

## **Question 1(a): Outline the patent situation as it currently stands for the claims of EP-CC**

### Claim 1: Glass comprising compound B

Although EP-CC was filed within the priority period, and correct priority information was used (even filed by the same applicant), the priority claim from DE-CC is not valid since DE-CC does not disclose the claimed subject matter (Art.87(1), G2/98).

The effective date of the claim is therefore the filing date, 28 February 2025.

JP-GP is not state of the art under Art.54 EPC, assuming it was not published early.

DE-CC is not state of the art under Art.54(2) or prior national art in Germany since it was not published.

PCT-CC-V is state of the art under Art.54(2) EPC (regular publication of PCT-CC-V took place early in Jan 25) but does not disclose the claimed subject matter.

EP-GP is state of the art under Art.54(3) EPC since it has been published (regular publication mid-March 2025) but does not disclose the claimed subject matter.

The disclosure of conventional glass panels since the 1990's is state of the art under Art.54(2) EPC but does not disclose the claimed subject matter.

The disclosure at the exhibition in August 2023 is state of the art under Art.54(2) EPC but does not disclose the claimed subject matter.

The art cited in the search report discloses compound B and its use in food but not a glass comprising this compound.

The claimed invention is therefore novel.

The closest prior art is a conventional flat glass panel, known since the 1990s.

The objective technical problem solved is the provision of glass which leads to greater energy generation when incorporated into a solar panel.

There is no prior art which discloses or even suggests the claimed solution.

The claimed invention therefore involves an inventive step.

The application shows how to make compound B and a glass panel incorporating compound B: the skilled person can therefore carry out the claimed invention (Art.83).

The invention of claim 1 is therefore patentable.

Since a positive search report was issued, the next deadline to be observed will be payment of the designation and examination fee and the statement to maintain the application; the deadline for this is six months after publication (regular publication to be expected end of July 2026), i.e. end of end of January 2027. Hence, EP-CC seems to be pending.

### Claim 2: Glass comprising compound B and compound A

Although EP-CC was filed within the priority period, and correct priority information was used (even filed by the same applicant), the priority claim from DE-CC is not valid since DE-CC does not disclose the claimed subject matter (Art.87(1), G2/98).

The effective date of the claim is therefore the filing date, 28 February 2025.

Since compound B is an integer of the claim, the novelty and inventive step analysis is the same as for claim 1 (with the additional technical effect of compound A increasing the resiliency of the glass). Further, there is no unity issue.

The application shows how to make compounds B and A and a glass panel incorporating them: the skilled person can therefore carry out the claimed invention (Art.83).

The invention of claim 2 is therefore patentable.

Since a positive search report was issued, the next deadline to be observed will be payment of the designation and examination fee and the statement to maintain the application; the deadline for this is six months after publication (regular publication to be expected end of July 2026), i.e. end of end of January 2027. Hence, EP-CC seems to be pending.

#### Claim 3: Glass panel made of a glass according to claim 1

Claim 3 (effective date is filing date = 28 February 2025) incorporates all the features of claim 1. Since claim 1 is patentable, the invention of claim 3 is also patentable. Further, there is no unity issue.

Since a positive search report was issued, the next deadline to be observed will be payment of the designation and examination fee and the statement to maintain the application; the deadline for this is six months after publication (regular publication to be expected end of July 2026), i.e. end of end of January 2027. Hence, EP-CC seems to be pending.

#### Claim 4: Glass panel made of a glass according to claim 2

Claim 4 (effective date is filing date = 28 February 2025) incorporates all the features of claim 2. Since claim 2 is patentable, the invention of claim 4 is also patentable. Further, there is no unity issue.

Since a positive search report was issued, the next deadline to be observed will be payment of the designation and examination fee and the statement to maintain the application; the deadline for this is six months after publication (regular publication to be expected end of July 2026), i.e. end of end of January 2027. Hence, EP-CC seems to be pending.

### **Question 1(b): Outline the patent situation as it currently stands for the claims of PCT-CC-A**

#### Claim 1: Compound A

Although PCT-CC-A was filed within the priority period, using correct priority information (even filed by the same applicant), the priority claim from DE-CC is not valid since DE-CC does not disclose the claimed subject matter in an enabling manner.

The effective date of the claim is therefore the filing date, 19 January 2026.

JP-GP is not state of the art under Art.54 EPC, assuming it was not published early.

DE-CC is not state of the art under Art.54(2) or national prior art in Germany since it was not published.

PCT-CC-V is state of the art under Art.54(2) EPC (regular publication of PCT-CC-V took place early in Jan 25) but does not disclose the claimed subject matter.

EP-GP is state of the art under Art.54(3) EPC since it has been published (regular publication mid-March 2025) but does not disclose the claimed subject matter.

The disclosure of conventional glass panels since the 1990's is state of the art under Art.54(2) EPC but does not disclose the claimed subject matter.

The disclosure at the exhibition in August 2023 is state of the art under Art.54(2) EPC but does not disclose the claimed subject matter (not possible to know what the glass was made of).

The document cited in the search report of EP-CC is likely prior art but does not disclose the claimed subject matter.

EP-CC will be prior art under Art.54(3) if it is published (normal publication will be sometime in July 2026) and EP-CC discloses compound A in an enabling manner: the claimed subject matter will therefore lack novelty if EP-CC is published as a pending application but will be novel if EP-CC is withdrawn before publication. However, this will only affect the regional European part of PCT-CC-A when PCT-CC-A has entered the European regional phase. Other countries (like JP) are unaffected by EP-CC.

Also, conventional flat glass panel, known since the 1990s, are prior art.

With the present priority situation, the public distribution of the brochures in May 2025 (disclosing substance A, a process to produce substance A and glass comprising substance A) will be prior art under Art 54(2) and novelty destroying for claim 1 of PCT-CC-A.

The invention of claim 1 is therefore not patentable as things stand.

The status of PCT-CC-A is not known (for example, it is not known whether all the fees were paid). But even assuming that PCT-CC-A is currently pending, no patent can be obtained. Assuming that PCT-CC-A is pending, the standard 30-months deadline will expire on 20.07.27 (Tuesday) and the 31-months date for EPO regional phase entry will expire on 20.08.27 (Friday).

#### Claim 2: Glass comprising compound A

Although PCT-CC-A was filed within the priority period, and correct priority information was used (even filed by the same applicant), the priority claim from DE-CC is not valid since DE-CC does not disclose the claimed subject matter in an enabling manner.

The effective date of the claim is therefore the filing date, 19 January 2026.

The patentability analysis is exactly the same as for claim 1: in particular, EP-CC and the brochures also disclose glass comprising compound A.

### **Question 1(c): Outline the patent situation as it currently stands for the claims of PCT-CC-V**

#### Claim 1: glass panel with a corrugated surface V

PCT-CC-V is a first filing for this subject matter.

There is no priority date so the effective date of the claim is the filing date, 02 July 2023.

The only state of the art (Art.54(2)) is the disclosure of conventional glass panels from the 1990s onwards and the claim is novel since it specifies both a corrugated surface, the corrugations have a V shape (two novel features).

The claimed invention is therefore novel.

The objective problem solved is the provision of a glass panel that is more resilient when incorporated into a solar panel.

This resilience is surprising and the skilled person would not therefore have modified a flat panel using V-shaped corrugations in the expectation of achieving this effect.

The claimed invention therefore involves an inventive step.

The fees for PCT-CC-V were all paid but the national/regional phase deadlines have expired and the consequence will vary from state to state.

The standard 30-months deadline expired Friday 01 January 2026. For the EPO, the 31-months deadline expired on Monday 02 February 2026 but further processing will be available for two months following the notification that the application is deemed withdrawn (may be issued earliest after expiry of the deadline, i.e. maybe issued earliest 03 February 2026). This period cannot yet have expired. Further processing can be requested, even if no loss of right communications has been issued.

A valid patent can therefore be expected at the EPO if further processing is used (see below) and the application is prosecuted to grant.

#### **Question 1(d): Outline the patent situation as it currently stands for the claims of EP-GP**

##### Claim 1: glass panel with a corrugated surface

EP-GP validly claims priority from JP-GB for this subject matter since it was filed by using correct priority information (even filed by the same applicant), within the 12-months priority period, JP-GP discloses the claimed subject matter and JP-GP is a first filing for this subject matter.

The effective date of the claim is therefore the filing date of JP-GP, 13 September 2023.

PCT-CC-V is potentially Art.54(3) prior art but only if it was published in English, French or German (or translated into such a language at the EPO; considering Crystal Clear being a German company filing in German is likely) and the filing fee is paid at the EPO (requirements according to R 165 EPC). As things stand, it is not prior art since at least the filing fee hasn't been paid. If it became prior art then it would be novel-destroying since it discloses a glass panel with a corrugated (V-shaped) surface. Such a lack of novelty could be overcome by introducing a disclaimer.

The disclosure at the exhibition in August 2023 is Art.54(2) prior art and there is good evidence in the form of the report – it should be obvious from the photographs that the exhibited panels had a corrugated (U-shaped) surface. No disclaimer is possible, at least according to EPO case law.

The claimed invention therefore lacks novelty.

The patent is granted and the opposition period will expire on Thursday 10 September 2026. An opposition can therefore be filed.

### Claim 2: glass panel with a V-shaped corrugated surface

EP-GP validly claims priority from JP-GB for this subject matter since it used correct priority information (even filed by the same applicant), within the 12-months priority period, JP-GP discloses the claimed subject matter and JP-GP is a first filing for this subject matter.

The effective date of the claim is therefore the filing date of JP-GP, 13 September 2023.

PCT-CC-V is potentially Art.54(3) prior art but only if it was published in English, French or German (or translated into such a language at the EPO; considering Crystal Clear being a German company filing in German is likely) and the filing fee is paid at the EPO (requirements according to R 165 EPC). As things stand, it is not prior art since at least the filing fee hasn't been paid. If it became prior art then it would be novel-destroying since it discloses a glass panel with a corrugated V-shaped surface.

The disclosure at the exhibition in August 2023 is Art.54(2) prior art and there is good evidence in the form of the report – however, it is not novelty-destroying since it discloses U-shaped corrugations rather than V-shaped corrugations.

The claimed invention is therefore novel at the moment.

The closest prior art is the exhibition which discloses alternative U-shaped corrugations. Since there does not seem to be any technical advantage in using V-shaped corrugations instead of U-shaped corrugations the claimed invention would seem to be an obvious alternative and to lack an inventive step.

The patent is granted and the opposition period will expire on Thursday 10 September 2026. An opposition can therefore be filed.

### Claim 3: glass panel with a U-shaped corrugated surface

EP-GP validly claims priority from JP-GB for this subject matter since it uses correct priority information (it even was filed by the same applicant), within the 12-months priority period, JP-GP discloses the claimed subject matter and JP-GP is a first filing for this subject matter.

The effective date of the claim is therefore the filing date of JP-GP, 13 September 2023.

PCT-CC-V is potentially Art.54(3) prior art but does not disclose this subject matter.

The disclosure at the exhibition in August 2023 is Art.54(2) prior art and there is good evidence in the form of the report – it should be obvious from the photographs that the exhibited panels had a corrugated (U-shaped) surface.

The claimed invention therefore lacks novelty.

The patent is granted and the opposition period will expire on Thursday 10 September 2026. An opposition can therefore be filed.

### **Question 2(a): As the situation currently stands, is CRYSTAL CLEAR free to produce and sell its glass panels in Europe?**

No, Crystal Clear is currently not free to produce and sell its glass panels in Europe since there is a granted patent EP-GP which covers a panel having a V-shaped or U-shaped surface (claims 1 and 2 or 1 and 3 respectively).

This only applies, however, in EPC contracting states in which EP-GB has been validated or has unitary effect. The standard validation period will expire on Tuesday 10 March 2026 (some countries may have a later date) and the period for requesting unitary effect expired on Monday 12 January 2026.

Note that no validation was necessary in Germany which is a London Agreement country. With Crystal Clear being a German company, likely having production facilities in Germany, this poses a threat.

Further, EP-GP will only be enforceable if renewal fees are paid – the first renewal fees due to national offices will fall due in September 2026.

**Question 2(b): As the situation currently stands, is GARASU PANERU free to produce its glass panels in Japan and sell its glass panels in Europe?**

Garasu Paneru is free to manufacture its glass panels in Japan since there is currently no third party Japanese patent that could affect its freedom to operate.

If PCT-CC-V enters the Japanese national phase late (standard 30-months phase has already expired on 2 January 2026; so we should contact a Japanese patent attorney whether a late entry is still possible), Crystal Clear may get protection for corrugations V. This way, Crystal Clear could stop GP's production of glass plates with corrugations V. This, however, is of limited use since GP can continue to produce glass plates with corrugations U.

However, if PCT-CC-A enters the Japanese national phase in time (20 July 2027) and is granted as a patent, Garasu Panera will not be able to manufacture in Japan since PCT-CC-A can validly claim compound A and glass comprising compound A (see below) and will cover both of GP's commercial embodiments.

Garas Paneru is free to sell its glass panels in Europe since there is currently no third party European patent that could affect its freedom to operate. However, this will not be the case if European patents are granted following prosecution of PCT-CC-V (however, not covering the present embodiment) and PCT-CC-A (which will cover GP's embodiment since it contains A). The same holds for a divisional EP-CC-DIV (see below).

Note that EP-CC is not a threat since its claims are limited to the use of B as a mandatory feature and this is lacking in Garasu Paneru's commercial embodiment.

**Question 3: What can CRYSTAL CLEAR do to improve their position?**

PCT-CC-V

Apply for further processing at the EPO within two months of a loss of rights communication. File a translation if the application is not in English, French or German (and pay a further processing fee; considering Crystal Clear being a German company filing in German is likely), pay the filing fee, designation fee, examination fee (plus a 50% further processing fee in each case). File a request for examination (and pay a further processing fee). No amendment of the claims required – specify examination based on the claims as published. No search fee required. Pay first renewal fee with surcharge by Monday, 03 August 2026.

This will make PCT-CC-V-EP pending again and will also establish PCT-CC-V-EP as Art. 54(3) prior art against EP-GP.

Consider requesting accelerated examination with PACE and waiving r.161 communication in order to get early grant.

Validate in states where Crystal Clear or Garasu Paneru are operating.

Consider late national phase entry in other countries of interest such as Japan. Check with local patent attorneys for this.

#### EP-GP

File opposition by Thursday 10 September 2026 and pay the opposition fee.

File a written, reasoned statement. Raise grounds of lack of novelty and lack of inventive step and ask for the patent to be revoked in its entirety. Cite PCT-CC-V for lack of novelty of claims 1 and 2 and the August 2023 conference disclosure for lack of novelty (claims 1 and 3) and lack of inventive step (claim 2). File evidence in the form of the exhibition report.

Alternatively, we might contact GP, explaining them the situation and ask for a non-revocable, royalty free licence for EP-GP in Europe, so as to block other competitors.

Consider to check about the situation and possibilities concerning JP-GP with a patent attorney in Japan.

#### EP-CC

Prosecute to grant if possible (need to check status; however likely to be still pending – see above).

Consider requesting accelerated examination with PACE in order to get early grant.

A divisional EP-CC-DIV, claiming substance A, glass comprising A and glass plates comprising A may be filed as long as EP-CC is pending. This is less preferred than repairing PCT-CC-A (see below) in light of the somewhat shorter patent lifetime (20 years after filing date, not priority date) and in light of the limitation to EP.

Validate in states where Crystal Clear or Garasu Paneru are operating.

#### PCT-CC-A

Add priority claim from EP-CC before Wednesday 20 May 2026 (16 months after first priority date). PCT-CC-A was filed within 12 months of EP-CC using correct priority information (even filed by by the same applicant). Further, EP-CC discloses the claimed subject matter and is the first filing that discloses A and glass containing A in an enabling manner – it is therefore a first filing under Art.87(1). Also file certified copy of EP-CC, or inform EPO/WIPO about the DAS code. However, no pages of the description of EP-CC may be incorporated into PCT-CC-A, since the priority claim to EP-CC was not made on filing (r. 4.18 PCT declaration).

Then, the effective date of the claims in PCT-CC-A will be prior to the distribution of the brochures. Further, for EP, EP-CC will no longer be Art. 54(3) prior art for the EP phase of PCT-CC-A.

Therefore, a patent grant is to be expected for all countries in which PCT-CC-A will enter the national/regional phase.

The 30-months (standard)/31-months (EPO) deadline starts with the filing date of DE-CC (20.1.25).  
One can delay this deadline slightly by withdrawing the priority claim to DE-CC; then the deadline will start with the filing date of EP-CC = 28.2.2025.

Consider entering the EPO regional phase early (possible at any time), waiving a r.161 communication and requesting accelerated examination with PACE in order to get early grant.

Validate in states where Crystal Clear or Garasu Paneru are operating.

Consider national phase entry in other countries of interest such as Japan.