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Datasheet for the decision of 16 January 2017

Case Number: T 0697/13 - 3.3.03

Application Number: 06706434.5

Publication Number: 1846478

IPC: C08G77/06, C08G77/08, C08G77/10, C08J3/03

Language of the proceedings: EN

Title of invention:
MANUFACTURE OF STABLE LOW PARTICLE SIZE ORGANOPOLYSILOXANE EMULSION

Patent Proprietor:
Wacker Chemie AG

Opponent:
Dow Corning Corporation

Headword:

Relevant legal provisions:
EPC Art. 123(2), 54, 111(1), 100(b)

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

Keyword:
Amendments - added subject-matter (yes; auxiliary request 2: no)
Sufficiency of disclosure - (yes)
Novelty - (yes)
Appeal decision - remittal to the department of first instance (yes)

Decisions cited:
T 0464/05, G 0002/03

Catchword:

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Case Number: T 0697/13 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 16 January 2017

Appellant: (Patent Proprietor)	Wacker Chemie AG Hanns-Seidel-Platz 4 81737 München (DE)
Representative:	Deffner-Lehner, Maria Wacker Chemie AG Zentralbereich Patente, Marken und Lizenzen Hanns-Seidel-Platz 4 81737 München (DE)
Respondent: (Opponent)	Dow Corning Corporation 3901 S. Saginaw Road Midland, Michigan 48686-0994 (US)
Representative:	f & e patent Fleischer, Engels & Partner mbB, Patentanwälte Braunsberger Feld 29 51429 Bergisch Gladbach (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 3 January 2013 revoking European patent No. 1846478 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	D. Semino
Members:	O. Dury
	R. Cramer

Summary of Facts and Submissions

I. The appeal by the patent proprietor lies against the decision of the opposition division revoking European patent No. EP 1 846 478.

II. The claims of the application as filed which are relevant to the present decision read as follows:

"1. A process for the manufacture of a stable emulsion having particle size up to 150 nanometer comprising:

i) providing a selective formulation comprising
(a) organopolysiloxane or mixtures thereof in an amount of 20 to 80 % by. wt.
(b) water in an amount of 5 to 30 % by wt.
(c) selective non-ionic emulsifier(s) having HLB in the range of 10-19 in amounts of 1 to 25% by wt. and
(d) selective anionic emulsifier having HLB in the range of 8-19 in an amount of 1 to 15 % by. wt.;

ii) homogenizing the mix of (i) using any standard homogeniser and maintaining a temperature of up to 50°C preferably in the range of 10-40°C such as to favour organopolysiloxane polymer growth rate or rise in polymer viscosity to at least 20000 cps; and

iii) neutralising the emulsion by alkali to a pH range 6-8."

"3. A process for the manufacture of stable and faster production of low particle size emulsion having high internal phase oil viscosity comprising:

(i) providing a selective formulation comprising providing water in an amount of 5 to 30% of the emulsion, 8 to 30% mixed emulsifiers comprising at least one anionic emulsifier and at least one non-ionic emulsifier having HLB value of the emulsifiers in the range of 10-19 preferably 12-15 and an organopolysiloxane or mixture of organopolysiloxanes in the range of 20-80% of the emulsion.

(ii) homogenising the mix with standard homogenizer while maintaining a temperature in the range up to 50°C, preferabily *[sic]* in the range of 20-40°C for a period of 10 minutes to 2 hr depending on the desired characteristics of the emulsion ;

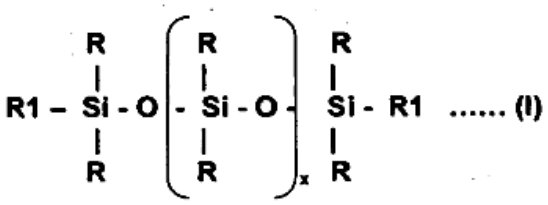
(iii) allowing the emulsion to age in the range of 5 to 30°C to favour faster growth of viscosity of the internal phase oil;

(iv) neutralising the emulsion with alkali and finally adding biocide for microbial prevention in the emulsion."

III. The granted patent was based on a set of 11 claims, of which claims 1 and 3 read as follows:

"1. A process for the manufacture of a stable emulsion having particle size (D50 value) up to 150 nanometer comprising:

i) providing a formulation comprising
(a) organopolysiloxane of the general formula I



where R^1 is a hydroxyl group and/or an alkoxy group having 1 to 8 carbon atom and where R, which may differ, is a monovalent hydrocarbon radical, x is an integer from 1 to 100, or mixtures thereof in an amount of 20 to 80 % by. wt.
(b) water in an amount of 5 to 30 % by wt.
(c) non-ionic emulsifier(s) having HLB in the range of 10-19 in amounts of 1 to 25% by wt. and
(d) anionic emulsifier selected from organic sulfonic acids having HLB in the range of 8-19 in an amount of 1 to 15 % by. wt.;

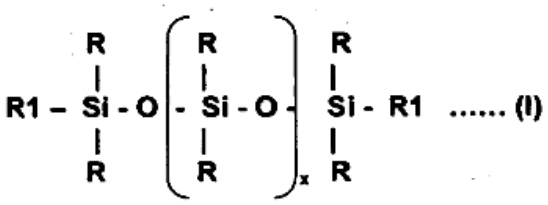
ii) homogenizing the mix of (i) using any standard homogeniser and maintaining a temperature in the range of 10-40°C such as to obtain an organopolysiloxane polymer with viscosity of at least 20000 mPa.s; and

iii) neutralising the emulsion by alkali to a pH range 6-8."

"3. A process for the manufacture of stable and faster production of particle size up to 150 nanometer emulsion having internal phase oil viscosity of at least 20000 mPa.s comprising:

(i) providing a formulation comprising providing water in an amount of 5 to 30% of the emulsion, 8 to 30% mixed emulsifiers comprising at least one anionic emulsifier selected from organic sulfonic acids having HLB in the range of 8-19 and at least one non-ionic

emulsifier having HLB value of the emulsifiers in the range of 10-19 preferably 12-15 and an organopolysiloxane of the general formula I



where R^1 is a hydroxyl group and/or an alkoxy group having 1 to 8 carbon atom and where R, which may differ, is a monovalent hydrocarbon radical,x is an integer from 1 to 100,or mixture of organopolysiloxanes of the formula (I) in the range of 20-80% of the emulsion.

(ii) homogenising the mix with standard homogenizer while maintaining a temperature in the range of 20-40°C for a period of 10 minutes to 2 hr depending on the desired characteristics of the emulsion;

(iii) allowing the emulsion to age in the range of 5 to 30°C to obtain a viscosity of at least 20000 mPa.s of the internal phase oil;

(iv) neutralising the emulsion with alkali and finally adding biocide for microbial prevention in the emulsion."

IV. An opposition against the patent was filed, in which the revocation of the patent in its entirety was requested. In the decision under appeal, which was based on the granted patent as sole request, *inter alia* the following documents were cited:

D1: EP 0 755 959

D2: US 6 239 211

The decision of the opposition division, as far as relevant to the present decision, can be summarised as follows:

- The granted patent fulfilled the requirements of Article 100(c) EPC in combination with Article 123(2) EPC. In particular, it was clear that the "internal phase oil" mentioned in claim 3 was identical to the organopolysiloxane polymer;

- The requirements of Article 100(b) EPC were not met because the determination method of the viscosity of the organopolysiloxane specified in granted claim 1 was not defined in the patent. Considering that said viscosity was a decisive parameter, that lack of information resulted in "the skilled person being unable to determine the technical measures that are necessary to solve the technical problem underlying the patent in suit viz. providing an emulsion wherein the viscosity of the organopolysiloxane polymer is at least 20000 mPa.s while the organopolysiloxane polymer particles have a particle size (D50 value) of up to 150 nm";

- The subject-matter of the granted claims was novel over each of D1 and D2.

V. The patent proprietor (appellant) appealed the above decision and, in its the statement of grounds of appeal, requested that the opposition division's decision be set aside. Besides, the following documents were *inter alia* simultaneously filed:

D7: Affidavit of Mr. Amit, dated 27 February 2013

D8: ASTM D 2196-99
D10: DIN 53019-2
D11: Brookfield dial reading viscometer with electronic drive; Operating instructions; Manual No. M/00-151, page 23

VI. With its rejoinder to the statement of grounds of appeal the opponent (respondent) requested that the appeal be dismissed.

VII. With a letter of 9 November 2016, which was sent in reply to a communication of the Board in preparation of the oral proceedings, the patent proprietor filed a main request and auxiliary requests 1-3 in replacement of all pending requests.

Regarding the main request, claim 1 was identical to granted claim 1 and claim 3 only differed from granted claim 3 in that the expression "according to claim 1" was inserted between "20000 mPa.s" and "comprising:".

Auxiliary request 1 differed from the main request in that in each of claims 1 and 3 the expression "where R, which may differ, is a monovalent hydrocarbon radical" was replaced by "where R is a methyl radical".

Auxiliary request 2 corresponded to the main request in which claim 3 was deleted.

VIII. With letter of 6 December 2016 the respondent submitted objections in respect of all pending requests.

IX. Oral proceedings were held on 16 January 2017 in the presence of both parties, at the end of which the Board announced its decision.

X. The appellant's arguments, insofar as relevant to the present decision, may be summarised as follows:

Admission of the requests

(a) The main request and auxiliary requests 1-2 were filed as attempts to reply to the issues identified in the preliminary opinion of the Board. The amendments made were not complicated to understand and did not raise new or unexpected issues. Therefore, those requests should be admitted to the proceedings.

Main request

(b) Article 123(2) EPC

The skilled person reading step i) of claim 1 would understand that it dealt with a polycondensation, which had to lead to an increase in molecular weight of the organopolysiloxane of formula (I). Besides, the wording "such as to obtain" made technically sense only if it meant that the molecular weight of the product obtained in step i) increased. Therefore, the amendment made in step ii) of claim 1 was allowable pursuant to Article 123(2) EPC.

Claim 3 was dependent on claim 1. That amendment was based on the combination of the processes indicated on page 6, line 8ff and on page 4, line 12ff of the application as filed. It was further clear from the application as filed that the internal oil phase was identical to the organopolysiloxane polymer, in particular because no other components/additives apart from those

specified in the claims were indicated in the application as filed. Therefore, the subject-matter of claim 3 was supported by the application as filed.

Auxiliary request 1

(c) Apart from the amendment of the definition of group R, which had a literal support in the application as filed, claim 3 of auxiliary request 1 was identical to claim 3 of the main request and, therefore, satisfied the requirements of Article 123(2) EPC for the same reasons.

Auxiliary request 2

(d) Claim 1 of auxiliary request 2 was identical to claim 1 of the main request and, therefore, satisfied the requirements of Article 123(2) EPC for the same reasons.

(e) Sufficiency of disclosure

The skilled person knew how to determine viscosity according to accepted ASTM or DIN standards well known in the art. In the absence of any information regarding temperature, said determination was done at room temperature, usually 25°C. It was shown in D7 that both the ASTM and DIN standards led to similar results and that using a temperature of either 20 °C or 25 °C led to non significant differences in viscosity. Other operating parameters such as shear conditions, spindle size, rotation speed, were not essential for determining viscosity and were appropriately selected by the technician.

There was no evidence on file that it would not be possible to prepare the emulsions defined in the claims by following the teaching of the patent in suit, nor that it was related to undue burden.

The conclusions drawn in decision T 464/05 of 14 May 2007, which dealt with the issue of sufficiency in respect of a different parameter than viscosity, did not apply to the present case.

Therefore, the missing information regarding the temperature or the method of determination of the viscosity could be a matter of clarity in the sense of Article 84 EPC but not of sufficiency of disclosure.

(f) Novelty

The emulsions prepared in D1 required a large amount of water, contrary to the requirement of claim 1. Besides, D1 failed to disclose the specific combination of features (b) to (d) according to claim 1.

D2 at least failed to disclose the specific combination of water, a non-ionic emulsifier and an anionic emulsifier according to features (b) to (d) of claim 1.

Therefore neither D1 nor D2 anticipated the subject-matter being claimed.

Remittal

(g) The remittal of the case to the first instance for further prosecution was not objected to.

XI. The respondent's arguments, insofar as relevant to the present decision, may be summarised as follows:

Admission of the requests

(a) The main request and auxiliary requests 1-2 were filed late and could have been filed much earlier in the proceedings, e.g. in direct reply to the respondent's response to the statement of grounds of appeal. This was particularly true because no new objection had been raised in appeal. Besides, the main request and auxiliary request 1 raised new issues e.g. in respect of Rule 80 EPC or Article 84 EPC. Therefore, those requests should not be admitted to the proceedings.

Main request

(b) Article 123(2) EPC

Whereas original claim 1 was limited to a process wherein either the organopolysiloxane polymer growth rate was favoured or a rise in polymer viscosity took place, the process now being defined in claim 1 also encompassed the possibility that a polymer of the specified viscosity might be present from the beginning without any increase of viscosity.

Should it be considered that the actual and the original wording of claim 1 had the same meaning,

it would not have been necessary to carry out that amendment. The fact that the amendment was deliberately made showed that the appellant aimed at a different and broader interpretation.

For that reason, claim 1 did not satisfy the requirements of Article 123(2) EPC.

(c) There was no disclosure in the application as filed that the viscosity of the oil phase should be at least 20000 mPa.s as now specified in claim 3. In particular, due to the "comprising" language of claim 3 the internal oil phase could contain in addition to the polymer itself other components that could have an influence on the viscosity. Therefore, at least for that reason, claim 3 did not meet the requirements of Article 123(2) EPC.

Auxiliary request 1

(d) The same argumentation as for claim 3 of the main request was valid for claim 3 of auxiliary request 1.

Auxiliary request 2

(e) Claim 1 of auxiliary request 2 was identical to claim 1 of the main request and, therefore, did not satisfy the requirements of Article 123(2) EPC for the same reasons.

(f) Sufficiency of disclosure

The patent in suit failed to provide any information regarding how to determine the viscosity mentioned in claim 1. Besides, it was

shown in D7 that using either different measuring methods such as ASTM and DIN standards or different temperatures for a given standard led to significantly different values of viscosity. In that respect, room temperature could vary between 16 and 30°C. Besides, the patent in suit also did not provide any information regarding other important operating conditions indicated in the standards cited in D7, such as shear rate, spindle type and/or rotation speed. As a consequence of that lack of information regarding the viscosity, the skilled person was not enabled to reproduce the invention.

Because of the lack of information regarding the viscosity the skilled person reproducing the claimed process and measuring the viscosity of the polysiloxane obtained with two different methods could be in a situation in which he obtained a viscosity within the range defined in claim 1 with one method and outside that range with the other method i.e. he would not know whether he reproduced the invention or not. For that reason, that lack of information was not only a matter of clarity but amounted to a lack of sufficiency of disclosure, as indicated in decision T 464/05.

The viscosity parameter was further a decisive parameter for defining the invention since it indicated when the polymerisation process was achieved. Besides, the viscosity limit was a functional feature defining how to perform step ii) of claim 1. Therefore, it was essential that the viscosity be unambiguously defined in order to be in a position to carry out the process of claim 1, which was not the case.

For those reasons the subject-matter of claim 1 was not sufficiently disclosed.

(g) Novelty

According to the description of D1 the emulsions prepared therein could contain up to 70 wt.% silicone. Considering that at least a minimum amount of surfactant was necessary, D1 specifically disclosed emulsions comprising less than 30 wt.% water. Besides, the range for the amount of anionic emulsifier taught in D1 overlapped in large part with that of claim 1, whereas the range for the amount of non-ionic emulsifier was almost identical. D1 further exemplified dodecylbenzene sulfonic acid as the preferred anionic surfactant, whereby it was taught that it also functioned as a catalyst. In that respect the parameter ranges defined in claim 1 were not narrow or remote from the parameter ranges for the same parameters disclosed in D1, so that the criteria for acknowledging novelty to a selection were not fulfilled.

The sole argument retained by the opposition division to acknowledge novelty over D2 was that the process of claim 1 required homogenising with a "standard homogeniser". However, that feature, when read in its broadest sense, was already disclosed as a suitable alternative in D2.

Therefore, the subject-matter of claim 1 was anticipated by D1 and D2.

Remittal

(h) The remittal of the case to the first instance for further prosecution was not objected to.

XII. The appellant requested that the decision under appeal be set aside and the patent be maintained in amended form according to the main request or to one of auxiliary requests 1 to 3, all filed with the letter of 9 November 2016.

The respondent requested that the appeal be dismissed. The respondent also requested that the main request and auxiliary requests 1 and 2 not be admitted to the proceedings.

Reasons for the Decision

1. Admission of the requests

The main request and auxiliary requests 1-2 were filed with letter of 9 November 2016 in reply to the communication containing the preliminary opinion of the Board. They were filed well in advance of the oral proceedings (more than two months) so that the respondent cannot have been taken by surprise by its content, which is corroborated by the objections put forward in its letter dated 6 December 2016. As compared to the requests pending before, the amendments made were easy to understand, did not raise complicated issues and clearly addressed some issues under Article 123(2) EPC while leaving the main points of the case unaltered. In particular no new issue which the Board or the respondent could not reasonably be

expected to deal with without adjournment of the oral proceedings was identified by the respondent. Therefore, there was no reason for the Board not to admit any of those requests pursuant to Article 13(3) RPBA. In addition, the Board could not find any reason of complexity or procedural economy which could speak against the admission of the requests into the proceedings. Therefore, the Board makes use of its discretion pursuant to Article 13(1) RPBA and admits each of those requests to the proceedings.

Main request

2. Article 123(2) EPC

2.1 Claim 1

2.1.1 Claim 1 corresponds to original claim 1 with a number of amendments including the amendment in step ii) of the expression "such as to favour organopolysiloxane polymer growth rate or rise in polymer viscosity to at least 20000 cps" to "such as to obtain an organopolysiloxane polymer with viscosity of at least 20000 mPa.s", which was the object of the sole objection put forward by the respondent.

2.1.2 The respondent’s objection is directed to the question whether or not claim 1 as amended encompasses also the possibility that a polymer of the specified viscosity is obtained without any increase of viscosity, i.e. that an organopolysiloxane of formula (I) having a viscosity of at least 20000 mPa.s is present before the homogenizing step.

2.1.3 However, there is in the present case no reason to deviate from the literal wording of the expression

"such as to obtain" in step ii) of granted claim 1, which, in the Board's view, only makes technically sense if it is read as meaning "to bring or get to" said viscosity, i.e. as implying that the organopolysiloxane did not have said viscosity before performing step ii). That conclusion is drawn not only from the mere wording of claim 1 but also when considering that the anionic surfactant mentioned in claim 1 is known to have, in addition to the role of surfactant in the emulsion process, also the role of catalyst for polymer growth, as indicated on page 12, lines 13-17 of the application as filed. As a consequence, the wording of claim 1 as amended imposes that the starting organopolysiloxane of formula (I) has a viscosity lower than 20000 mPa.s. Therefore the amendment identified in section 2.1.1 does not lead to an extension of subject-matter as compared to original claim 1.

2.1.4 The question why the amendment of step ii) of claim 1 was made is not a relevant issue for assessing if the requirements of Article 123(2) EPC are met. The sole question to be answered is whether or not the subject-matter now being claimed is directly and unambiguously derivable from the application as filed, which as explained above, is considered to be the case here. Therefore, the respondent's objection according to which the question arose why the appellant had decided to modify the wording of step ii) is not relevant.

2.1.5 Under those circumstances, the respondent's argument in support of the objection that claim 1 did not meet the requirements of Article 123(2) EPC is rejected.

2.2 Claim 3

2.2.1 The process of claim 3 is in particular characterised in that in step (iii) the viscosity of the internal phase oil is of at least 20000 mPa.s.

2.2.2 The appellant argued that claim 3 is derivable from the combination of the processes on page 6, lines 8-31 in combination with the disclosure of the process on page 4, lines 11-30 of the application as filed.

2.2.3 However, in said passages the value of 20000 mPa.s is only disclosed in relation to the organopolysiloxane obtained in step ii) and not to the internal phase oil as now specified in claim 3. In that respect, due to the "comprising" language of the claim, the "internal phase oil" may contain, in addition to the polymer, other components that may have an influence on the viscosity. That conclusion is supported by the indication e.g. on page 14, lines 30-31, according to which the organopolysiloxane is considered to be "in the inner phase of the emulsion", which does not exclude the presence of other components in said inner phase (inner phase and internal phase being apparently used as equivalent in the application as filed). The fact that the application as filed does not disclose any other components/additives apart from those specified in claim 3 does not affect that conclusion because such components are not excluded from the wording of claim 3. In view of the above, the appellant’s argument according to which the expression "internal phase oil" in claim 3 is identical to the "organopolysiloxane" in claim 1, which was adhered to by the opposition division (reasons of the decision: bottom of page 5), is rejected. The cited passages do not provide therefore a basis for the specific value of

the viscosity of the internal phase oil in step (iii) of claim 3.

2.2.4 Therefore, at least for that reason, the subject-matter of claim 3 as amended does not fulfill the requirements of Article 123(2) EPC.

Auxiliary request 1

3. Claim 3 of auxiliary request 1 contains the same viscosity requirement in step (iii) as claim 1 (see section 2.2.1). Therefore, auxiliary request 1 is not allowable pursuant to Article 123(2) EPC for the same reasons as the main request.

Auxiliary request 2

4. Claim 1 of auxiliary request 2 is identical to claim 1 of the main request. Therefore the respondent's objection pursuant to Article 123(2) EPC is rejected for the same reason as for the main request. As claim 3 in the form of the previous requests has been deleted, the objection against it no longer applies.

5. No objections pursuant to Article 84 EPC or Rule 80 EPC were raised in respect of auxiliary request 2.

6. Sufficiency of disclosure

6.1 In order to meet the requirements of sufficiency, an invention has to be disclosed in a manner sufficiently clear and complete for it to be carried out. This means that a skilled person should be able, also on the basis of common general knowledge, to perform the invention disclosed in the patent without undue burden and without needing inventive skill within the whole area

claimed.

6.2 The question to be answered in the present case is whether or not the skilled person is in a position to carry out with a good chance of success and without undue burden a process according to claim 1 based on the information provided in the patent in suit as a whole and, if necessary, common general knowledge.

In that respect, the following information is provided in the patent in suit:

- nature of the organopolysiloxanes (paragraphs 12, 24, 25);
- nature of the anionic and non-ionic surfactants (paragraphs 28-31);
- homogenizing and neutralising conditions (paragraphs 32-38).

The patent in suit further contains examples I, II, III which illustrate the subject-matter being claimed.

6.3 The respondent pursued the line of argumentation retained by the opposition division according to which the patent in suit was insufficiently disclosed because of the lack of information regarding the method to determine the viscosity mentioned in granted claim 1.

6.4 However, that argument is related to an apparent ambiguity in the determination method of the viscosity. The question which has to be answered is if said ambiguity amounts to a lack of sufficient disclosure.

In that respect, it is derivable from e.g. D7 (sections 12-21, also making reference to D8, D10 and D11, which include ASTM and DIN standards for measuring the viscosity of polymers) that the skilled person

knows how to determine viscosity in general. Although it was agreed by the appellant that different determination methods for the viscosity such as those of D8 and D10 could be contemplated and that those methods may lead to different results, such an ambiguity is related to the boundaries of the claims (here: the lower end of the viscosity range), which amounts to a (possible) lack of clarity pursuant to Article 84 EPC. However, for an insufficiency arising out of an ambiguity it is not enough to show that an ambiguity exists, e.g. at the edges of the claims. In the present case, the respondent has in particular not shown that said ambiguity in the determination method, which certainly affects the lower end of the viscosity range, is such that the skilled person is not in a position to carry out the process of preparation of the emulsions defined in the claims by following the teaching of the patent in suit. In other words it was not shown that said ambiguity affects the whole claim or is associated with an undue burden so as to amount to a lack of sufficiency.

6.5 The question whether, as a consequence of the ambiguity in terms of the viscosity specified in claim 1, the skilled person knows if he is working within or outside the scope of the claims is related to the definition of the scope of the claims, which is a matter of clarity pursuant to Article 84 EPC.

6.6 Even if there might be some ambiguity as to when step ii) is to be considered to be achieved, it was not shown that because of said ambiguity the skilled person would not be in position to carry out the process of claim 1 and/or to prepare a stable emulsion having particle size (D50 value) of up to 150 nm.

6.7 Both the respondent and the opposition division (reasons for the decision: upper half of page 7) held that the viscosity feature specified in claim 1 was a decisive parameter of the claimed process and were therefore of the opinion that the ambiguity in its determination resulted in a lack of sufficiency and was not a mere clarity issue. However, no evidence was relied upon in order to support that conclusion and, as explained above, it was in particular not shown that the skilled person would not be in a position to prepare the emulsions defined in the claims by following the teaching of the patent in suit. In that respect, an objection of insufficient disclosure presupposes that there are serious doubts, substantiated by verifiable facts and the burden of proof is primarily on the opponent(s) (Case Law of the Boards of Appeal of the EPO, 8th. edition, 2016, II.C.8). In the present case, it was not shown that those conditions were satisfied.

Also, it was not shown that there was any indication in the patent in suit regarding said criticality of the viscosity feature, as argued by both the respondent and the opposition division. To the contrary, it is derivable from e.g. paragraphs 13-15, 21, 28, 30, 32, 33, 35 and 36 of the patent in suit that the gist of the invention is rather to adequately select the emulsifiers and to control the temperature during the mixing and optional ageing step(s), whereas the type of homogenizer is not important (step ii) of claim 1; paragraph 37 of the patent in suit). Those features are said to be critical in order to prepare the dispersions defined in the operative claims. Therefore, those arguments did not convince.

6.8 Considering that no technical effect is indicated in the claims, the question whether or not a technical problem related to such an effect is effectively solved over the whole scope of the claim, which appears to be derivable from the opposition division's conclusion (see passage of the decision cited in section IV above), is a matter of inventive step pursuant to Article 56 EPC and not of sufficiency of disclosure (G 2/03, OJ EPO 2004, 448: section 2.5.2 of the reasons).

6.9 Decision T 464/05, which was relied upon by the respondent, dealt with a patent claim directed to a unitary disposable absorbent article, of which an element was *inter alia* defined by a parameter called "mass vapor transmission rate" (MVTR). The patent in suit did not make reference to any usual standard for measuring MVTR (see first paragraph of section 3.4 of the reasons) and used a different method for which no indication of a crucial parameter "air gap" was given, whereby it had been shown that using different "air gaps" led to significantly different MVTR either within or outside the range specified in the claims (sections 3.4.1 and 3.4.2 of the reasons). The skilled person further had no means to fill that lack of information on the basis of the patent in suit or of its general knowledge. The Board in that case concluded that under those circumstances the skilled person was not able to determine whether some samples would be in accordance with the claimed invention or not and that the invention could not be reproduced over the whole area claimed (section 3.4.3 of the reasons).

In view of the above, the claims at stake in T 464/05 were directed to a product characterised by a parameter (MVTR), whereby the parameter was shown to be

ambiguously defined. Therefore, the present case at least differs from that of T 464/05 in that the operative claims are not directed to a product characterised by an ambiguous parameter but to a process for making a stable emulsion having particle size up to 150 nanometers, said process being defined by an homogenising step ii) which has to be carried out until a certain polymer viscosity is achieved, whereby all the information necessary to determine unambiguously said viscosity is not provided in the patent in suit. In such a case, in order to show that a lack of disclosure was present, it would have been necessary to show that the ambiguity related to the viscosity parameter was such that the process defined in operative claim 1 could not be carried out and/or that the process did not enable to prepare emulsions as defined in claim 1, which was not done.

In addition, the objection of lack of sufficiency is related to a lack of information regarding the determination of viscosity of organopolysiloxane, for which it was shown that international standards D8 and D10 are known. Therefore, the present case is also in that respect different from that underlying T 464/05, in which the parameter MVTR was determined using a method described only in the patent in suit and not a recognised standard.

Finally, in the present case, there is no evidence on file showing that the ambiguity in the method of determination of viscosity is such as to amount to a lack of sufficiency (see sections 6.4 to 6.6 above).

For those reasons, the respondent's arguments based on T 464/05 did not convince.

6.10 In view of the above, the respondent's objection regarding sufficiency of disclosure is rejected.

7. Article 54 EPC

7.1 Novelty over D1

7.1.1 The subject-matter of claim 1 is *inter alia* characterised by the combination of specific non-ionic and anionic emulsifiers and a specific amount of water (step i), features (b), (c) and (d)).

7.1.2 D1 is directed to a method of preparing microemulsions of non-gelled organopolysiloxanes which comprises (i) copolymerizing a cyclic siloxane and an unsubstituted alkyl trialkoxysilane, an aryltrialkoxysilane or a tetraalkoxysilane, in an aqueous medium containing a non-ionic surfactant, an anionic **or** cationic surfactant and a catalyst, until the desired increase in molecular weight is obtained, and (ii) controlling the gel content of the organopolysiloxane in the microemulsion as defined in its claim 1 (emphasis by the Board). Said method involves the opening of a cyclic siloxane ring whereby polysiloxane oligomers with terminal hydroxy groups are formed (D1: page 4, lines 53-55).

7.1.3 According to the teaching of D1 anionic surfactants, which correspond to anionic emulsifiers according to feature (d) of operative claim 1, are disclosed in general as an alternative to cationic surfactant and not as a mandatory component of the microemulsions of D1 (claim 1; page 5, line 50 to page 6, line 20). Besides, should an anionic surfactant be present, no limitation is made in D1 in terms of their HLB value (as compared to the requirement defined in feature (d) of claim 1 regarding an HLB of 8-19) and their amount

is indicated to be of 0.05-30 wt.% (D1: page 6, lines 19-20), which is broader than the range of 1-15 wt.% according to feature (d) of claim 1.

It is correct that dodecylbenzene sulfonic acid, which is also taught as one of the preferred anionic emulsifier in paragraph 29 of the patent in suit, is also disclosed on page 6, lines 1-2 and used in the examples of D1. However, said compound is either disclosed as an example among other suitable organic sulfonic acids which may be used as anionic surfactant/ emulsifier or as a suitable catalyst among others (page 5, lines 44-46 and 53-54). Therefore in both cases dodecylbenzene sulfonic acid is only disclosed as a possible alternative among several others.

Therefore, an anionic emulsifier selected from organic sulfonic acids having HLB in the range of 8-19 in an amount of 1 to 15 wt.% according to feature (d) of claim 1 may only be arrived at after performing a double selection within the ambit of D1, namely to use dodecylbenzene sulfonic acid among many possible alternative components and to use a suitable amount thereof.

7.1.4 Useful non-ionic surfactants are disclosed on page 6, lines 21-33 of D1, whereby it is indicated that they may have an HLB of 10-20 (line 21) and be present in an amount of 0.1-40, preferably 0.5-30 wt.% (lines 32-33). Therefore, a non-ionic surfactant having HLB in the range of 10-19 and in an amount of 1-25 wt.% according to feature (c) of claim 1 may also only be arrived at after appropriately selecting at least the amount thereof.

7.1.5 The description of D1 does not comprise any information regarding the amount of water present in the microemulsions. In that respect, the respondent's argument was that D1 taught an amount of water of up to 30 wt.% (page 5, lines 36-38). However, that passage discloses that the emulsions of D1 contain a silicone concentration of 10-70, preferably 25-60 wt.%. Even if, to the respondent's benefit, the remaining of the emulsions was water, an amount of 5-30 wt.% according to feature (b) of claim 1 would only be achieved when using the specific amount of 70 wt.% silicone taught in that passage of D1. Therefore, the passage relied upon by the respondent only discloses a single value of water amount according to claim 1.

7.1.6 It was agreed by the parties that the examples of D1 do not anticipate the subject-matter of claim 1, at least because they do not disclose a formulation comprising water in an amount of 5-30 wt.% according to feature (b) of claim 1.

7.1.7 The respondent's arguments relating to the fact that the ranges of emulsifiers of claim 1 were neither narrow nor far removed from the known ranges of D1 are related to the concept of "selection inventions" (Case Law *supra*, I.C.6.3), i.e. the selection of a sub-range of numerical values from a broader range. However, it is shown above that the situation is, in the present case, different: in order to arrive at the subject-matter being claimed, one needs, in addition to performing several selections within the ranges of non-ionic and anionic emulsifiers disclosed in D1, further choose to use i) an appropriate anionic emulsifier e.g. dodecyl benzene sulfonate (either as anionic emulsifier or catalyst) and ii) an amount of water of 30 wt.%. As explained above, in the absence of any pointer to that

combination, that subject-matter is not directly and unambiguously disclosed in D1.

7.1.8 In view of the above, the combination of features (b), (c) and (d) according to claim 1 may only be arrived at after performing a series of choices within the ambit of D1. In the absence of any pointer in D1 to said combination, the subject-matter of claim 1 is not directly and unambiguously disclosed in D1.

7.2 Novelty over D2

D2 discloses a method of preparing an emulsion containing particles of an organopolysiloxane polymer comprising: (i) forming a mixture containing a silanol endblocked siloxane, an alkyltrialkoxysilane, water, and a non-ionic surfactant **or** an anionic surfactant; (ii) emulsifying the mixture by agitating or shearing the mixture; (iii) adding a condensation specific acid catalyst to the resulting emulsion; (iv) polymerizing the catalyzed emulsion to form an organopolysiloxane polymer; and (v) continuing polymerizing step (iv) until the organopolysiloxane polymer has attained the desired viscosity; the alkyltrialkoxysilane having the formula $R'Si(OR'')_3$ where R′ and R″ represent alkyl groups, and R′ contains sixteen or more carbon atoms (claim 1; emphasis by the Board).

According to the description of D2, the condensation catalyst can be a strong acid such as hydrochloric acid (which is used in the examples of D2), sulfuric acid, or a sulfonic acid catalyst such as dodecylbenzene sulfonic acid (column 3, lines 55-57). Besides, the catalyst is used in an amount of 0.05-25 wt.% (column 3, lines 63-64).

Water can be used in an amount of 10-90, preferably 20-80 wt.%.

The non-ionic surfactant is present in an amount of 0.1-40, preferably 0.5-30 wt.% (column 3, line 66 to column 4, line 3). It is further disclosed that useful non-ionic surfactants preferably have an HLB of 10-20 (column 3, lines 21-28).

The anionic surfactant may be selected within the list of alternatives given at column 2, line 66 to column 3, line 20 and is used in an amount of 0.05-25, preferably 0.5-20 wt.% (column 3, lines 64-66).

7.3 Hence, in its general disclosure, D2 teaches to use either a non-ionic **or** an anionic surfactant and not a combination thereof as specified in features (c) and (d) of claim 1.

7.4 Regarding the anionic surfactant, apart from dodecylbenzene sulfonic acid, which is indicated at column 3, lines 55-57 of D2 as a suitable catalyst and which is also an anionic emulsifier according to feature (d) of claim 1, it was not shown that organic sulfonic acids having an HLB of 8-19 according to feature (a) of claim 1 would be directly and unambiguously disclosed elsewhere in D2, in particular not in the list of suitable anionic surfactants.

In addition, dodecylbenzene sulfonic acid is only disclosed in D2 as one alternative among other catalysts (not a strong acid; selection among any sulfonic acid catalysts). Therefore, in order to arrive at the subject-matter of claim 1, one would further have to choose to use, in combination with that specific catalyst, i) an amount thereof of 1-15 wt.%,

ii) an amount of water of 5-30 wt.% and iii) an amount of non-ionic surfactant of 1-25 wt.% as defined in features (a), (b) and (c), respectively of claim 1, each of those ranges being within the broader ranges taught in D2. In the absence of any pointer thereto in D2 it cannot be concluded that the combination of features of operative claim 1 is directly and unambiguously disclosed in D2.

7.5 For those reasons, the novelty objections raised by the respondent in respect of D1 and D2 are rejected.

8. Remittal

The issue of inventive step was not addressed in the contested decision and was also not discussed on appeal. Further considering that both parties were in favour of remittal to the first instance in order to deal with that issue, the Board finds it appropriate to remit the case to the department of first instance for further prosecution (Article 111(1) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance for further prosecution.

The Registrar: The Chairman:

B. ter Heijden D. Semino

Decision electronically authenticated