

**Internal distribution code:**

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

**Datasheet for the decision  
of 12 December 2006**

**Case Number:** T 0326/04 - 3.3.06

**Application Number:** 94201094.3

**Publication Number:** 0643130

**IPC:** C11D 17/06

**Language of the proceedings:** EN

**Title of invention:**

Granular detergent compositions comprising nonionic surfactant  
and process for making such compositions

**Applicant:**

THE PROCTER & GAMBLE COMPANY

**Opponents:**

HENKEL KGaA  
Unilever PLC

**Headword:**

Granular composition/PROCTER

**Relevant legal provisions:**

EPC Art. 83

**Keyword:**

"Sufficiency of disclosure (all requests) - no: undue burden  
of empirical investigation necessary to carry out the  
invention"

**Decisions cited:**

T 0019/90

**Catchword:**

-



Case Number: T 0326/04 - 3.3.06

**DECISION**  
of the Technical Board of Appeal 3.3.06  
of 12 December 2006

**Appellant:** THE PROCTER & GAMBLE COMPANY  
(Patent Proprietor) One Procter & Gamble Plaza  
Cincinnati, OH 45202 (US)

**Representative:** Peet, Jillian Wendy  
Procter & Gamble Technical Centres Limited  
Whitley Road  
Longbenton,  
Newcastle upon Tyne NE12 9TS (GB)

**Respondent I:** HENKEL KGaA  
(Opponent I) VTP (Patente)  
D-40191 Düsseldorf (DE)

**Representative:** -

**Respondent II:** Unilever PLC  
(Opponent II) Unilever House, Blackfriars  
London EC4P 4BQ (GB)

**Representative:** Bowman, Paul Alan  
Lloyd Wise  
Commonwealth House  
1-19 New Oxford Street  
London WC1A 1LW (GB)

**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
30 December 2003 concerning maintenance of  
European patent No. 0643130 in amended form.**

**Composition of the Board:**

**Chairman:** P.-P. Bracke  
**Members:** P. Ammendola  
A. Pignatelli

## Summary of Facts and Submissions

I. This appeal is from the decision of the Opposition Division concerning the maintenance in amended form of European patent No. 0 643 130 according to the then pending auxiliary request of the Patent Proprietor.

II. Claim 1 of the patent as granted read:

*"1. A granular detergent composition or component having a bulk density of at least 650 g/l, comprising surfactant system wherein said composition or component comprises from 40% to 85% by weight of nonionic surfactant and characterised in that said surfactant system is substantially in the solid phase at temperatures of 25°C and below, and that said surfactant system has a softening point within the range of above 25°C to 100°C 25°C and wherein the surfactant system has a viscosity profile whereby the viscosity of the surfactant system is at least 20000 cps at a temperature of 10°C above the softening point, and less than 10000 cps at a temperature of 30°C above the softening point, all viscosities being measured at a shear rate of 25s<sup>-1</sup>."*

III. Opponents I and II had sought revocation of the patent in suit on the grounds of lack of novelty and inventive step (Article 100(a) in combination with Articles 52(1), 54 and 56 EPC). Opponent II had relied also on the ground of insufficient disclosure (Article 100(b) EPC). Both Opponents had based their novelty objections exclusively on patent documents.

IV. The Opposition Division had found that the patent in suit provided insufficient disclosure in respect of the surfactant system displaying the softening point and viscosity profile required in the granted claims (see e.g. claim 1 reported above). It had considered that the patent examples would prove that the required properties could only be obtained when using e.g. certain specific nonionic surfactants in certain relative amounts and that the skilled person could only rely on possibly extensive trial and error experiments in order to identify further suitable surfactant systems.

The Opposition Division had found however that the subject-matter of the claims according to the then pending auxiliary request complied with the requirements of the EPC.

V. Only the Patent Proprietor (hereinafter "Appellant") lodged an appeal against this decision. It filed with the grounds of appeal three sets of amended claims as first to third auxiliary request.

VI. At the oral proceedings which took place before the Board on 12 December 2006 in the announced absence of Opponent II (hereinafter "Respondent II"), the Appellant abandoned the second and the third auxiliary requests.

VII. Hence, only the first of the auxiliary requests is relevant for the present decision. Claim 1 thereof differs from claim 1 as granted (see above section II) only in that the wordings "100°C

*25°C" and "85% by weight of nonionic surfactant and" have respectively been replaced by "100°C" and by "85% by weight of nonionic surfactant selected from the group consisting of ethoxylated nonionic surfactants, glycerol ethers, glucosamides, glycerol amides, glycerol esters, fatty acids, fatty acid esters, fatty amides, alkyl polyglucosides, alkyl polyglycol ethers, polyethylene glycols, ethoxylated alkyl phenols and mixtures thereof and".*

VIII. The Appellant argued substantially as follows:

- the finding of surfactant systems with the softening point and viscosity profile as defined in granted claim 1 required only routine experiments which were no blind trial and error experiments, but a limited routine investigation which simply built on the generic and specific disclosure given in the patent;

- the Respondents' objections to the novelty of the patented subject-matter rendered less credible their own allegations as to the difficulties possibly encountered by the skilled person in carrying out the invention;

- the Respondents had provided no verifiable experimental evidence supporting these allegations and they had not even explored whether or not industrial producers of surfactants could provide nonionic surfactants or mixtures thereof with the desired properties;

- the patent described in details two sorts of suitable nonionic surfactant systems and thus fulfilled the

requirement of sufficiency of disclosure as indicated e.g. in the decision of the Board of Appeal T 19/90 (OJ 1990, page 476);

- the same reasoning applied all the more to the subject-matter of claim 1 of the auxiliary request, additionally requiring the presence of specific nonionic surfactant ingredients.

- IX. The Respondents refuted the Appellant's arguments in respect of claim 1 as granted substantially by relying on the same reasoning of the decision under appeal. They maintained that the same reasoning proved also the insufficiency of disclosure of the subject-matter of claim 1 of the first auxiliary request, according to which the surfactant system could still possibly comprise, beside at least one of the nonionic ingredients listed in the claim, any other sort of surfactants in any relative amount.
- X. The Appellant has requested that the decision of the first instance be set aside and that the Board establish that the patent with claims as granted or alternatively with claims 1 to 11 according to the first auxiliary request filed with the grounds of appeal meets the requirement of Article 83 EPC and that the case be remitted to the first instance department for further prosecution.
- XI. The Respondents I and II have requested that the appeal be dismissed.

## Reasons for the Decision

### *Main request*

1. Claim 1 as granted: sufficiency of disclosure (Articles 83 and 100(b) EPC)
  - 1.1 The Board notes that this claim imposes no restriction as to the chemical composition of the surfactant system of the claimed granular compositions or components (see section II of the Facts and Submissions above). Hence, any e.g. nonionic surfactant or mixture thereof that displays the desired softening point and viscosity profile represents a surfactant system suitable for carrying out the patented invention. This is also consistent with the generic disclosure in the patent that the surfactant systems of the invention preferably comprise two nonionic surfactants selected among certain families thereof and that display different softening points (see e.g. paragraphs 29 to 39 of the granted patent). The only two surfactant systems specifically exemplified in the patent also consist of nonionic surfactant(s), i.e. either of dodecyl glycerol ether alone or of **blends** of fatty acid amide and ethoxylated alcohol in certain proportions (see examples 1, 2 and 6 to 17).
  - 1.2 However, the patent itself discloses that other blends of the same fatty acid amide and ethoxylated alcohol at different amount ratios do **not** display the desired softening point and viscosity profile (see comparative examples 3 and 4 of the patent). This fact suggests that nonionic surfactants of different melting points and belonging to some of the families thereof indicated

as preferred in the patent in suit, may possibly result in blends that are possibly unsuitable as surfactant system for the patented compositions and components.

Therefore, to realize surfactant systems different from those two already specifically disclosed in the patent examples requires to preliminarily verify if the e.g. nonionic mixture that one intends to use possesses the desired properties and, in case of a negative result, to modify the composition of the surfactant system until the desired properties are achieved. Hence, trial and error experiments may turn out necessary in order to carry out the embodiments of the invention.

1.3 The jurisprudence of the Boards of Appeal has established that when empirical investigation is needed to reproduce the invention, it should not amount to an undue burden (see the "Case Law of the Boards of Appeal of EPO", 4th ed.2001, chapter II.A.4, p.148). Hence, when trial and error experiments are required, the disclosure in the patent should provide adequate information leading necessarily and directly towards success through the evaluation of the initial failures and, therefore, only a few attempts should be required to transform failure into success.

1.4 In the present case, however, the skilled person does not find in the patent in suit any guidance as to which of the many theoretically plausible modifications of the chemical composition of the already tested nonionic mixture(s) would result in, or render at least more likely, the achievement of the desired properties.



Consequently, if the identification of a surfactant system suitable for use in the claimed composition or component does not occur on the first attempt, the skilled person can only continue testing other nonionic mixtures, **either** in the hope of succeeding sooner or later by chance **or** as part of a logically structured experimental research project aiming at unveiling the possibly existing scientific correlations (e.g. between the desired properties of the surfactant mixture and the physical chemical properties of the possible starting nonionic ingredients) that could allow to foresee which nonionic mixtures are very likely to display the desired properties. In both cases very extensive experimental work may precede the successful attempt.

The Board concurs, therefore, with the findings of the Opposition Division that the extent of trial and error experiments possibly necessary for the reproduction of the subject-matter defined in claim 1 of the patent in suit amounts to an undue burden.

- 1.5 The Board finds for the following reasons that the Appellant has provided no convincing argument justifying the reversal of the decision under appeal that the ground of opposition under Article 100(b) prejudices the maintenance of the patent as granted.
  - 1.5.1 The Appellant has argued (see above section VIII of the Facts and Submissions) that the skilled reader of the patent in suit may easily identify further suitable nonionic surfactants or blends thereof by extrapolating from the abundant generic disclosure in the patent (resumed above at point 1.1) and, in particular, from

the two specific sorts of surfactant systems described in the invention examples. This would allow to carry out any embodiments of the invention with the help of some limited routine experimental work.

However, even if it is reasonable for the skilled person to start from e.g. the patent examples and, thus, to consider the possibility of adding to or replacing the nonionic surfactant(s) forming the surfactant system exemplified therein by e.g. other similar nonionic ingredient(s), still it remains also reasonable to presume (for the same reason indicated above in point 1.2) that a substantial fraction of these in principle plausible modifications of the examples (in respect of the kind, number and relative amount of the other surfactant(s) to be used) could turn out unable to produce the desired properties. Indeed, the comparative examples in the patent confirm that just a difference in the ingredients' relative amounts is sufficient to render unsuitable as surfactant system the same mixture of nonionic ingredients used in the invention examples. Hence, even when prudently modifying the patent examples the skilled person may repeatedly fail in obtaining further preferred surfactant systems.

- 1.5.2 The Appellant has further argued (see above section VIII of the Facts and Submissions) that the Respondents' objection of insufficient disclosure would be jeopardized by their "novelty objections". However, according to the jurisprudence of the Boards of Appeal the disclosure of the invention claimed in a patent in suit is solely determined by the content of this latter possibly integrated by the common general

knowledge in the relevant technical field. The common general knowledge has been defined as being normally represented by encyclopaedias, textbooks, dictionaries and handbooks. Patent documents are only to be considered to be part of the common general knowledge in exceptional circumstances, such as when a field of research was that new that technical knowledge was not yet available from textbooks.

In the present case the documents cited by the Respondents as novelty destroying are exclusively patent documents, which have not been cited in the patent specification in support of the disclosure. Nor exist exceptional circumstances that would justify to consider the content of the cited patent specifications as common general knowledge. Hence, the disclosure possibly contained in these citations has no bearings on the extent of disclosure of the claimed invention and needs not to be considered when establishing sufficiency of disclosure.

- 1.5.3 The Appellant has also maintained (see above section VIII of the Facts and Submissions) that the Respondents have neither unsuccessfully attempted to reproduce embodiments of the patented invention and/or not even verified if industrial producers of nonionic surfactant systems had any difficulties in providing a system with the required softening point and viscosity profile.

However, as underlined also in the decision under appeal (compare point 3.6 of the decision under appeal with above point 1.2), in the present case the patent itself renders credible that the skilled person may fail when attempting to carry out (even the preferred)

embodiments of the claimed subject-matter. Hence, no further evidence had to be provided by the Respondents in order to substantiate their objections and/or is needed for justifying the decision under appeal.

- 1.5.4 Also irrelevant is found the Appellant's reference to the jurisprudence of the Boards of Appeal that an invention is in principle sufficiently disclosed if at least one way is clearly indicated enabling the person skilled in the art to carry out the invention. Indeed, this jurisprudence refers to cases in which there is **no** fact rendering credible that reasonable attempts to carry out embodiments of the invention different from that exemplified in the patent are likely to end up with a failure.

For instance, the decision T 19/90 - specifically referred to by the Appellant - relates to a case wherein no fact suggested that the same (surprising) result obtained on a mouse in the sole patent example was not to be expected also when applying the claimed method on any other non-human mammals (see points 3.3 and 3.4 of the reasons in T 19/90).

Instead, as repeatedly indicated above, in the present case there are reasons (i.e. the comparative examples 3 and 4 in the patent) for expecting that the attempts that the skilled person could reasonably make for carrying out the invention may turn out unsuccessful.

- 1.6 Therefore, the Appellant's main request is to be refused.

*First auxiliary request*

2. Claim 1: sufficiency of disclosure (Article 83 EPC)

The same reasoning as above applies also to the subject-matter of this claim (see above section VII of the Facts and Submissions) which differs from granted claim 1 only in that the former requires that at least one of the ingredients of the surfactant system must belong to the one of the listed families of nonionic surfactants.

The Board notes that the given list not only embraces most of the known nonionic surfactants, but also includes the two nonionics whose blends have been found not to display the desired softening point and viscosity profile (in comparative examples 3 and 4). Moreover, even with this list, the definition of the surfactant system in the present claim implies no restriction as to the number, kind and relative amounts of the other surfactants possibly present in the surfactant system.

Therefore, similarly to above (see points 1.2 and 1.4), it is reasonable to expect that the skilled person who is attempting to obtain e.g. further preferred surfactant systems encompassed in claim 1 of this request, may often face failures and, thus, that extensive experimental work may possibly precede the successful attempt.

The Board finds, therefore, that also the extent of trial and error experiments possibly necessary for the

reproduction of the subject-matter defined in claim 1 of this request may amount to an undue burden.

- 2.1 Hence, the Board concludes that the subject-matter of claim 1 of the auxiliary request does not comply with the requirements of Article 83 EPC and, thus, that also this request is not allowable.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed

The Registrar:

The Chairman:

G. Rauh

P.-P. Bracke