



## What is sufficiency?

In most countries, patent applications are required to “disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art”. This comes from the TRIPS agreement, which sets out the minimum standard for IP rights in WTO countries. The idea stems from a core principle of patenting: that a proprietor gains a limited monopoly in exchange for disclosing the invention to the public.

But what does this requirement mean? What is *sufficiently* clear and complete? Who is the *skilled person* and why do they determine whether the application is sufficient or not? What are the ramifications of the application being *insufficient*, and what remedies are available?


### The Skilled Person

Whether a patent application is deemed clear and complete will naturally depend on the reader. It may well be that a patent concerning electronics is unclear to a leading chemist, for example. This is of course not surprising, given the chemist works in a different field to that of an electrical engineer. Sufficiency, as well as other concepts such as inventive step, must therefore be considered from the point of view of the notional person skilled in the art, or the skilled person.

The skilled person is thought of as having access to all the prior art available to the public at the priority date (the filing date, or, if priority is claimed, the filing date of the earliest priority-founding patent application), as well as having common general knowledge in line with that of somebody working in the field at the priority date. In some instances, it may be more appropriate to think of the skilled person as a group of persons, such as a research or production team, rather than a single person. Notably, the skilled person isn't a real person, but rather a useful legal concept.

### Clear and Complete

Having defined what the skilled person knows, the question then becomes: ***Can the skilled person put the invention into effect using the patent application?***



Following the teaching in the patent application, the skilled person should be able to arrive at the invention claimed. This extends to all claim types, whether it be a method the skilled person can perform or an apparatus that can be constructed. Sufficiency is assessed at the priority date, and therefore any research or evidence made available after this date cannot be relied upon.

The skilled person shouldn't need to think creatively, or carry out extensive research, in order to piece the invention together for themselves. However, it should be noted that the skilled person is capable of performing routine work and experimentation, and can cope with failures on their way to a working product or process. Generally, they should be able to follow what is described and use their learning and general knowledge to reach a working invention without repeated failure.

## Forms of Insufficiency

The skilled person being unable to reproduce an invention from the patent application is one form of insufficiency, referred to as “*classical insufficiency*”, and has long been established. However, different sufficiency problems can arise in practice, with examples of what these are and how they can be overcome detailed in case law.

“*Biogen insufficiency*” is where the skilled person is unable to reproduce the invention across the full scope of the claim, due to the claim being too broad. An example of this could be where a group of compounds is claimed, and the description only mentions one compound in that group. The skilled person may not be able to get the invention to work when other compounds in the group are used. This is deemed to be insufficient since the monopoly that would be granted by the claim is broader than the contribution the application makes to the state-of-the-art.

Insufficiency can also arise where the skilled person is unable to carry out the invention due to an ambiguity in the claim. This is relevant when a property or parameter recited in a claim is not well-defined and which would, when relied upon, yield different results. This type of insufficiency may arise where measurements or properties are required by the claim, but the unit or method of measurement is not well-established. In such cases, it may be necessary to describe in the patent application: the measurement process; factors capable of influencing this process; and the conditions in which the process was carried out. This can remove the ambiguity and enable the skilled person to work the invention.

## Ramifications and Remedies

In Europe, once a patent application has been granted by the EPO, other parties can oppose the patent within a period of nine months of grant. Oppositions can only be based on the grounds of non-patentability, added matter, and *lack of sufficiency*.

This means that, after grant, the patent can be challenged by others who claim the teaching of the patent is not clear and complete. A successful opposition could ultimately result in the patent being revoked.

Should a patent be found to be insufficient, it can be difficult to remedy. Amending the patent to better explain the working of the invention would likely add matter to what was filed at the priority date, and thus give rise to an added-matter objection.

It is clear that remedies are fairly limited due to the applicant being bound by the subject-matter of the patent application as filed. It is therefore critical at the drafting phase of the application to ensure there is enough explanation to enable the skilled person to work the invention.

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