses of a polypropylene composition according to any one of claims 1 to 7 in accordance with claims 11 and 12 and the articles of claims 13 and 14 comprising a composition according to any one of claims 1 to 7 meet the requirements of Article 56 EPC.

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# Order

# For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



N. Schneider

M. C. Gordon

Decision electronically authenticated