International Organization for Standardization
Organisation internationale de normalisation
Международная организация по стандартизации
Ch. de Blandonnet 8 | CP 401, 1214 Vernier | Geneva, Switzerland | T: +41 22 749 01 11 | central@iso.org | www.iso.org

Ref. ISO/TMB IWA 43
Date: 2023-03-06

Invitation to an international workshop on:

IWA on *Domestic glass types - crystal glass, crystal and lead crystal glass - specifications and test methods* (IWA 43)

Dear ISO Members,

Following approval by the Technical Management Board of a proposal from the Association française de normalisation (AFNOR), we are pleased to invite you to a workshop to develop an International Workshop Agreement (IWA 43) on *Domestic glass types - crystal glass, crystal and lead crystal glass - specifications and test methods.*

Workshop meeting date:

The workshop will take place on:

Date: June 16, 2023, from 9:30 to 16:30 CEST UTC+2 (UK, London time)

Location: AFNOR Office - 11 Rue Francis de Pressensé, 93210 Saint-Denis, France.

There will be an option to join virtually through Zoom:
https://afnor.zoom.us/j/98827533916?pwd=VXNyOTBsZ1FTS0x0MXdYWmxaNE1XUT09
Password: 660217

If deemed necessary, a second workshop will take place at AFNOR on **12 July 2023**. Likewise, a possibility to join virtually will be provided.

We ask that you please fill in the registration form below **in Annex 3** and send it back at the latest by the 1st of May 2023 to the secretariat: gwenola.hardouin@afnor.org

The Workshop participation will be opened to registered participants only.

Yours sincerely,

Marco Rossi
Director, Standardization and Technical Policy

INVITATION to

International Workshop Agreement 43

Domestic glass types - crystal glass, crystal and lead crystal glass - specifications and test methods

June 16, 2023

At AFNOR headquarter

11 Rue Francis de Pressensé, 93210 Saint-Denis, France

The European Domestic Glass Association (EDG) and AFNOR are pleased to invite interested stakeholders from public and private sector organizations worldwide to participate in the ISO International Workshop Agreement (IWA) on domestic glass types - crystal glass, crystal and lead crystal - specifications and test methods.

Background

There has been recent significant technical progress and market evolution with regard to high quality crystal glass types for domestic use. A huge market shift occurred from lead crystal to innovative crystal glass, driven by progress in industrial processes. Three decades of research also led to the development of new formulas without intentionally added lead oxide.

There is an urgent need to ensure that consumers are not confused or misled by the variety of appellations and innovations.

Purpose

The purpose of the IWA is to establish specifications for high quality crystal glass, ‘crystal’ and lead crystal at international level. It is expected that these specifications would address the three categories of material, in terms of density, refractive index, and composition. The IWA is also expected to refer to existing and relevant test methods and possibly identify complementary tests if necessary.

The purpose is to focus on material definition, other considerations such as occupational health and safety requirements and release limit values are excluded.

Scope

The document will provide specifications and test methods for domestic glass types of high quality: crystal glass, crystal and lead crystal glass (composition, density, refractive index and lead content).

Domestic glass applications cover consumer goods such as tableware, containers (e.g. bottles, decanters, perfume jars), giftware, jewellery, home decor, decorative components (e.g. for the jewellery, textile, lighting), furniture and luminaries. Other industrial or technical applications, such as glass in building, automotive, medicine and laboratories will not be considered.

See more about the proposal in Annexe 1, as approved by the Technical Management Board of ISO (TMB Resolution 9/2023).

Compliance with ISO process

AFNOR, the French member body of ISO, guarantees its support in the management and publication of the IWA in compliance with ISO Directives, following the principles of international standardization: transparency, fairness and consensus.

AFNOR appoints Mrs Paola Di Discordia (EDG) as chair and Mrs Gwenola Lefresne Hardouin (AFNOR) as secretary of the IWA.

To participate

Please fill in the registration form below **in Annex 3** and send it back at the latest by the 1st of May 2023 to the secretariat: gwenola.hardouin@afnor.org

The Workshop participation will be opened to registered participants only.

Time schedule for the ISO IWA Proposal

A consultation will be organized ahead of the meeting and by the beginning of May 2023, on working documents to call for comments. Documents will be shared with all those registered.

The workshop will take place at AFNOR on **16 June 2023**. A possibility to join virtually will be provided.

If deemed necessary, a second workshop will take place at AFNOR on **12 July 2023**. Likewise, a possibility to join virtually will be provided.

Once the discussions have reached their conclusion, the final text of the IWA as arising from the Workshop consultations and meetings will be submitted to ISO for publication. ISO

members may market and promote the document through their regular channels. ISO will hold the copyright to the document.

Meeting information of the first workshop

Date: **June 16, 2023** from 9:30 to 16:30 CEST (lunch break from 13:00 to 14:00)

Venue: 11 Rue Francis de Pressensé, 93210 Saint-Denis, France.
See more information on where we are, where to stay and practical information in **Annex 2**.

Zoom:
https://afnor.zoom.us/j/98827533916?pwd=VXNyOTBsZ1FTS0x0MXdYWmxaNE1XUT09
Password : 660217

Draft agenda:

		Draft Timing (CEST)
1.	**Opening of the meeting Code of conduct**	**9:30**
2.	**Roll call of delegates**	**9:50**
3.	**Adoption of the agenda**	**10:10**
4.	**Draft IWA 43** • **Initial draft** *(Draft available by the beginning of May 2023)* • **Comments received during the consultation organized ahead the 1st workshop** *(Comments available by the end of May 2023)* • **Discussion on the answers to comments proposed by workshop chair and secretary** *(Proposed answers available by 12th of June 2023)*	
4.1	**General : Purpose and objectives**	**10:30**
4.2	**Title and scope**	**11:00**
4.3	**Specifications**	**11:30**
4.4	**Methods**	**14:00**
4.5	**Bibliography**	**15:45**
5.	**Recommendations and actions**	**16:00**
6.	**Any other business**	**16:20**
7.	**Closure of the meeting**	**16:30**

Fee: None; although all expenditures including transportation, accommodation, health insurance and visa fees will be paid by your own organization.

Questions

Should you have any question, as Workshop secretary, I will be glad to be of assistance.

Sincerely,

Gwenola Lefresne Hardouin
Secretary of the workshop
Afnor Standardization
gwenola.hardouin@afnor.org

Paris, 3rd of March 2023

Annex 1

International Organization for Standardization
Organisation internationale de normalisation
Международная организация по стандартизации

PROPOSAL FOR AN INTERNATIONAL WORKSHOP AGREEMENT

A proposal for an International Workshop Agreement (IWA) shall be submitted to the secretariat of the Technical Management Board at ISO/CS (tmb@iso.org). Proposals will be referred to the ISO Technical Management Board for approval (4-week ballot).

Once the proposal for the IWA is approved by the TMB, the proposer will be requested to prepare an announcement/ invitation to the workshop, which will be circulated to the ISO members by ISO/CS. Please note that the announcement must be made at least 90 days in advance of the agreed date to allow potential attendees adequate time to plan on attending the workshop (Annex SI.3).

See the ISO Supplement Annex SI for full details of the Procedure for the development of IWAs.

Proposer

A proposal to hold an ISO workshop for the purpose of developing one or more IWAs on a particular subject may come from any source, including ISO member bodies, liaison organizations, corporate bodies etc. An organization that is not an ISO member body or liaison organization, or is not international in scope, shall inform the ISO member body in its country of its intent to submit such a proposal.

European Domestic Glass (EDG) together with AFNOR (Association française de normalisation-French standardization body)

The European Domestic Glass Association, set up in 1966, groups together the domestic glass industry's collaborative activity on European legislative issues, managed under a single membership structure. The association represents the common interests of European domestic glass producers and promotes the use and reuse of domestic glass in a more social, environmental and responsible way.

Contact details of proposer

Name: Paola Di Discordia & Gwenola Hardouin

Email: pdidiscordia@edg-esga.eu & gwenola.hardouin@afnor.org

Title of the proposed IWA

DOMESTIC GLASS TYPES - CRYSTAL GLASS, CRYSTAL AND LEAD CRYSTAL GLASS - SPECIFICATIONS AND TEST METHODS

Purpose and justification

Context

Domestic glass is largely used for consumer goods, such as tableware, containers (e.g. bottles, decanters, perfume jars), giftware, jewellery, home decor, decorative components (e.g. for the jewellery, textile, lighting), furniture and luminaries. Other industrial or technical applications, such as glass in building, automotive, medicine and laboratories are not considered as domestic glass.

There has been recent significant technical progress and market evolution with regard to high quality crystal glass types for domestic use. A huge market shift occurred from lead crystal glass to innovative crystal glass, driven by progress in industrial processes. Three decades of research also led to the development of new formulas without intentionally added lead oxide:

1. manufacturers do not use lead oxides anymore among the starting raw materials to obtain crystal glass,
2. it is now possible to obtain a new glass, 'crystal', the characteristics of which are far superior to those of crystal glass, in terms of refractive index and density, and are very close to those of lead crystal glass.

See in annex the main characteristics of lead crystal glass, 'crystal' and crystal glass.

Thanks to these innovations an entirely new product ('crystal') is now being put on the market. Consequently, its definition is expected, in order to request an update of the Harmonized System of Customs Codes.

There is an urgent need to ensure that consumers are not confused or misled by these innovations. Therefore, one purpose of this proposal is to provide a timely and clear definition of 'crystal' on the market.
Moreover, consumers, in particular those of younger generations, may be more prone to consider the environmental footprint of articles before taking a purchasing decision. Information on the characteristics of high-quality domestic glass types would facilitate consumers' decision-making.

Purpose

The purpose of the IWA is to establish specifications for high quality crystal glass, 'crystal' and lead crystal glass at international level. It is expected that these specifications would address the three categories of material, in terms of density, refractive index, and composition. The IWA is also expected to refer to existing and relevant test methods and possibly identify complementary tests if necessary.
The purpose is to focus on material definition, other considerations such as occupational health and safety requirements and release limit values are excluded.

Justification

A clear characterization of crystal glass, 'crystal' and lead crystal glass would be beneficial to recognize and properly identify product specifications. In this way, it will facilitate commercial exchanges on a global scale. With regard to 'crystal' and crystal glass, a lead content criterion will address potential lead contamination, aiming at reinforcing their recognition and thereby facilitating their marketing, use, and recyclability.

There is currently no internationally standardized criterion matching the new formulas regarding the elimination of lead oxides from the starting raw materials, which is a major concern for the market.

This approach is similar to the one already chosen in IWA 8:2009 that became ISO 24117:2020 "Tableware, giftware, jewellery and luminaries, made of glass — Glass clarity — Classification and test method" including an iron content criterion in relation to glass clarity. Nevertheless, both the materials covered, and the purpose of these normative documents, are different. ISO 24117:2020 relates to specifications relative to lightness, chroma and iron oxide content, while the proposed IWA focuses on starting raw materials, density, refractive index and lead content.

There is also no recognized definition for 'crystal', despite its specifications of high quality. In such case, 'crystal' would only be assimilated to mainstream glass in terms of marketing and customs.
It is therefore highly needed to rapidly agree on relevant definitions and test methods, especially since 'crystal' is starting to be put on the market.

After careful review of existing ISO technical bodies, we conclude that there is currently no technical committee that could host the development of an ISO deliverable for the purpose of only developing the specification of the three categories of material. However, there are already existing test methods that can be referred to or adapted.

An IWA is the best option to promptly discuss and share a definition meeting market expectations.
After the publication of the IWA, its promotion to an international standard will be considered and could be proposed under the most appropriate standardization technical body.

Contribution to Sustainable Development Goals (SDGs):

A specification of different crystal glass types and, in particular, a lead content criterion for those crystal glass types, would contribute to Goal 9 "Industries, Innovation and infrastructures" by finding lasting solutions to both economic and environmental challenges, such as the reduction of hazardous starting raw materials while ensuring a solid and durable product over time.

Meetings

There will be no participation fees to participate in the workshop; however, the participants will be expected to cover their own expenses.
Meetings will be held in presence at AFNOR premises (11 rue Francis de Pressensé, 93571 La Plaine Saint-Denis, France). Connection via Zoom will be provided for those who would be unable to attend.
Meetings will be chaired by Paola Di Discordia (EDG), the secretariat will be held by Gwenola Hardouin (AFNOR).
The workshop language will be English.

Action plan

Upon TMB approval,

1) Preparatory work: EDG and AFNOR will elaborate an initial draft proposal of IWA.
2) Initial Consultation: A first draft proposal will be circulated among participants to seek their comments, by correspondence. Their feedback will then be compiled in preparation of a 1st workshop meeting, which will appropriately address all comments, concerns and objections.
3) 1st workshop meeting, hosted in AFNOR premises, La Plaine Saint Denis, France.

Participants are expected to

- comment successive versions of the draft,

- consider and discuss all comments received,
- possibly agree on a final version of the draft for publication as an IWA.

4) Optional: 2nd workshop meeting, as necessary.
5) Finalization and submission of the draft IWA. EDG and AFNOR to update the final draft IWA taking into account all changes agreed upon, and to circulate this final version and send it to ISO Central Secretariat for publication.

Timetable

Step	Earliest estimated dates
TMB Approval → Notice of the kick-off meeting	February 2023
Preparatory work	March-April2023
Initial consultation of workshop members	May 2023
1st workshop meeting	June 2023
Optional 2nd workshop meeting	July 2023
Finalization and Submission of Agreement	August 2023

Does the proposed IWA relate to or impact on any existing work in ISO committees?

☐ Yes ☒ No

Please list any relevant documents and/or ISO committees

This IWA targets crystal glass materials used in a wide variety of applications in consumer goods, including but not necessarily items for food contact.
Such work does not fall in the scope of ISO/TC 63 “Glass containers” or ISO/TC 166 “Ceramic ware, glassware and glass ceramic ware in contact with food”. However, these technical committees have developed test methods, for example to assess lead and cadmium release limit values, which may be referred to by in the IWA. No overlap with existing standards is thus foreseen.

Many sectors include crystal glass as a material, e.g. decorative items, furniture and home decor but would not have been a proper setting for this work as it addresses the material rather than specific products.

The IWA is therefore not expected to duplicate nor to negatively affect any ongoing work within ISO.

The following relevant documents have already been identified for consideration:

- ASTM E1621-22 XRF Standard Guide for Elemental Analysis by Wavelength Dispersive X-Ray Fluorescence Spectrometry
- ASTM C729-11 (2022) Test Method for Density of Glass by the Sink-Float Comparator
- ASTM C693-93(2019) Standard Test Method for Density of Glass by Buoyancy
- ASTM C1648-12(2018) Standard Guide for Choosing a Method for Determining the Index of Refraction and Dispersion of Glass
- DIN 51086-2 :2002 (Inactive) Testing of oxidic raw materials and materials for ceramics, glass and glazes – Part 2: Determination of Ag, As, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Er, Fe, La, Mg, Mn, Mo, Nd, Ni, P, Pb, Pr, S, Sb, Se, Sn, Sr, Ti, V, W, Y, Yb, Zn, Zr by optical emission spectrometry with inductively coupled plasma (ICO OES)
- DIN 51001 2003:08 General procedures for the X-ra fluorescence analysis (XRF) of oxidic raw materials
- DIN 66137-1: 2003-11 Principles of solid state density; Part 1: Principles
- EN 2155-3:1993-04 Aerospace series; test methods for transparent materials for aircraft glazing; part 3: determination of refractive index
- EUR 8137 EN Certification report on BCR-126A and BCR-126B
- NF B30-004: Crystal and crystal glass

Relevant stakeholders (list of organizations that may be interested)

The following organizations will be targeted for participation and dissemination of the opportunity to participate, as they are recognized for their expertise on domestic glass and the breadth of their constituency:

European Domestic Glass
International Crystal Federation

As per the ISO Directives, all details will be announced by the workshop secretariat, the ISO Central Secretariat and EDG, inter alia.

Member body willing to act as secretariat

AFNOR

Number of meetings to be held (if more than one is envisaged) and proposed dates

2 meetings (expected in June 2023, and July 2023 if necessary)

Annexes are included with this proposal (give details)

An annex is attached with an outline of the IWA.

ANNEX

REQUEST FOR AN IWA
DOMESTIC GLASS TYPES -
CRYSTAL GLASS, CRYSTAL AND LEAD CRYSTAL GLASS -
SPECIFICATIONS AND TEST METHODS

OUTLINE

1. SCOPE

This document provides specifications and test methods for domestic glass types of high quality: crystal glass, crystal and lead crystal glass (composition, density, refractive index and lead content).

Domestic glass applications cover consumer goods such as tableware, containers (e.g. bottles, decanters, perfume jars), giftware, jewellery, home decor, decorative components (e.g. for the jewellery, textile, lighting), furniture and luminaries. Other industrial or technical applications, such as glass in building, automotive, medicine and laboratories are not considered.

2. SPECIFICATIONS

- Definition of crystal glass types:
  - crystal glass
  - crystal
  - lead crystal glass

- Technical characteristics

Description domestic glass types of high quality	**Characteristics**			
	Metal oxides	Density	Refractive index	Remarks
Crystal glass	Σ (ZnO, BaO, K2O, SrO, Al2O3, TiO2, ZrO2, Sb2O3) ≥10%	≥2.45	≥1.520	Max permissible lead content
Crystal	Σ (ZnO, BaO, K2O, SrO, Al2O3, TiO2, ZrO2, Sb2O3) ≥ 24%	≥2.67	≥ 1.535	Max permissible lead content

Lead Crystal glass	PbO ≥ 24%	≥2.9	≥ 1.545	N/A

3. TEST METHODS

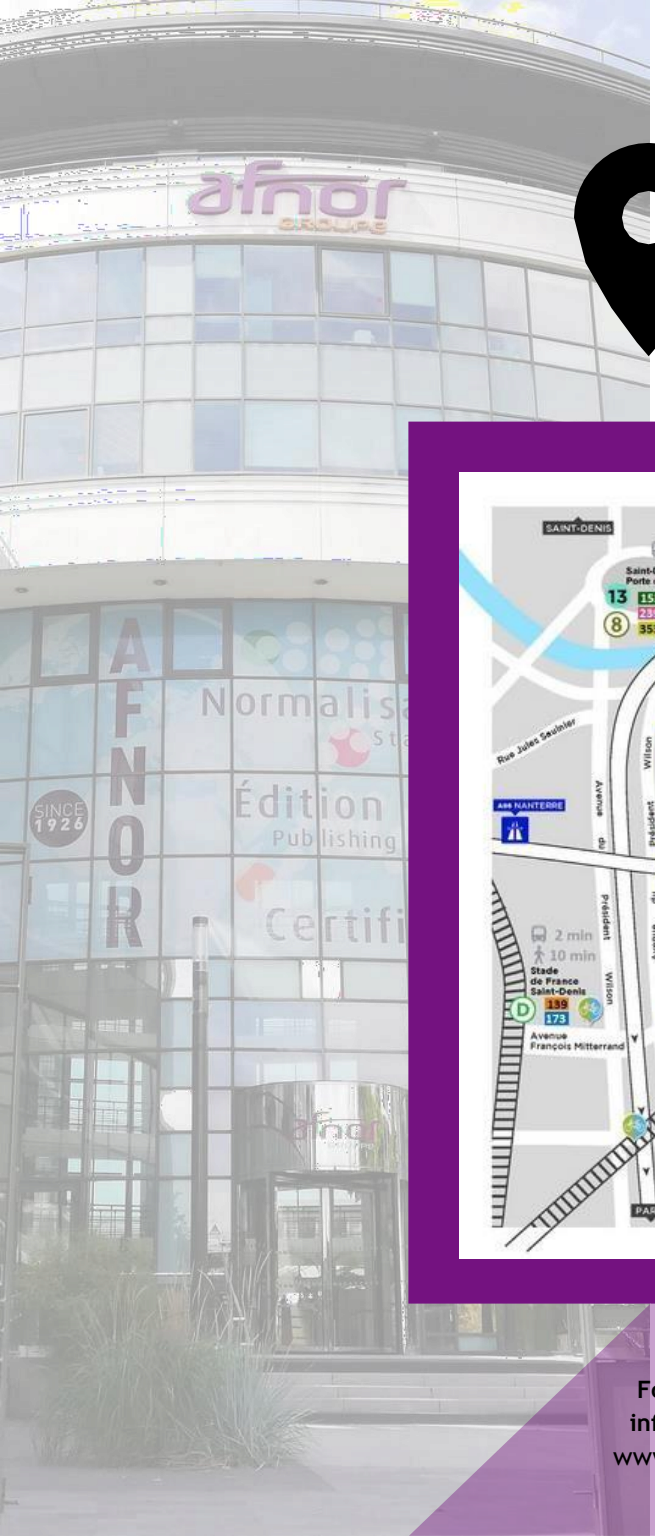
[Development or reference to test methods]

- **Chemical analysis**
- **Tests on physical properties**
  - Density
  - Refraction index

4. Bibliography

- The following relevant documents have already been identified for consideration:
- ASTM E1621-22 XRF Standard Guide for Elemental Analysis by Wavelength Dispersive X-Ray Fluorescence Spectrometry
- ASTM C729-11 (2022) Test Method for Density of Glass by the Sink-Float Comparator
- ASTM C693-93(2019) Standard Test Method for Density of Glass by Buoyancy
- ASTM C1648-12(2018) Standard Guide for Choosing a Method for Determining the Index of Refraction and Dispersion of Glass
- DIN 51086-2 :2002 (Inactive) Testing of oxidic raw materials and materials for ceramics, glass and glazes – Part 2: Determination of Ag, As, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Er, Fe, La, Mg, Mn, Mo, Nd, Ni, P, Pb, Pr, S, Sb, Se, Sn, Sr, Ti, V, W, Y, Yb, Zn, Zr by optical emission spectrometry with inductively coupled plasma (ICO OES)
- DIN 51001 2003:08 General procedures for the X-ra fluorescence analysis (XRF) of oxidic raw materials
- DIN 66137-1: 2003-11 Principles of solid state density; Part 1: Principles
- EN 2155-3:1993-04 Aerospace series; test methods for transparent materials for aircraft glazing; part 3: determination of refractive index
- EUR 8137 EN Certification report on BCR-126A and BCR-126B
- NF B30-004: Crystal and crystal glass

Annex 2



WHERE WE ARE

AFNOR, 11 rue Francis de Pressensé
93210 LA PLAINE SAINT-DENIS FRANCE
+33 (0)1 41 62 80 00 | www.groupeafnor.org/en/

RER B 'La Plaine Stade de France' (3' walk)
RER D 'Stade de France – Saint-Denis' (10' walk)

ticket t+ not valid, buy point-to-point ticket

Line 13: 'Saint-Denis Porte de Paris' (15' walk)

Lines 139 / 153 / 173 / 239
(1' walk)

10 rue des Bretons
93210 LA PLAINE SAINT-DENIS FRANCE
(A parking place shall be requested at least 48 hours in advance from your AFNOR contact)

AFNOR ⇄ Roissy-CDG: min. 30 €
AFNOR ⇄ Orly: min. 50 €
(Taxis can be ordered from the reception desk)

The nearest airport is **Roissy-CDG** (20 km)
www.parisaeroport.fr/en/homepage

For further information:
www.ratp.fr/en

AFNOR premises comply with the accessibility guidelines.

Hearing amplifiers are available at the front desk.

WHERE TO STAY

HOTEL BOOKING

To book a room, please visit:

www.hcorpo.com

Connection information:
Login: afnor/visiteurs
Password: AfnorVisiteurs1

AFNOR is only 15' away from Paris city centre (RER B direct line)

Some nearby hotels

Ibis Styles Paris Saint Denis Plaine
212 Avenue Du President Wilson
93210 LA PLAINE SAINT-DENIS
+33 (0)1 48 09 96 85

Novotel Suites Paris Stade De France
31 Avenue Jules Rimet
93210 LA PLAINE SAINT-DENIS
+33 (0)1 49 46 54 54

Ibis Saint-Denis Stade Ouest
20 Rue Jules Saulnie
93210 LA PLAINE SAINT-DENIS
+33 (0)1 48 09 48 10

PRACTICAL INFORMATION
FOR VISITORS

AFNOR RECEPTION
The AFNOR reception is open between 8 am and 5:30 pm.
The reception will provide you with the meeting room number and a visitor badge.

LUNCH
At lunchtime, two options are available:

- AFNOR's self-service restaurant (open from 1pm to 2pm)
- Restaurants within a 10-minute walk of AFNOR

TELEPHONE
The international country code for France is +33.

WIFI
WIFI free access is guaranteed to all delegates in meeting rooms of the venue.

TIPPING
Tipping is not a common practice or obligatory. It is at your own discretion and only for good or excellent service. As an indication, you can add 7 % to 10 % to the restaurant bill.

PLUGS
220 volts / 50 Hz (you may need an adaptor!)

PASSPORT, VISAS
You may need an invitation letter to obtain your visa to visit France, please ask your AFNOR contact for the meeting.

PARIS TOURIST INFORMATION
Official website of the Paris Tourist Information Centre:
en.parisinfo.com

Annex 3

To be returned by 1st of May 2023 to Gwenola Lefresne Hardouin - AFNOR by e-mail (gwenola.hardouin@afnor.org)

International Workshop Agreement 43 on:

Domestic glass types - crystal glass, crystal and lead crystal - specifications and test methods

Participation registration form

Registering for an IWA is intended to be a lightweight-process. The obligations and commitments on yourself and your company are kept to a minimum in order to make registration easy.
A list of members registered with the name of their organization will be shared but all other personal information provided will be kept confidential.

All expenditures including transportation, accommodation, health insurance and visa fees will be paid by your own organization.

Should you require a letter of invitation, please send an e-mail to the secretary.

Participants for ISO IWA workshops are not required to be appointed by an ISO national member body, but they are advised to notify their registration to their ISO national member body before they register.

Working rules

By signing this membership registration, you accept the following conditions:

You subscribe to the ISO Code of conduct.

You subscribe to the objectives of the work, as outlined in the IWA proposal.

You agree to offer your expertise in the agreement building process, and to contribute by participating in meetings to this process.

Membership information and contacts

1) *Background information on your company/organisation and its interest in the Workshop (50-80 words)*

2) *Company/organisation to be recorded as a Registered Participant:*

   Organisation name (please give the official name of the Company/Organisation):

   Address:

   Please indicate what kind of company/organisation you belong to:

   [Please choose from following list: Industry, Administration, Consumer, Consultants, Academia, Standard Bodies, Other (in which case you will have to specify)]

3) *Name and contact details of the participant(s) representing your company/organisation (It is possible to register several participants)*

   Mr or Mrs (please indicate)
   Last Name:
   First Name:
   Function:
   E-mail:

I have read and agree with the above conditions, and I wish to register myself and my company/organisation as participant in this Workshop.

Date and Signature: ...