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**Datasheet for the decision
of 19 May 2025**

Case Number: T 1310/23 - 3.3.09

Application Number: 16793367.0

Publication Number: 3294544

IPC: B29C35/02, B32B17/10, F41H7/02,
B32B27/12, B32B7/12

Language of the proceedings: EN

Title of invention:

UNDERBODY SHIELD COMPOSITION AND ARTICLES THAT PROVIDE
ENHANCED PEEL STRENGTH AND METHODS OF USING THEM

Applicant:

Hanwha Azdel, Inc.

Headword:

Underbody shield composition/HANWHA AZDEL

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

Amendments - extension beyond the content of the application
as filed (yes)

Decisions cited:

T 3142/19, T 1137/21



Beschwerdekammern

Boards of Appeal

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Case Number: T 1310/23 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 19 May 2025

Appellant:
(Applicant)

Hanwha Azdel, Inc.
2000 Enterprise Drive
Forest, VA 24551 (US)

Representative:

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Am Börstig 5
96052 Bamberg (DE)

Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted on 2 January 2023
refusing European patent application No.
16793367.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman A. Haderlein
Members: C. Meiners
N. Obrovski

Summary of Facts and Submissions

- I. The present appeal was filed by the applicant (appellant) against the examining division's decision to refuse the application.
- II. In the decision under appeal, the examining division concluded that the subject-matter of the sole claim request filed by letter dated 18 June 2021 contained subject-matter which extended beyond the content of the application as filed (Article 123(2) EPC). Consequently, it refused the application.
- III. In a letter dated 16 May 2025, the appellant informed the board that it would not be represented at the oral proceedings scheduled for 19 May 2025. The oral proceedings were held in the absence of the appellant.
- IV. Wording of the relevant claims

Claim 1 of the main request reads as follows:

"An automotive underbody shield constructed and arranged to couple to an undercarriage of an automotive vehicle, the underbody shield comprising:

a thermoplastic porous core layer (110, 210, 310, 410, 510, 610, 1010, 1110, 1430) comprising a web open celled structures defined by random crossing over of reinforcing glass fibers held together by polypropylene resin, the thermoplastic porous core layer further comprising a microsphere lofting agent distributed homogeneously throughout the thermoplastic porous core layer, wherein the microsphere lofting agent is effective to increase a thickness of the thermoplastic porous core layer upon exposure to heat to provide a

post lofted core layer, wherein the thermoplastic porous core layer comprises a porosity between 20% to 80% by volume, 30 weight percent to 70 weight percent reinforcing glass fibers, and 2 weight percent to 20 weight percent microsphere lofting agent;

a scrim (130, 230, 330, 430, 530, 1020, 1120, 1420) disposed on a first surface of the post-lofted core layer, wherein the scrim comprises a basis weight of at least 65 gsm and an elongation at break of at least 20%; and

an adhesive layer (120, 220, 320, 420, 520, 1015, 1425) between the post lofted core layer and the scrim, the adhesive layer comprises a thermoplastic polyolefin polymer mixed with a thermosetting material, wherein an amount of the thermoplastic polyolefin polymer in the adhesive layer is greater than an amount of the thermosetting material in the adhesive layer, wherein a basis weight of the underbody shield is less than 3000 gsm, and wherein a post-molding peel strength between the scrim and the post lofted core layer is at least 0.5 N/cm in the machine direction and at least 0.5 N/cm in the cross direction as tested by DIN 53357 A dated October 1, 1982."

Claim 1 of the first auxiliary request differs from claim 1 of the main request on account of the additional feature whereby (inserted at the end of the claim): "[,] and wherein the exterior automotive underbody shield comprises at least one drawn area with a depth of 5 cm or more without breakthrough."

By contrast, compared with claim 1 of the main request, claim 1 of the second auxiliary request limits the composition of the core layer by requiring a level of glass fibres of from 40 to 50 wt.%, 50 to 60 wt.% polypropylene and 2 to 10 wt.% microsphere lofting

agent. Moreover, the scrim material is specified as being polyethylene terephthalate, and the adhesive layer is further limited by requiring the thermoplastic polymer to be polyethylene or polypropylene and the thermosetting material to be an epoxy adhesive.

Finally, claim 1 of the third auxiliary request differs from that of the second auxiliary request on account of i) a basis weight of the porous core layer of 1000 gsm, ii) a basis weight of the scrim of 80 gsm, iii) a basis weight of the adhesive layer of 20 gsm, and in that iv) a total thickness of the post-lofted core layer, adhesive layer and scrim together is about 20 mm.

- V. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request or one of the first to third auxiliary requests filed with the statement of grounds of appeal.

Reasons for the Decision

1. Amendments - main request

- 1.1 It is established case law that the content of an application as filed must not be considered a reservoir from which features pertaining to separate embodiments could be combined to artificially create a particular embodiment (see Case Law of the Boards of Appeal, 10th edition, 2022, II.E.1.6.1.a). An accumulation of optional features may make it difficult to determine what the invention actually is and that, in a multitude of optional features, a singled-out individual feature *combination* may not be directly and unambiguously

derivable (see also T 3142/19, point 6.4 of the Reasons).

1.2 The mere fact that a claimed fall-back position encompasses the examples of an application merely conveys that the claimed subject-matter as amended includes the (potential) core of the invention; however, it does not necessarily demonstrate that the application as filed directly and unambiguously discloses the whole claimed subject-matter as amended, including its boundaries. Instead, multiple selections from a large number of lists and possibilities without a specific pointer can lead to fresh subject-matter, also in the presence of examples that fall within the amended claims. This was also the conclusion in the board's decision in case T 1137/21 (point 1.6 of the Reasons).

1.3 In this regard, the subject-matter of claim 1 is based, *inter alia*, on the feature *combination* of claims 1, 3, 5/141 and 8, 9 and 10 (the latter is also reflected in claim 146 with regard to the porosity after moulding) of the application as filed. The subject-matter of claim 1 is the result of various intermediate generalisations, thus giving rise to fresh subject-matter. These intermediate generalisations concern the mention of *specific* materials used in the example of the application as filed being omitted. In this regard, these specific materials used in the scrim and the adhesive layer functionally interact to achieve the sought peel strengths. They are thus inextricably linked to one another.

Furthermore, claim 5 as filed, on which the claimed subject-matter is based, among others, requires the skin material to comprise a *porous non-woven material*.

This is equally taught in paragraphs [0010] and [0012] of the description as filed, referred to by the appellant, which also disclose the claimed basis weight and elongation at break. Omitting the reference to a *porous non-woven material* thus gives rise to a further inadmissible intermediate generalisation, because a scrim is not necessarily a non-woven material.

- 1.4 Hence, the board concludes that there is no direct and unambiguous basis for the feature combination in claim 1 in the application as filed. Therefore, the subject-matter of claim 1 does not meet the requirement of Article 123(2) EPC.

2. *Auxiliary requests*

The above objection under Article 123(2) EPC similarly applies to the subject-matter of claim 1 of each of the first, second and third auxiliary requests. In particular, they do not contain the feature *porous non-woven material* referred to above in the second paragraph in point 1.3. They are thus not allowable either.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Götz-Wein

A. Haderlein

Decision electronically authenticated