

Spec. no: IOS-MAT-0003
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Specification

Formaldehyde requirements of wood, wood-based and wood-like natural materials and products



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Formaldehyde requirements of wood, wood-based and wood-like natural materials and products

Purpose

The purpose of this specification is to ensure that:

- IKEA products do not cause our customers any irritation or health problems due to formaldehyde.
- IKEA products with a safe margin fulfil legal requirements and customer expectations in all our sales countries.
- IKEA continues the stepwise approach towards our long-term goal that the formaldehyde emissions from our wood and wood-based articles shall be at the same level as from natural wood.

In order to achieve this purpose, this specification specified the requirement not only for testing and limits but also for quality assurance system, and for documentation along the whole supply chain, from glue/resin producers and material producers, to component producers to IKEA suppliers.

Scope

This specification applies to:

1. Wood-based board materials such as particleboard (flat), dry process fibreboard (flat), wet process fibreboard, plywood, laminated veneer lumber and structural composite lumber, oriented strand board, and equivalent or similar boards (e.g. straw-board) made from similar cellulosic raw materials other than wood.
2. 3D wood-based materials such as moulded plywood, moulded particleboard.
3. Coverings such as foil, paper and edge-band and gluing process of coverings to a substrate.
4. Application of veneer (with maximum thickness of 6.4 mm, including bamboo veneer) to a substrate or fleece.
5. Edge-glued wood panel.
6. Reconstituted veneer.
7. The processes of gluing the above materials to each other as well as together with some other materials, as specified in the respective requirement tables.
8. Bamboo glued board in IOS-MAT-0096 needs to follow plywood requirements in this specification, when the bamboo product is built with layers at thickness below 6.4mm, and adjacent layers are in cross directions.

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9. All wood, as well as all materials based on wood or wood-like natural materials (e.g. bamboo veneer), regardless of content of glue, if used in build-in products and building materials to be sold in Japan (according to *section 2*).

For many materials and gluing processes, IKEA requirements for formaldehyde are divided according to the different allowed levels. The required documentation for these different levels is also different.

All requirements for each material and gluing process apply to the respective material or process, before any other materials have been added. This means, for instance, requirements on board apply to the raw board, before any coating, covering or veneer is applied, and before combination with any other materials.

This specification doesn't apply to

- a. Gluing process for joining of wood with mortise and tenon, dowel joints, mitre, dovetail, or similar joining.
- b. Gluing process for extension of wood bar (rail/rod/stick) - could be e.g. furniture legs, parts of solid wood furniture frame, parts of clothes hanger - with finger joints or similar.
Note: if wood bar or equivalent is made by cutting it out from edge-glued wood panel, then this section applies.
- c. Gluing process for joining of veneer sheets (gluing edge-to-edge, or zig-zag glue sawing).
- d. Cork.
Note: The gluing process for joining cork to wood-based materials or to other materials in the scope of this specification is included in *section 1.6.4*.
- e. Wood plastic composite
- f. Bamboo materials in IOS-MAT-0096, which is not classified as plywood.

However, *section 2* of this specification **does** apply to processes and materials immediately above when they are used in build-in products and building materials to be sold in Japan (as specified in bullet 9 above).

This specification is connected to *IOS-TM-0010 Formaldehyde in wood-based material – Test methods*.

Implementation of changes

Changes in this specification, version no AA-10899-14 shall be implemented at the latest from packaging date stamp 1913 (year 2019 week 13).

Products not compliant with this version of the specification shall be shipped to IKEA before shipping products compliant with this version. Non-compliant products must not be shipped so that the products arrive in the USA after 2019-03-21.



Verification documents that contain references to previous versions of this specification do not need renewal in advance of the normal renewal time just in order to have a reference to this version of the specification.

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1 Requirements for materials, processes, final products

1.1 Due care

This specification contains emission/content limits for materials and gluing processes. It also contains a number of requirements on quality assurance and documentation. All these are minimum requirements. IKEA supplier needs to take all additional precautionary actions, including extra testing, verifying traceability information along the supply chain which they deem necessary in order to secure the compliance of products with formaldehyde limits, after taking variations into account.

Examples of situations that may trigger additional precautionary actions could be, but are not limited to:

- starting up a new board producer,
- test results are unstable or very close to limits.

1.2 Requirement structure for materials and processes

For all materials (except build-in products and building materials to be sold in Japan):

- *Section 1.4* applies for flat particleboard, flat dry process fibreboard and flat plywood.
- *Section 1.5* applies for layer-glued materials, OSB, wet process fibreboard, edge-glued wood panel, moulded board.
- *Section 1.6* applies for surface covering, reconstituted veneer and gluing processes.

For build-in products and building materials to be sold in Japan *section 2* applies.

Requirements for quality assurance, documentation and testing are described in *section 3* and *section 4*.

1.3 Possible additional verification of compliance in finished products

Appendix A contains limit levels for finished products and for finished (coated, covered) board materials in finished products. There is normally no need for a supplier to perform tests according to *Appendix A*, since all materials and gluing processes shall have been tested and documented separately. However, IKEA reserves the right to verify compliance of final products or of materials taken from final products. Testing according to *Appendix A* is used in case of additional testing of final products or materials taken from final products.

1.4 Requirements for flat particleboard, flat dry process fibreboard and flat plywood

This section covers board materials that are in the scope of:

- Code of Federal Regulations (CFR) 40 CFR § 770 on Formaldehyde Standards for Composite Wood Products Act, which added the Title VI to the Toxic Substances Control Act, TSCA. The issuing authority is the US Environmental Protection Agency, US EPA.

Note: The IKEA requirements also refer in some cases to California Code of Regulation (CCR) 93120.12 Title 17 ("CARB"). The IKEA requirements in some cases go further than 40 CFR § 770 (US EPA) and CARB.



Requirements in *sections 1.4.1 to 1.4.4* apply in full to all flat particleboard, flat dry process fibreboard and flat plywood, except for particleboard or dry process fibreboard that fulfils the following criteria:

- The board is produced in North America
- The board is used in articles sold only in North America

If the board fulfils both of the above criteria, it shall still comply with *sections 1.4.1 to 1.4.4* but with allowed modifications according to *section 1.4.5*.

Note: If the board manufacturer uses another production control test method than the perforator, then compliance according to the perforator limit (table 1, 2 & 3) can be confirmed by test done by the TPC during the audits, provided that there is agreement between the TPC and the board manufacturer and the requirements in *section 4.1.1.2* are fulfilled.

1.4.1 Flat particleboard

Table 1: Requirements for flat particleboard			
Board type	Test method	Requirement	Documentation
Flat particleboard, all	ASTM E1333 or ASTM D6007	All boards shall either be: <ul style="list-style-type: none"> • Certified by an IKEA-approved TPC regarding US EPA TSCA Title VI, or • Exempt from certification with CARB approval or exempt from certification with TPC approval according to US EPA TSCA VI. 	All of the following shall be available: <ul style="list-style-type: none"> • US EPA Declaration for final IKEA article containing such board material • General Statement of Compliance along the supply chain, • Statement of Compliance from IKEA supplier, <ul style="list-style-type: none"> - in ECIS, EDIFACT, EDI, - or if the above is not possible, then scanned invoice or bill of lading (which shall be uploaded to CONNECT), • Markings on IKEA product <p>Requirements for documentation and marking along the supply chain are described in <i>section 4.4</i>.</p> <p>TPC which is not IKEA-approved: If there is a need to use a TPC which is not IKEA-approved, then each mill batch of board that is used to make the IKEA article shall be tested according to ASTM D6007.</p>
All flat particleboard shall comply with the requirements above and the requirements for one of the following board certification levels:			

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Table 1: Requirements for flat particleboard

Certification level	Test method	Limit	Documentation
Particleboard US EPA § 770.10	ASTM E1333 or ASTM D6007	0.09 ppm	<p>All of the following:</p> <ul style="list-style-type: none"> • TPC certificate at level according to US EPA TSCA Title VI § 770.10 • Proof of continued TPC certification for US EPA TSCA Title VI § 770.10, not older than 5 months (as required in <i>section 4.1.1.1</i>). <p>Documentation available at board manufacturer for a minimum 5 years and to be provided to IKEA on request – both of the following:</p> <ul style="list-style-type: none"> • Production test results of formaldehyde • Quarterly test reports from TPC
	EN ISO 12460-5 Perforator	4.0 mg/100 g	<p>One of the two following options:</p> <p>i. Compliance to this limit as part of the TPC's certification program for US EPA TSCA Title VI § 770. The half-yearly verification document can be any of the following:</p> <ul style="list-style-type: none"> - attestation of compliance with IOS-MAT-0003 version 14, - attestation of compliance with this limit, - audit report or notification letter that states that the TPC has carried out the following points: <ul style="list-style-type: none"> · Verify test records from production control tests, · Carry out own test by the same test method. - Test report showing compliance with the limit and containing statement that it is made in connection with the certification. <p>In order to use this option, the TPC shall be IKEA approved lab for EN ISO 12460-5.</p> <p>ii. TR per mill batch.</p>

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Table 1: Requirements for flat particleboard

Certification level	Test method	Limit	Documentation
Particleboard ULEF test frequency reduction	ASTM E1333 or ASTM D6007	Target value: 0.05 ppm Cap value: 0.08 ppm	<p>All of the following:</p> <ul style="list-style-type: none"> • TPC certificate related to US EPA TSCA Title VI § 770.18 at ULEF level • Proof of continued TPC certification, not older than 8 months • CARB approval for test frequency reduction, or US EPA TSCA approval for test frequency reduction issued by the TPC <p>Documentation available at board manufacturer for a minimum 5 years and to be handed over to IKEA on request – both of the following:</p> <ul style="list-style-type: none"> • Production test results of formaldehyde • Half-yearly test reports from TPC
	EN ISO 12460-5 Perforator	4.0 mg/100 g	<p>One of the two following options:</p> <p>i. Compliance to this limit as part of the TPC's certification program for US EPA TSCA Title VI § 770. The half-yearly verification document can be any of the following:</p> <ul style="list-style-type: none"> - attestation of compliance with IOS-MAT-0003 version 14, - attestation of compliance with this limit, - audit report or notification letter that states that the TPC has carried out the following points: <ul style="list-style-type: none"> · Verify test records from production control tests, · Carry out own test by the same test method, - Test report showing compliance with the limit and containing statement that it is made in connection with the certification. <p>In order to use this option, the TPC shall be IKEA approved lab for EN ISO 12460-5.</p> <p>ii. TR per mill batch.</p>

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Table 1: Requirements for flat particleboard			
Particleboard ULEF TPC exemption	ASTM E1333 or ASTM D6007	Target value: 0.04 ppm Cap value: 0.06 ppm	CARB approval for TPC exemption, or US EPA TSCA approval ¹ for TPC exemption issued by the TPC
	EN ISO 12460-5 Perforator	4.0 mg/100 g	Yearly test report
Particleboard NAF TPC exemption	ASTM E1333 or ASTM D6007	Target value: 0.04 ppm Cap value: 0.06 ppm	CARB approval for TPC exemption, or US EPA TSCA approval ¹ for TPC exemption issued by the TPC

¹ US EPA accepts CARB TPC exempt including test frequency reduction approvals.

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1.4.2 Flat dry process fibreboard, excluding those used for flooring with maximum thickness 8 mm

Table 2: Requirements for flat dry process fibreboard (uncoated), e.g. MDF, HDF, LMDF, excluding those used for flooring with maximum thickness 8 mm			
Board type	Test method	Requirement	Documentation
Dry process fibreboard, all (except for flooring ≤ 8 mm)	ASTM E1333 or ASTM D6007	All boards shall either be: <ul style="list-style-type: none"> • Certified by an IKEA-approved TPC regarding US EPA TSCA Title VI, or • Exempt from certification with CARB approval or exempt from certification with TPC approval according to US EPA TSCA VI 	All of the following shall be available: <ul style="list-style-type: none"> • US EPA Declaration for final IKEA article containing such board material • General Statement of Compliance along the supply chain, • Statement of Compliance from IKEA supplier, <ul style="list-style-type: none"> - in ECIS, EDIFACT, EDI, - or if the above is not possible, then scanned invoice or bill of lading (which shall be uploaded to CONNECT), • Markings on IKEA product <p>Requirements for documentation and marking along the supply chain are described in <i>section 4.4</i>.</p> <p>TPC which is not IKEA-approved: If there is a need to use a TPC which is not IKEA-approved, then each mill batch of board that is used in to make the IKEA article shall be tested according to ASTM D6007.</p>
All flat dry process fibreboard (except for flooring with maximum thickness 8 mm) shall comply with the requirements above and the requirements for one of the following board certification levels:			

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Certification level	Test method	Limit	Documentation
Dry process fibreboard US EPA § 770.10	ASTM E1333 or ASTM D6007	0.11 ppm (Note: For MDF with maximum thickness 8 mm, IKEA's limit here is lower than US EPA)	<p>All of the following:</p> <ul style="list-style-type: none"> • TPC certificate at level according to US EPA TSCA Title VI § 770.10 • Proof of continued TPC certification for US EPA TSCA Title VI § 770.10, not older than 5 months (as required in <i>section 4.1.1.1</i>). <p>And, additionally for dry process fibreboard ≤ 8 mm, one of the following four options (at least half-yearly):</p> <ul style="list-style-type: none"> • Attestation of compliance with IOS-MAT-0003 version 14, • Attestation of compliance with this lower limit, • Audit report or notification letter that states this lower limit, • Test report showing compliance with this lower limit and containing statement that it is made in connection with the certification. <p>Note: this verification for dry process fibreboard ≤ 8 mm can be contained in the TPC certificate and PoCTC; or in the same attestation, notification letter or audit report that is required for showing compliance with EN ISO 12460-5 perforator limit according to option <i>i</i> in the requirement row immediately below; or in a separate document.</p> <p>Documentation available at board manufacturer for a minimum 5 years and to be provided to IKEA on request – both of the following:</p> <ul style="list-style-type: none"> • Production test results of formaldehyde • Quarterly test reports from TPC
	EN ISO 12460-5 Perforator	5.0 mg/100 g	<p>One of the two following options:</p> <p>i. Compliance to this limit as part of the TPC's certification program for US EPA TSCA Title VI § 770. The half-yearly verification document can be any of the following:</p> <ul style="list-style-type: none"> - attestation of compliance with IOS-MAT-0003 version 14, - attestation of compliance with this limit, - audit report or notification letter that states that the TPC has carried out the following points:

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Certification level	Test method	Limit	Documentation
			<ul style="list-style-type: none"> · Verify test records from production control tests, · Carry out own test by the same test method. <ul style="list-style-type: none"> - Test report showing compliance with the limit and containing statement that it is made in connection with the certification <p>In order to use this option, the TPC shall be IKEA approved lab for EN ISO 12460-5.</p> <p>Note: this can be contained in the TPC certificate and the PoCTC, or be a separate document</p> <p>ii. TR per mill batch.</p>
Dry process fibreboard ULEF test frequency reduction	ASTM E1333 or ASTM D6007	Target value: 0.06 ppm Cap value: 0.09 ppm	All of the following: <ul style="list-style-type: none"> • TPC certificate related to US EPA TSCA Title VI § 770.18 at ULEF level • Proof of continued TPC certification, not older than 8 months • CARB approval for test frequency reduction, or US EPA TSCA approval for test frequency reduction issued by the TPC <p>Documentation available at board manufacturer for a minimum 5 years and to be handed over to IKEA on request – both of the following:</p> <ul style="list-style-type: none"> • Production test results of formaldehyde • Half-yearly test reports from TPC
	EN ISO 12460-5 Perforator	5.0 mg/100 g	One of the two following options: <p>i. Compliance to this limit as part of the TPC's certification program for US EPA TSCA Title VI § 770. The half-yearly verification document can be any of the following:</p> <ul style="list-style-type: none"> - attestation of compliance with IOS-MAT-0003 version 14, - attestation of compliance with this limit, - audit report or notification letter that states that the TPC has carried out the following points: <ul style="list-style-type: none"> · Verify test records from production control tests, · Carry out own test by the same test method. - Test report showing compliance with the limit and containing statement that it is

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Certification level	Test method	Limit	Documentation
			made in connection with the certification In order to use this option, the TPC shall be IKEA approved lab for EN ISO 12460-5. ii. TR per mill batch.
Dry process fibreboard ULEF TPC exemption	ASTM E1333 or ASTM D6007	Target value: 0.04 ppm Cap value: 0.06 ppm	CARB approval for TPC exemption, or US EPA TSCA approval ² of TPC exemption issued by the TPC
	EN ISO 12460-5 Perforator	5.0 mg/100 g	Yearly test report
Dry process fibreboard NAF TPC exemption	ASTM E1333 or ASTM D6007	Target value: 0.04 ppm Cap value: 0.06 ppm	CARB approval for TPC exemption, or US EPA TSCA approval ² of TPC exemption issued by the TPC

1.4.3 Flat dry process fibreboard used for IKEA flooring with maximum thickness 8 mm

Table 3: Requirements for flat dry process fibreboard used for IKEA flooring (uncoated) (e.g. MDF, HDF) with maximum thickness 8 mm

Board type	Test method	Requirement	Documentation
Dry process fibreboard used for IKEA flooring (≤ 8 mm), all	ASTM E1333 or ASTM D6007	All boards shall either be: <ul style="list-style-type: none"> • Certified by an IKEA-approved TPC regarding US EPA TSCA Title VI, or • Exempt from certification with CARB approval or exempt from certification with TPC approval according to US EPA TSCA VI. 	<p>All of the following shall be available:</p> <ul style="list-style-type: none"> • US EPA Declaration for final IKEA article containing such board material • General Statement of Compliance along the supply chain, • Statement of Compliance from IKEA supplier, <ul style="list-style-type: none"> - in ECIS, EDIFACT, EDI, - or if the above is not possible, then scanned invoice or bill of lading (which shall be uploaded to CONNECT), • Markings on IKEA product <p>Requirements for documentation and marking along the supply chain are described in <i>section 4.4</i>.</p> <p>TPC which is not IKEA-approved: If there is a need to use a TPC which is not IKEA-approved, then each mill batch of board that is used in to make the IKEA article shall be tested according to ASTM D6007.</p>

² US EPA accepts CARB TPC exempt including test frequency reduction approvals.

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Table 3: Requirements for flat dry process fibreboard used for IKEA flooring (uncoated) (e.g. MDF, HDF) with maximum thickness 8 mm			
All flat dry process fibreboard used for IKEA flooring shall comply with the requirements above and the requirements for one of the following board certification levels:			
Certification level	Test method	Limit	Documentation
Dry process fibreboard used for IKEA flooring (≤ 8 mm), US EPA § 770.10	ASTM E1333 or ASTM D6007	0.13 ppm	<p>All of the following:</p> <ul style="list-style-type: none"> • TPC certificate at level according to US EPA TSCA Title VI § 770.10 • Proof of continued TPC certification for US EPA TSCA Title VI § 770.10, not older than 5 months (as required in <i>section 4.1.1.1</i>). <p>Documentation available at board manufacturer for a minimum 5 years and to be provided to IKEA on request:</p> <ul style="list-style-type: none"> • Production test results of formaldehyde • Quarterly test reports from TPC
	EN ISO 12460-5 Perforator	8.0 mg/100 g	<p>One of the two following options:</p> <p>i. Compliance to this limit as part of the TPC's certification program for US EPA TSCA Title VI § 770. The half-yearly verification document can be any of the following:</p> <ul style="list-style-type: none"> - attestation of compliance with IOS-MAT-0003 version 14, - attestation of compliance with this limit, - audit report or notification letter that states that the TPC has carried out the following points: <ul style="list-style-type: none"> · Verify test records from production control tests, · Carry out own test by the same test method. - Test report showing compliance with the limit and containing statement that it is made in connection with the certification <p>In order to use this option, the TPC shall be IKEA approved lab for EN ISO 12460-5.</p> <p>ii. TR per mill batch.</p>

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Table 3: Requirements for flat dry process fibreboard used for IKEA flooring (uncoated) (e.g. MDF, HDF) with maximum thickness 8 mm

Certification level	Test method	Limit	Documentation
Dry process fibreboard used for IKEA flooring ($\leq 8\text{mm}$), ULEF test frequency reduction	ASTM E1333 or ASTM D6007	Target value: 0.08 ppm Cap value: 0.11 ppm	All of the following: <ul style="list-style-type: none"> • TPC certificate related to US EPA TSCA Title VI § 770.18 at ULEF level • Proof of continued TPC certification, not older than 8 months • CARB approval for test frequency reduction, or US EPA TSCA approval for test frequency reduction issued by the TPC Documentation available at board manufacturer for a minimum 5 years and to be handed over to IKEA on request: <ul style="list-style-type: none"> • Production test results of formaldehyde • Half-yearly test reports from TPC
	EN ISO 12460-5 Perforator	8.0 mg/100 g	One of the two following options: <ol style="list-style-type: none"> Compliance to this limit as part of the TPC's certification program for US EPA TSCA Title VI § 770. The half-yearly verification document can be any of the following: <ul style="list-style-type: none"> - attestation of compliance with IOS-MAT-0003 version 14, - attestation of compliance with this limit, - audit report or notification letter that states that the TPC has carried out the following points: <ul style="list-style-type: none"> · Verify test records from production control tests, · Carry out own test by the same test method. - Test report showing compliance with the limit and containing statement that it is made in connection with the certification In order to use this option, the TPC shall be IKEA approved lab for EN ISO 12460-5. TR per mill batch.
Dry process fibreboard used for IKEA flooring ($\leq 8\text{mm}$), ULEF TPC exemption	ASTM E1333 or ASTM D6007	Target value: 0.04 ppm Cap value: 0.06 ppm	CARB approval for TPC exemption, or US EPA TSCA approval ³ for TPC exemption issued by the TPC
	EN ISO 12460-5 Perforator	8.0 mg/100 g	Yearly report

³ US EPA accepts CARB TPC exempt including test frequency reduction approvals.

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Table 3: Requirements for flat dry process fibreboard used for IKEA flooring (uncoated) (e.g. MDF, HDF) with maximum thickness 8 mm

Dry process fibreboard used for IKEA flooring ($\leq 8\text{mm}$), NAF TPC exemption	ASTM E1333 or ASTM D6007	Target value: 0.04 ppm Cap value: 0.06 ppm	CARB approval for TPC exemption, or US EPA TSCA approval ³ for TPC exemption issued by the TPC
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1.4.4 Flat plywood including veneer core and composite core

Table 4: Requirements for flat plywood, including veneer-based certified structural materials (uncoated)			
Board type	Test method	Requirement	Documentation
Flat plywood, all	ASTM E1333 or ASTM D6007	<p>All boards shall either be:</p> <ul style="list-style-type: none"> • Certified by an IKEA-approved TPC regarding CARB and US EPA TSCA Title VI, or • Exempted from certification with CARB approval and exempt from certification with TPC approval according to US EPA TSCA VI, or • Excluded as structural plywood due to certification according to: PS 1, PS 2, ASTM D5456 or ANSI A190.1 and made with PF glue or formaldehyde-free glue. <p>When a plywood is produced by applying a veneer to an existing core (<i>see definitions in section 5 under plywood for composite core, combination core and veneer core</i>), the core material shall comply with applicable requirement for the core material.</p> <p>The resulting veneer core plywood and composite core plywood or combined core plywood shall be certified as plywood if the core includes particleboard, dry process fibreboard and/or a plywood with TPC certification or TCP exempt.</p>	<p>All of the following shall be available:</p> <ul style="list-style-type: none"> • US EPA Declaration for final IKEA article containing such board material (except for listed certified structural plywood) • General Statement of Compliance along the supply chain, and except for listed US-certified structural plywood) • Statement of Compliance from IKEA supplier, <ul style="list-style-type: none"> - (in ECIS, EDIFACT, EDI, - or if not possible, then scanned invoice or bill of lading (which shall be uploaded to CONNECT)) • Markings on IKEA product <p>Requirements for documentation and marking along the supply chain are described in section 4.4.</p> <p>TPC which is not IKEA-approved: If there is a need to use a TPC which is not IKEA-approved then each mill batch of board that is used in to make the IKEA article shall be tested according to ASTM D6007.</p>
All flat plywood shall comply with the requirements above and the requirements for one of the following board certification levels:			

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Table 4: Requirements for flat plywood, including veneer-based certified structural materials (uncoated)			
Certification level	Test method	Limit	Documentation
Plywood US EPA § 770.10	ASTM E1333 or ASTM D6007	0.05 ppm	<p>All of the following:</p> <ul style="list-style-type: none"> • TPC certificate at level according to US EPA TSCA Title VI § 770.10 • Proof of continued TPC certification, not older than 5 months <p>Documentation available at board manufacturer for a minimum 5 years and to be handed over to IKEA on request – both of the following:</p> <ul style="list-style-type: none"> • Production test results of formaldehyde • Quarterly test reports from TPC
Plywood ULEF Test frequency reduction	ASTM E1333 or ASTM D6007	Cap value: 0.05 ppm	<p>All of the following:</p> <ul style="list-style-type: none"> • TPC certificate related to US EPA TSCA Title VI § 770.18 at ULEF level • Proof of continued TPC certification, not older than 8 months • CARB approval for test frequency reduction, or US EPA TSCA approval for test frequency reduction issued by the TPC. <p>Documentation available at board manufacturer for a minimum 5 years and to be handed over to IKEA on request:</p> <ul style="list-style-type: none"> • Production test results of formaldehyde • Half-yearly test reports from TPC
Plywood ULEF TPC exemption	ASTM E1333 or ASTM D6007	Target value: 0.04 ppm	CARB approval for TPC exemption, or US EPA TSCA approval ⁴ for TPC exemption issued by the TPC
		Cap value: 0.05 ppm	
Plywood NAF TPC exemption		Target value: 0.04 ppm	CARB approval for TPC exemption, or US EPA TSCA approval ⁵ for TPC exemption issued by the TPC
		Cap value: 0.05 ppm	

⁴ US EPA accepts CARB TPC exempt including test frequency reduction approvals.

⁵ US EPA accepts CARB TPC exempt including test frequency reduction approvals.



Table 4: Requirements for flat plywood, including veneer-based certified structural materials (uncoated)

Certification level	Test method	Limit	Documentation
Plywood, certified according to one of below standards and only use PF glue or formaldehyde-free glue (e.g. polymer isocyanate, pMDI – polymeric MDI): <ul style="list-style-type: none"> • Structural Plywood, PS 1 or PS 2 • Structural composite lumber, ASTM D5456 • Structural Glued Laminated Timber, ANSI A190.1 	EN ISO 12460-3 Gas analysis	0.7 mg/m ² h	All of the following: <ul style="list-style-type: none"> • Certificate according to applicable standard, • Test report <ul style="list-style-type: none"> - For PF glue: quarterly - For formaldehyde-free glue: yearly • SD from the board or glue producer describing what type of glue is used, e.g. PF, pMDI etc. not older than 5 years <p>Note: IKEA requires using PF glue or formaldehyde-free glue in order to be able to use the documentation system with certificates according to mentioned standards.</p> <p>Note: The certificate does not need to be from a CARB/US EPA nor IKEA-approved TPC.</p>

1.4.5 Modified requirements for flat particleboard, flat dry process fibreboard produced and sold in North America

Flat particleboard, flat dry process fibreboard have modified requirements if they fulfil **both** of the following criteria:

- the board is produced in North America;
- the board is used in articles only sold in North America.

If the board fulfils both of the above criteria, it shall still comply with *sections 1.4.1 to 1.4.3* but with allowed modifications as below:

- the limits according to EN ISO 12460-5 (Perforator method) and documentation requirements related to that test method do not apply.
- the limit by ASTM E1333 or ASTM D6007 for dry process fibreboard with maximum thickness 8 mm (no matter for floor or not), is changed to 0.13 ppm.



1.5 Requirements for layer-glued materials, OSB, wet process fibreboard, edge-glued wood panel, moulded board.

1.5.1 Layer-glued materials

1.5.1.1 Layer-glued materials with veneer or covering as surface included in the same pressing

Requirements for layer-glued material where the outer layer is veneer, paper or foil covering applied in the same pressing when making the layer-glued material, are given in *Table 5*.

Note: Such paper or foil coverings applied in the same pressing when making the layer-glued materials, need to comply with *section 1.6.1* before pressing them together with veneers.

Table 5: Layer-glued materials with veneer surface (uncoated) or paper, foil coverings			
Material	Test method	Limit	Documentation
Curved layer-glued materials with formaldehyde-containing glue (e.g. UF, MUF, PF)	EN ISO 12460-3, Gas analysis	1.2 mg/m ² h	One of the following: <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements Documented internal process control with production control test once every week, see <i>section 4.1.3</i> for documentation requirements TR per mill batch
Curved layer-glued material with dispersion/emulsion glues with very low formaldehyde content (e.g. some PVAc or VAE glues). This excludes UF, MUF, MF and PF glues or any containing those glues. Note: Addition of formaldehyde or formaldehyde donor as biocides in the glues is not allowed. See <i>IOS-MAT-0069</i> .	ISO 15373 to determine formaldehyde content page	600 ppm in liquid ready-to-use glue mixture	Both of the following: <ul style="list-style-type: none"> SD not older than 1 year, stating this limit is complied with TR for the ready to use glue mixture not older than 1 year Note: SD and TR are normally provided by the glue producer. Note: Based on SD with exact information about glue ID (product name, code) and glue producer, IKEA might contact the glue producer to obtain composition information. Confidentiality agreement can be arranged.
Curved layer-glued material with formaldehyde-free glue	EN 717-1 Chamber method	0.015 mg/m ³ (0.012 ppm)	<ul style="list-style-type: none"> SD not older than 1 year issued by the glue producer stating type of glue used with a statement that the glue complies with the definition of "Formaldehyde-free", see <i>section 5</i>.
Flat layer-glued material including LVL (only the LVL with veneer in parallel direction). Note: To be defined as flat layer-glued material, no layer below the facing veneer may be laid perpendicular to any other inner veneers. If any inner veneer is laid approximately perpendicular the material is regarded as plywood and shall comply with <i>Table 4</i> .			

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Table 5: Layer-glued materials with veneer surface (uncoated) or paper, foil coverings			
Material	Test method	Limit	Documentation
Flat layer-glued materials with formaldehyde-containing glue such as UF, MUF but not PF glue	EN ISO 12460-3 Gas analysis	0.7 mg/m ² h	<ul style="list-style-type: none"> SD issued by the flat layer-glued material producer stating that all veneer layers are laid approximately parallel, and specify the direction of surface veneer – perpendicular or parallel to the core veneer. <p>And one of the following:</p> <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements Documented internal process control with production control test once every week, see <i>section 4.1.3</i> for documentation requirements TR per mill batch
Flat layer-glued materials using PF glue	EN ISO 12460-3 Gas analysis	0.7 mg/m ² h	<ul style="list-style-type: none"> SD issued by the flat layer-glued material producer stating that all veneer layers are laid approximately parallel, and specify the direction of surface veneer – perpendicular or parallel to the core veneer. SD not older than 1 year, stating type of glue <p>And one of the following:</p> <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements Documented internal process control with production control test once every week, see <i>section 4.1.3</i> for documentation requirements Monthly TR from an IKEA approved laboratory. Reduction to TR every 3 months after 4 consecutive tests below the warning limit. If the warning limit is exceeded in a test, or if change of glue is made, another 4 consecutive monthly test reports with result below warning limit are required before switching to quarterly test. Warning limit: 0.4 mg/m²h TR per mill batch

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Table 5: Layer-glued materials with veneer surface (uncoated) or paper, foil coverings

Material	Test method	Limit	Documentation
<p>Flat layer-glued material with dispersion/emulsion glues with very low formaldehyde content (e.g. some PVAc or VAE glues). This excludes UF, MUF, MF and PF glues or any mixture containing those glues.</p> <p>Note: Addition of formaldehyde or formaldehyde donor as biocides in the glues is not allowed. See <i>IOS-MAT-0069</i>.</p>	ISO 15373 to determine formaldehyde content	600 ppm in liquid ready-to-use glue mixture	<ul style="list-style-type: none"> SD issued by the flat layer-glued material producer stating that all veneer layers are laid approximately parallel, and specifying the direction of surface veneer – perpendicular or parallel to the core veneer. <p>And both of the following:</p> <ul style="list-style-type: none"> SD not older than 1 year issued by the glue producer stating this limit is complied with. TR for the ready-to-use glue mixture not older than 1 year, which is normally provided by the glue producer. <p>Note: Based on glue SD with exact information about glue ID (product name, code) and glue producer, IKEA might contact the glue producer to obtain composition information. Confidentiality agreement can be arranged.</p>
Flat layer-glued material with formaldehyde-free glue	EN 717-1 Chamber method	0.015 mg/m ³ (0.012 ppm)	<p>Both of the following:</p> <ul style="list-style-type: none"> SD issued by the flat layer-glued material producer stating that all veneer layers are laid approximately parallel, and specify the direction of surface veneer – perpendicular or parallel to the core veneer. SD not older than 1 year issued by the glue producer stating type of glue used with a statement that the glue complies with the definition of “Formaldehyde-free”, see <i>section 5</i>.



Production control tests shall be carried out with the required frequency for each separate layer-glued material. Layer-glued materials with the same veneer, glue, gluing process and thickness of component, cured by high frequency heating shall be considered as different materials if the shapes are different. Layer-glued materials with the same veneer, glue, gluing process and thickness of component, cured by hot pressing can be considered as same materials even if the shapes are different, as long as the material producer is sure that the parameters and results are the same.

For formaldehyde-free layer-glued materials, the EN 717-1 limit is the limit for the additional emissions due to the glue application. Emissions from the solid wood raw material can be subtracted from the emissions of the glued material in order to assess compliance with the limit.

1.5.1.2 Layer-glued materials with veneer core, and board material as surface formed in the same pressing

Requirements are given in *Table 6*. Such boards can include particleboard, dry process fibreboard, OSB or hardboard; both flat and curved.

Note: It is flat plywood that shall comply with the requirement in section 1.4, if one surface is board, the other is veneer, and the core is with veneer in cross direction.

Note: These surface boards shall also comply with the requirements in this specification for the respective kind of board, before being pressed together with the veneers to make a layer-glued material.

Table 6: Requirements for layer-glued materials with board material as surface on one or both sides, included in the same pressing process as for layer-glued material			
Material	Test method	Limit	Documentation
Layer-glued materials with board materials as surface, using formaldehyde-containing glue (e.g. UF, MUF, PF)	EN ISO 12460-3, Gas analysis	1.2 mg/m ² h	One of the following: <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements Documented internal process control test once every week, see <i>section 4.1.3</i> for documentation requirements TR per mill batch
Layer-glued materials with board materials as surface, using dispersion/emulsion glues with very low formaldehyde content (e.g. some PVAc or VAE glues). This excludes UF, MUF, MF and PF glues or any mixture containing those glues. Note: Addition of formaldehyde or formaldehyde donor as biocides in the glues is not allowed. See <i>IOS-MAT-0069</i> .	ISO 15373 to determine formaldehyde content	600 ppm in liquid ready-to-use glue mixture	Both of the following: <ul style="list-style-type: none"> SD not older than 1 year, stating this limit is complied with. TR for the ready to use glue mixture not older than 1 year. <p>Note: SD and TR are normally provided by the glue producer. Note: Based on SD with exact information about glue ID (product name, code) and glue producer, IKEA might contact the glue producer to obtain composition information. Confidentiality agreement can be arranged.</p>

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Table 6: Requirements for layer-glued materials with board material as surface on one or both sides, included in the same pressing process as for layer-glued material			
Material	Test method	Limit	Documentation
Layer-glued materials with board materials as surface, using formaldehyde-free glue	EN 717-1 Chamber method	0.015 mg/m ³ (0.012 ppm)	SD not older than 1 year issued by the glue producer stating type of glue used and a statement that the glue complies with the definition of "Formaldehyde-free", see section 5.

For formaldehyde-free layer-glued materials with board material as surface, the EN 717-1 limit is the limit for the additional emissions due to the glue application. Emissions from the veneer and surface board can be subtracted from the emissions of the glued material in order to assess compliance with the limit.

1.5.2 Edge-glued wood panel

Gluing of edge-glued wood panel shall be done with low formaldehyde-emitting processes or formaldehyde-free glue, as defined in Table 7.

Table 7: Requirements for edge-glued wood panel			
Material	Test method	Limit	Documentation
Edge-glued wood panel with low formaldehyde-emitting processes	EN ISO 12460-3, Gas analysis	0.6 mg/m ² h	<p>Monthly TR from an IKEA approved laboratory. Test frequency can be reduced to:</p> <ul style="list-style-type: none"> • TR every 3 months after 3 consecutive tests below the warning limit. If the warning limit is exceeded in a test, or if change of glue is made, another 3 consecutive monthly test reports with result below warning limit are required before switching to quarterly test. <ul style="list-style-type: none"> - Warning limit: 0.4 mg/m²h • Or, representative quarterly testing for a group of materials with test result below 0.3mg/m²h for each test in the last 3 months. Once this limit is exceeded, this group of material need to start testing individually either by monthly test or quarterly test depending on their test results
<p>Edge-glued wood panel with dispersion/emulsion glues with very low formaldehyde content (e.g. some PVAc or VAE gules). This excludes UF, MUF, MF and PF glues or any mixture containing those glues.</p> <p>Note: Addition of formaldehyde or formaldehyde donor as biocides in the glues is not allowed. See IOS-MAT-0069.</p>	ISO 15373 to determine formaldehyde content	600 ppm in liquid ready-to-use glue mixture	<p>Both of the following:</p> <ul style="list-style-type: none"> • SD not older than 1 year, stating this limit is complied with. • TR for the ready to use glue mixture not older than 1 year. <p>Note: SD and TR are normally provided by the glue producer. Note: Based on SD with exact information about glue ID (product name, code) and glue producer, IKEA might contact the glue producer to obtain composition information. Confidentiality agreement can be arranged.</p>

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Material	Test method	Limit	Documentation
Edge-glued wood panel with formaldehyde-free glue	EN 717-1 Chamber method	0.015 mg/m ³ (0.012 ppm)	SD not older than 1 year issued by the glue producer stating type of glue used and a statement that the glue complies with the definition of "Formaldehyde-free", see <i>section 5</i> .

For formaldehyde-free edge-glued solid wood, the EN 717-1 limit is the limit for the additional emissions due to the glue application. Emissions from the solid wood raw material can be subtracted from the emissions of the glued material in order to assess compliance with the limit.



1.5.3 OSB

Table 8: Requirements for OSB			
Material	Test method	Limit	Documentation
OSB produced with formaldehyde-containing glues (UF, MUF), excluding PF glue	EN ISO 12460-5, Perforator	4.0 mg/100 g	One of the following: <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements TR per mill batch
OSB produced with PF glue	EN ISO 12460-5, Perforator	2.0 mg/100 g	Both of the following: <ul style="list-style-type: none"> Quarterly test report SD from the board/glue producer describing the gluing system used not older than 1 year
OSB produced with formaldehyde-free glue	EN ISO 12460-5, Perforator	2.0 mg/100 g	Both of the following: <ul style="list-style-type: none"> TR not older than 1 year SD from the board/glue producer describing the gluing system used not older than 1 year

1.5.4 Wet process fibreboard (including hardboard, medium board, softboard)

Table 9: Requirements for wet process fibreboard (uncoated)			
Material	Test method	Limit	Documentation
Wet process fibreboard produced with formaldehyde-containing glues (UF, MUF), excluding PF glue	EN ISO 12460-5, Perforator	4.0 mg/100 g	One of the following: <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements TR per mill batch
Wet process fibreboard produced with PF glues	EN ISO 12460-5, Perforator	2.0 mg/100 g	Both of the following: <ul style="list-style-type: none"> Quarterly test report SD from the board/glue producer describing the gluing system used not older than 1 year
Wet process fibreboard produced with dispersion/emulsion glues with very low formaldehyde content (e.g. some PVAc or VAE glues). This excludes UF, MUF, MF and PF glues or any mixture containing those glues. Note: Addition of formaldehyde or formaldehyde donor as biocides in the glues is not allowed. See <i>IOS-MAT-0069</i> .	ISO 15373 to determine formaldehyde content	600 ppm in liquid ready-to-use glue mixture	Both of the following: <ul style="list-style-type: none"> SD not older than 1 year, stating this limit is complied with. TR for the ready to use glue mixture not older than 1 year. <p>Note: SD and TR are normally provided by the glue producer. Note: Based on SD with exact information about glue ID (product name, code) and glue producer, IKEA might contact the glue producer to obtain composition information. Confidentiality agreement can be arranged.</p>
Wet process fibreboard produced with formaldehyde-free glue	EN ISO 12460-5, Perforator	2.0 mg/100 g	Both of the following: <ul style="list-style-type: none"> TR not older than 1 year SD from the board producer describing the gluing system used not older than 1 year
Wet process fibreboard produced without any glue	EN ISO 12460-5, Perforator	2.0 mg/100 g	SD from the board producer describing the process where no glue is used not older than 1 year



1.5.5 3D moulded particleboard

Table 10: Requirements for 3D moulded particleboard (uncoated)			
Material	Test method	Limit	Documentation
Moulded particleboard	EN ISO 12460-5 Perforator	4.0 mg/100 g	One of the following: <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements TR per mill batch

Note: The following are considered as flat particleboard, and requirements according to section 1.4 apply, not the requirements according to *Table 10*:

- Particleboard that is produced as flat board, and then given a shape through pressing/moulding (the requirements according to section 1.4 shall be verified before the shaping).
- Particles moulded into a flat final board, but with texture or shaped/dented surface.

1.5.6 3D moulded dry process fibreboard

Table 11: Requirements for 3D moulded dry process fibreboard (uncoated)			
Material	Test method	Limit	Documentation
Moulded dry process fibreboard	EN ISO 12460-5, Perforator	5.0 mg/100 g	One of the following: <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements TR per mill batch

Note: The following are considered as dry process fibreboard, and requirements according to section 1.4 apply, not the requirements according to *Table 11*:

- Dry process fibreboard that is produced as flat board, and then given a shape through pressing/moulding (the requirements according to section 1.4 shall be verified before the shaping).
- Fibres moulded into a flat final board, but with texture or shaped/dented surface.

1.6 Requirements for surface coverings, edge-band made of wood, reconstituted veneer and gluing processes

1.6.1 Surface covering

Surface covering includes foil, laminates and plastic or paper edge-band. Testing of all coverings mentioned in *Table 12 and Table 13* except for uncured impregnated paper, shall be done on the covering itself before application to a substrate.

Table 12: Requirements for paper covering/paper foil			
Material	Test method	Limit	Documentation
Paper covering with coating			
Paper coverings with coating, and with impregnation (e.g. pre-impregnated fully cured paper)	EN ISO 12460-3 Gas analysis	1.3 mg/m ² h	One of the following: <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements TR not older than 1 year
Paper covering with coating, and no impregnation under the coating (e.g. LBWP)			

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Table 12: Requirements for paper covering/paper foil			
Material	Test method	Limit	Documentation
Paper covering without coating, but with impregnation			
Uncured impregnated paper (e.g. melamine paper)	EN ISO 12460-3 Gas analysis	1.3 mg/m ² h	<p>One of the following:</p> <ul style="list-style-type: none"> Supervision for paper application on substrate, see <i>section 4.1.2</i> for documentation requirements TR after paper application not older than 1 year <p>Tests shall be made on the combination of this paper and its substrate after the curing, which happens during application to its substrate, e.g. MFC. Un-cured paper does not need testing.</p> <p>Note: The substrate itself needs to comply with relevant requirements before applying the uncured impregnated paper onto it.</p>
Cured impregnated paper (e.g. balance paper with impregnation)	EN ISO 12460-3 Gas analysis	1.3 mg/m ² h	<p>One of the following:</p> <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements TR not older than 1 year
Laminate (cured impregnated papers, e.g. high pressure laminate)			
Paper covering without coating, without impregnation			
Formaldehyde-containing paper	EN ISO 12460-3 Gas analysis	1.3 mg/m ² h	<p>One of the following:</p> <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements TR not older than 1 year
Formaldehyde-free paper	EN 717-1 Chamber method	0.015 mg/m ³ (0.012 ppm)	SD not older than 1 year issued by the covering producer stating the paper covering complies with the definition of "Formaldehyde-free", see <i>section 5</i> .

Table 13: Requirements for plastic covering			
Material	Test method	Limit	Documentation
Plastic covering with formaldehyde-containing coating	EN ISO 12460-3 Gas analysis	1.3 mg/m ² h	<p>One of the following:</p> <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements TR not older than 1 year
Plastic covering with formaldehyde-free coating	EN 717-1 Chamber method	0.015 mg/m ³ (0.012 ppm)	SD not older than 1 year issued by the covering or coating producer stating the plastic covering complies with the definition of "Formaldehyde-free", see <i>section 5</i> .
Plastic covering without coating	-		SD from covering producer, not older than 1 year describing what type of material the covering is made of, and that there is no coating on it.



1.6.2 Edge-band made of wood

Table 14: Requirements for edge-band made of wood			
Material	Test method	Limit	Documentation
Edge-band made of layer-glued material with formaldehyde-containing glue	EN ISO 12460-3 Gas analysis	1.3 mg/m ² h	One of the following: <ul style="list-style-type: none"> Supervision, see <i>section 4.1.2</i> for documentation requirements TR not older than 1 year
Edge-band made of layer-glued material with dispersion/emulsion glues with very low formaldehyde content (e.g. some PVAc or VAE glues). This excludes UF, MUF, MF and PF glues or any mixture containing those glues. Note: Addition of formaldehyde or formaldehyde donor as biocides in the glues is not allowed. See <i>IOS-MAT-0069</i> .	ISO 15373 to determine formaldehyde content	600 ppm in liquid ready-to-use glue mixture	Both of the following: <ul style="list-style-type: none"> SD not older than 1 year, stating this limit is complied with. TR for the ready to use glue mixture not older than 1 year. Note: SD and TR are normally provided by the glue producer. Note: Based on SD with exact information about glue ID (product name, code) and glue producer, IKEA might contact the glue producer to obtain composition information. Confidentiality agreement can be arranged.
Edge-band made of layer-glued material with formaldehyde-free glue	EN 717-1 Chamber method	0.015 mg/m ³ (0.012 ppm)	SD not older than 1 year issued by the glue producer stating type of glue used and a statement that the glue complies with the definition of "Formaldehyde-free", see <i>section 5</i> .
Edge-band made of solid wood without glue	-		No formaldehyde requirement applies to the solid wood.

Note: For conditioning requirement see *section 4.2.3*.

Note: Coverings made of plastic and paper also include edge-bands made of the same materials.

Note: Coverings with the same base material and coating and only differing in printing ink and pattern only need to test two representative samples, provided that the ink used is formaldehyde-free. An SD stating that it is formaldehyde-free shall be uploaded to Connect and renewed once every second year.



1.6.3 Reconstituted veneer

Table 15: Requirements for reconstituted veneer including fleece, if any (before gluing to any substrate)			
Note: If one of the glues, either in veneer joint or gluing of the fleece is formaldehyde containing glue, the requirements for reconstituted veneer using formaldehyde-containing glue apply.			
Material	Test method	Limit	Documentation
Reconstituted veneer using formaldehyde-containing glue	EN ISO 12460-3 Gas analysis	1.2 mg/m ² h	Monthly test report from an IKEA approved laboratory. Reduction to test report every 3 months after 4 consecutive tests below the warning limit. If the warning limit is exceeded in a test, or if change of glue is made, another 4 consecutive monthly test reports with result below warning limit are required before switching to quarterly test. Warning limit: 0.6 mg/m ² h
Reconstructed veneer with dispersion/emulsion glues with very low formaldehyde content (e.g. some PVAc or VAE glues). This excludes UF, MUF, MF and PF glues or any mixture containing those glues. Note: Addition of formaldehyde or formaldehyde donor as biocides in the glues is not allowed. See <i>IOS-MAT-0069</i> .	ISO 15373 to determine formaldehyde content	600 ppm in liquid ready-to-use glue mixture	Both of the following: <ul style="list-style-type: none"> • SD not older than 1 year, stating this limit is complied with. • TR for the ready to use glue mixture not older than 1 year. Note: SD and TR are normally provided by the glue producer. Note: Based on SD with exact information about glue ID (product name, code) and glue producer, IKEA might contact the glue producer to obtain composition information. Confidentiality agreement can be arranged.
Reconstituted veneer with formaldehyde-free glue	EN 717-1 Chamber method	0.015 mg/m ³ (0.012 ppm)	SD not older than 1 year issued by the glue producer stating type of glue used and a statement that the glue complies with the definition of "Formaldehyde-free", see <i>section 5</i> .



1.6.4 Gluing processes

Table 16: Requirements for gluing processes (excluding those listed in previous separate requirement tables), including:			
<ul style="list-style-type: none"> • Cardboard to wood-based material • Application of surface coverings (e.g. foils, laminates, cured melamine paper, edge-band) • Board to board in order to create a thicker board, in flat or curved shapes • Board-on-frame and board-on-stiles constructions (including such constructions with bamboo) • Gluing of veneer or other wood-based material/panel to substrate 			
Process	Test method	Limit	Documentation
<p>All the gluing processes listed in the scope of this table shall be carried out with formaldehyde-free glues or polymer glues (dispersion, emulsion) with very low formaldehyde content, according to one of the two requirement rows below.</p> <p>Note: If a veneer or a thin solid wood panel is within the definition of veneer, then gluing this to a substrate or to each other may result either in plywood requiring US EPA certification according to <i>Table 4</i> or in a laminated product.</p>			
Gluing with formaldehyde-free glues	EN 717-1 Chamber method	0.015 mg/m ³ (0.012 ppm)	SD not older than 1 year issued by the glue producer stating type of glue used and a statement that the glue complies with the definition of "Formaldehyde-free", see <i>section 5</i> .
Gluing with dispersion/emulsion glues with very low formaldehyde content (e.g. some PVAc or VAE glues). This excludes UF, MUF, MF and PF glues or any mixture containing those glues. Note: Concerning restrictions on formaldehyde and biocides. See <i>IOS-MAT-0069</i> .	ISO 15373 to determine formaldehyde content	600 ppm in liquid ready-to-use glue mixture	Both of the following: <ul style="list-style-type: none"> • SD not older than 1 year, stating this limit is complied with. • TR for the ready to use glue mixture not older than 1 year. <p>Note: SD and TR are normally provided by the glue producer. Note: Based on SD with exact information about glue ID (product name, code) and glue producer, IKEA might contact glue producer to obtain composition information, Confidentiality agreement can be arranged.</p>

Gluing processes refer to gluing together furniture parts, and the glues referred to are glues for such assembly.

In case of need to verify a formaldehyde-free resin/glue, the limit value of 0.015 mg/m³ by EN 717-1 can be used. The limit value is the maximum allowed increase, when the resin/glue to be tested has been applied to a hardboard substrate that was produced using the wet process without addition of resins/glue.

Note: Each material used in the above processes need to comply with relevant requirements for that individual material before gluing, e.g. flat particleboard shall comply with *section 0* before gluing.

2 Japan F**** requirements

Requirements for due care under *section 1.1* and requirements under *section 1.3*, *section 1.6.4*, *section 3*, *section 4.2* and *section 4.3* are also valid for Japan F****.



2.1 Scope of the F**** requirements

These requirements only apply to products for which compliance according to *section 2.3* is explicitly stated in the TED. These build-in products, and building materials (e.g. hard flooring), to be sold in Japan, must comply with F**** requirements. For materials in other products for the Japanese market, the normal requirements in *section 1* apply.

2.2 Examples of products and materials in the scope of the F**** requirements

Examples of product types covered: kitchen and bathroom cabinets, and wardrobes intended for permanent fixture to building.

2.3 Requirements for build-in products and building materials to be sold in Japan

Reference in Technical Description for IKEA products to "Table 2.3" shall be seen as reference to "section 2.3".

A special procedure for Japan F**** comprises:

- a. IKEA supplier submits cross-sections, illustrating the structure for its products or components.
- b. IKEA approved test laboratory for F**** evaluates the cross-sections. The laboratory may require additional information or ask for sending in samples for F**** test, and decide which materials are exempted materials from F**** requirements.
- c. In most cases, obtaining an MFN certificate issued by the Japanese Ministry (Ministry of Land, Infrastructure, Transport and Tourism, MLIT).

In order to comply with the Japan F**** requirements, each individual wood and wood-based material or combined material must be either F**** compliant with MFN certificate before start of production or exempted material. The exempted material requires less documents.

An MFN certificate application may take four to six months, so application needs to be initiated by the IKEA supplier in collaboration with IKEA well ahead of production start.

It may take several cross-sections including cut view drawings of the materials or material combinations to fully describe and illustrate a product related to all possible sources of formaldehyde.

Examples of some constructions that require cross-sections are given in *section 2.3.2*. A cross-section template is provided by IKEA through Supplier Portal.

2.3.1 Requirements for individual wood and wood-based material and combined materials

The MFN certificate can be based on the cross-section of the individual wood and wood-based material or the combined material.

Gluing process requirements in *Table 16* apply for F**** articles.

Exemptions for gluing processes (bullet points *a* to *c*) and materials (bullet point *a*) listed in *Scope* do not apply for F**** articles.

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Table 17: Requirements for Japan F**** materials and combined materials (except exempted materials)

Material	Test method	Limit	Documentation
Individual wood and wood-based material (e.g. particleboard, MDF, HDF, hardboard, solid wood, glued solid wood panel, plywood), which is not part of a combined material in the final product	Desiccator methods: <ul style="list-style-type: none"> JIS A 1460 for particleboard and fibreboard JAS MAFF for plywood JAS MAFF for glued solid wood panel 	Average value 0.3 mg/l (i.e. max allowed average value is 0.349 mg/l) No individual value may exceed 0.400 mg/l	All of the following: <ul style="list-style-type: none"> MFN certificate, including pages on affected materials. TR from approved laboratory showing fulfilment of F**** for each mill batch. Cross-section from material producer, not older than 1 year if no change compared to cross-section its MFN certificate. Yearly SD from IKEA supplier stating compliance with <i>section 2.3.3</i>.
Combined material (e.g. glued solid wood panel with paint, melamine-faced particleboard, MDF with paint or foil, board with veneer)	Desiccator methods: <ul style="list-style-type: none"> JIS A 1460 for particleboard and fibreboard JAS MAFF for plywood JAS MAFF for glued solid wood panel 	Average value 0.3 mg/l (i.e. max allowed average value is 0.349 mg/l) No individual value may exceed 0.400 mg/l	All of the following: <ul style="list-style-type: none"> MFN certificate for the combined material, including pages on affected combined materials. TR from approved laboratory showing fulfilment of F**** for each mill batch of the combined material. Cross-section from the supplier of the combined material. The validity of the cross-section in Connect is one year and can be prolonged every 1 year, if there is no change compared to cross-section its MFN certificate. MFN certificate for each individual wood and wood-based materials in the combined material cross-section. TR from IKEA-approved laboratory for each individual wood and wood-based materials in the combined material, not older than 1 year. Yearly SD from IKEA supplier stating compliance with <i>section 2.3.3</i>. And supporting documents listed on above cross-section: <ul style="list-style-type: none"> SD for any formaldehyde-free materials in the combined materials, not older than 1 year. Safety Data Sheet for any chemical products used to make the combined material (e.g. surface coatings, including coatings pre-applied on the covering; or glue for instance to apply covering or veneer to the board) not older than 5 years.

For documents needed to be uploaded to Connect, see *Appendix B*. The way for registration is also specified in *Appendix B*. All material/process/component combination shall link to IKEA articles.



2.3.1.1 Renewal of MFN certificate, cross-section and other documents in Table 17

The cross-sections and MFN certificate shall be updated and informed to IKEA before any change in materials or chemical products. If any material is changed, the documents directly linked to it shall be renewed and additionally any cross-section including this material shall be renewed. Based on the evaluation of new cross-section by F**** laboratory, a new MFN certificate may need to be issued.

The requirement of renewal applies also to all other documents in case of change. An MFN certificate is valid as long as there is no change to the concerned materials or combined materials.

2.3.2 Cross-sections examples

Some examples of cross-sections:

- An individual material – particleboard without any surface treatment as a rail in a kitchen cabinet.
- A glass door with aluminium frame in a kitchen cabinet (they may fall into the exempted material, but still need to submit cross-section with material information for the evaluation)
- A combined material – cabinet side panel made of glued solid wood panel with lacquer
- A combined material – counter top made with particleboard, melamine covering on both sides, hot-melt glue, plastic edge band and surface coating on the edge band.

2.3.3 Additional quality assurance requirements for production of build-in products and building materials to be sold in Japan

All below points need to be secured and SD issued and uploaded to Connect. The production of F**** products may not be continuous production according to orders, but each time when restarting the production of Japan F**** products, all below points shall be secured and documented.

The supplier shall implement a documented system for ensuring that only the materials and components compliant with F**** requirements are used for producing build-in products to be sold in Japan, and are separated from those materials and components with higher formaldehyde levels. The system shall include the below points:

Separation of materials fulfilling different formaldehyde requirements, if any

1. The internal documents of drawings, bill of materials, component lists and purchase orders for such materials must have a unique number, name and code.
2. Materials with clear and different identity through e.g. permanent marking on each piece or colouring of the core material, or marking, labelling, tagging the packaging or container, shall never be mixed up either at the storage area or production areas.
3. During production, materials with higher level of formaldehyde shall not be present at the same machine/working place at the same time.



Repairing

4. Repairing is only allowed to take place in a dedicated area where only materials and components fulfilling F**** are handled. Repairing shall never be made at sub-or sub-sub-suppliers.

Outsourcing

5. Outsourcing shall not be carried out without fulfilling the same quality assurance requirements in this section at the sub-supplier, plus the requirements for due care and communication along the supply chain in *section 1.1*.

Mass balance

6. A quantity balance must be implemented for formaldehyde-containing materials. The following parameters are referred to a defined period of time between stock controls and they can be expressed in terms of volume, surface or weight:

QI: Quantity of incoming (materials)

QO: Quantity of outcome material in finished products

PW: Process waste (material)

QR: Quantity rejected (semi-finished and finished products)

DIF: Difference between the initial and final stock (materials) (final stock quantity minus initial stock quantity)

$$QI = QO + PW + QR + DIF$$

The quantity balance must be verified before delivery for each article and production date stamp.

If the left part is not equal to or greater than the right, final products must be segregated until the reasons have been analysed and corrected.

3 Quality assurance

3.1 Process control

Process control is always needed except when using formaldehyde-free glue or dispersion/emulsion-glues with very low formaldehyde content, no matter how frequently formaldehyde concentration/emissions are tested. This means for instance, that if a producer performs mill batch testing, they still need to have process control. All process parameters with tolerance need to be set after trial of production and discussion with the glue producer. The parameters need to be monitored and recorded at certain frequency depending on the variations in formaldehyde level.

When the measured value of any parameter is approaching its process control tolerance limit, the process needs to be adjusted.

3.2 Warning limits

The limits given in this specification, except target values, are cap values and shall never be exceeded for any materials or products when they are delivered to IKEA. Considering possible variations due to raw materials, glue, process control parameters and test methods, it is necessary to set a warning limit based on the cap value and the variation level.

In a start-up or changing phase for layer-glued material with documented internal process control, the material producer shall carry out more frequent tests with at least 5 consecutive results below the warning limits before switching to the minimum test frequency.

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In running production for all materials and gluing processes, when the warning limit is exceeded, an investigation shall be triggered, e.g. additional tests for the same batch, adjustment to glue and production process shall be made if relevant, and then followed by more frequent tests in order to confirm that the production is consistently back within the warning limits before reducing to the minimum test frequency.

A warning limit can, as a suggestion, start with 80 % of the cap value, unless otherwise stated in this specification. It can be adjusted by the material/component manufacturer, based on the level of variation.

3.3 Traceability

The IKEA supplier shall secure that there is traceability of all materials/components with formaldehyde-containing glues, in each step in the supply chain back to the original use of the glue. Traceability means that the IKEA supplier shall, for each date stamp of the final sales article, be able to trace which production batches of each material and component in the article were used.

3.4 Avoiding mixing up

A supplier, board manufacturer, component manufacturer or gluing process-operator that uses wood-based materials with different formaldehyde levels, shall ensure separation of those materials clearly for in-coming material storage, and semi-product storage in order to avoid possible mixing up.

4 Documentation

Language of all documents required to be in Connect shall be in English, except for Japan F**** or if otherwise stated. However, it is always acceptable to have other languages alongside English, as long as all information is given in English.

4.1 Documentation systems

4.1.1 TPC certification

A certificate is issued by a TPC after the positive result from evaluation on board producer's quality system, performance of test laboratory for production control, board emission level, and instruction to board producer for required labelling and marking.

There are follow up on-site audit every quarter, or every half-year if the board is approved for ULEF test frequency reduction. After audit there shall be an audit report to board producer to address the TPC's findings, conclusion, and also test results from TPC's laboratory on samples picked up from production line. If a board producer is not willing to share the audit report, an attestation by TPC with clear conclusion of compliance is also accepted.



The TPC certificate and the PoCTC can be presented in different ways by different TPCs, with the following three possible scenarios:

Scenario	Description
A	TPC certificate is renewed every certain number of years. The proof of continued TPC certification is issued after each audit.
B	TPC certificate is not renewed after the initial certificate. The proof of continued TPC certification is issued after each audit.
C	TPC certificate is renewed after each audit, meaning there is no separate proof of continued TPC certification. The function of PoCTC is replaced by this TPC certificate.

Note: For document content requirement on GSoC, SoC, Markings on goods, see section 4.4

4.1.1.1 Document content of TPC certificate and proof of continued TPC certification

The TPC certificate is a document stating that the manufacturer has been certified by a TPC. The proof of continued TPC certification (PoCTC) is a document showing that the TPC certificate is still valid.

For certification of materials for IKEA products, the following information shall be included in the TPC certificate:

- The board product range of the certification, e.g. listing all individual thicknesses, a range of thicknesses or a board product series with a special name. If for some reason, this information is not available in TPC certificate, the board manufacturer shall list the equivalent information in GSoC.
- If there is more than one production line on the same production site, TPC certificate shall state clearly which production line is covered.
- The board certification level shall be indicated. If no certification level indicated, it will be considered as § 770.10
- Name and address of the production site.

The proof of continued TPC certification can either be the audit report itself or a notification letter or attestation certifying that the board producer is still in compliance. It shall include:

- which period is covered by the PoCTC;
- reference to the TPC certificate number.

The proof of continued TPC certification (PoCTC) shall be registered in Connect with active-from date as the first date of validity if it is stated in the PoCTC, otherwise the date of issue. The PoCTC is required in Connect after the first re-audit after the original TPC certification (i.e. within five months of the TPC certificate, or within eight months in case of ULEF test frequency reduction).

If an IKEA supplier is still, after five months (or eight months, depending on the time period specified in the documentation requirements in *section 1.4*), using batches of board that were produced within the five (or eight) months active period of the PoCTC, the IKEA supplier can re-



register the PoCTC in Connect for a maximum new time period corresponding to the length of the original active period, i.e. no longer than five (or eight) additional months, and shall then add a comment explaining why the PoCTC is still active in the Connect "comment" field. If the same situation still applies at the end of such an extended period, the IKEA supplier can renew the extension again (for maximum five/eight months), with a new comment.

4.1.1.2 For production control using different test methods from the TPC test methods Different production control test methods from ASTM D 6007 maybe used after TPC's approval for board materials in *Table 1*, *Table 2* and *Table 3*. But the quality control limit (QCL) shall be able to comply with both ASTM limits and EN perforator limits.

Note: IKEA is planning to remove the perforator as a requirement method and recommends the board manufacturer to instead work with an emission-based production control method.

4.1.2 Supervision and its documentation requirements

Supervision, as an option for documentation for some kinds of materials or gluing processes according to *sections 1.5* and *1.6* shall fulfil the following conditions:

- Follow the principles of European Supervision (DIBt 100 including thickness range)
- Be made by a third party (supervising body) approved by IKEA for the test method being supervised
- Assessment by the supervising body if the production can fulfil IKEA formaldehyde limits
- A minimum of 2 visits per year by the supervising body or by a competent laboratory contracted to the supervising body compare
- Minimum yearly review of the Q-assurance system by supervising body
- Minimum yearly review of the production quality control laboratory by supervising body
- Minimum yearly calibration test between the production quality control laboratory and the supervising body
- If an alternative production control method is used for quality control, the correlation between the used method and the method defined by IKEA shall be checked every 6 months.

4.1.2.1 Required documents

- A proof of continued supervision, i.e. audit report or attestation; not older than 8 months, with a conclusion that the production/material is in compliance IOS-MAT-0003 version 14, or in compliance with the specific IKEA limits in *section 1.5* and *1.6*.

The following documents shall be kept at the board producer for a minimum of five years and be provided to IKEA upon request:

- Test reports from supervision
- Test results from board production

4.1.3 Documented internal process control

Documented internal process control, as a documentation option for some materials according to *section 1.5*, shall fulfil the following conditions:



- A process scheme – a document showing the control points, the correct parameters (e.g. machine settings, relative humidity, temperature, moisture content of the raw material, etc.) and their tolerances, and check frequency.
- Logbook verifying that these process parameters have been implemented in production of each batch.
- Production tests at a frequency described in the requirement table for each separate material, unless otherwise stated. The production tests shall be performed either by IKEA approved laboratory or by internal laboratories compliant with *sections 4.2.1* or *4.2.2*.
- On request, all the above documents and information shall be shown to IKEA.

|| 4.1.3.1 Required documents

One of the two options:

- Test report from IKEA approved laboratory, or
- Test carried out by a qualified internal test laboratory according to *section 4.2.1* with documents requested by point g under the same section.

4.1.4 Mill batch test

When carrying out mill batch testing as an option for verification of requirements in *section 1.5*, the testing can be carried out in either of the following ways:

- Mill batch test report from IKEA approved laboratory, or
- Test carried out by a qualified internal test laboratory according to *section 4.2.1* with documents requested by point g under the same section.

4.2 Testing

4.2.1 Requirements for internal test laboratory using same test methods as required according to this specification

Material manufacturer or IKEA supplier may set up their internal laboratory for documented internal process control (DIPC), or mill batch test (except for Japan F****), instead of arranging all the tests at IKEA approved laboratories.

In this case, the internal laboratory shall:

- a. have standard operation procedure for relevant tests.
- b. have full records of original test data and calibration of the test devices.
- c. show by training certificate that the operator has been trained by IKEA approved laboratory, test apparatus provider or experienced operator, who has been running comparison test successfully in last two years, or equivalent.
- d. have comparison tests with IKEA approved laboratory (IKEA approved laboratory for comparison test can be found in TRS) before using their own laboratory and then carry out quarterly comparison tests. Each comparison test shall include two sets of homogeneous samples (e.g. homogeneous particleboard or fibreboard samples) with different formaldehyde levels above and below IKEA limits, and around the limits of the materials tested at internal laboratory. The deviation from the result of IKEA approved laboratory shall for EN ISO 12460-3 be within $\pm 0.2 \text{ mg/m}^2\text{h}$, if the emission value is $\leq 1.0 \text{ mg/m}^2\text{h}$; and not deviate more than 20 %, if the emission value is $> 1.0 \text{ mg/m}^2\text{h}$. For EN ISO 12460-5 the deviation from the result of IKEA approved laboratory shall be within $\pm 0.5 \text{ mg/100 g}$. The comparison test report with results from the two test laboratories shall be compiled by the IKEA approved laboratory.



Note: In order to reduce sample deviation, samples provided by the IKEA approved laboratory can be a different material type than the material types normally tested at an internal test laboratory.

- e. have quarterly tests from IKEA approved laboratory on at least two samples from the materials for IKEA products. Sampling shall not be limited to one or one group of materials, but shall over a longer period, e.g. one year, be representative of the whole range of materials.
- f. carry out regular production control tests at the internal laboratory according to the frequency described in *section 1* and in parallel to the tests described in above points *d* and *e*.

The IKEA supplier shall:

- g. upload quarterly test result summary for tests performed at an internal laboratory, which stated in *section 4.1.3* and *4.1.4*, quarterly test reports on at least two materials for IKEA products and quarterly comparison test reports to Connect.
- h. secure all above requirements at the laboratory, and have access to the information required in *a*, *b* and *c*.

4.2.2 Requirement for internal test laboratory using different test methods than required according to this specification

For mill batch testing (except for Japan F****) and documented internal process control (DIPC), it is possible to use other test methods for production control than EN ISO 12460-3 or EN ISO 12460-5, provided that the internal test laboratory:

- complies with the same requirements under *section 4.2.1* point *a*, *b*, *c*, *e*, *f*.
- establishes correlation between EN ISO 12460-5/EN ISO 12460-3 and these alternative production control methods, with a correlation factor above 0.9 (based on at least 5 data points) together with an IKEA approved laboratory. The correlation shall be reviewed every six months.

IKEA supplier shall:

- comply with point *g* and *h*, except comparison test reports under *section 4.2.1*,
- upload the reports for correlation and six-monthly review to Connect.



4.2.3 Sampling and conditioning

Applicable for all testing: All samples are to be handled and conditioned as specified in relevant test standard.

Furthermore:

- Samples for production control tests under TPC certification or supervision shall be handled according to the certified quality assurance system.
- Samples for comparison tests or correlation tests (between internal laboratory and IKEA approved laboratory) should be handled according to the instruction from the IKEA approved laboratory.
- Other samples shall be packaged in plastic. After arrival to the laboratory, the sample shall be stored, for temperature equalisation purposes, for a minimum of 24 hours in normal room air conditions (still wrapped in plastic) before testing, no other preconditioning shall be made. **Note:** This also applies to coverings.

Sampling shall be made, unless otherwise specified, before any surface coating or covering has been applied. Sampling for testing of unfinished material shall be done in the stage immediately preceding the application of the surface coating or surface covering.

For ASTM D6007 and ASTM E1333 compliance testing according to CARB CCR 93120 Title 17 and US EPA TSCA Title VI § 770.20, nine specimens are to be taken evenly distributed over the entire board. The nine specimens shall be tested in three groups with three specimens for each, resulting in three test results that shall be averaged to represent the panel.

Further information relating to sampling, conditioning and calculation of result, is available in specification IOS-TM-0010.

4.2.4 Verifying test and test report information

All test reports required according to minimum test demands this specification, shall be from IKEA approved test laboratory unless otherwise stated. Test from IKEA approved laboratory always has precedence in assessing compliance. Contact IKEA for a list of approved laboratories.

A test report shall state:

- The orderer of the test report (company name and address)
- Issuer of the test report (an IKEA approved laboratory)
- Sample description (see below)
- Test method and when relevant the sampling procedure used
- Test result including detection limit

A test report shall contain the following sample description:

- Name of material/component producer and/or gluing-process operator
- Production location, as well as specific production line, if the producer has more than one production site or more than one production line on the same site
- Material description (e.g. type of board, thickness, board certification level, type of glue, surface material if any)
- Material identification (trade name, article code, and/or other identification)
- Production date, material batch number or equivalent



4.2.5 Test result summaries

Test result summary allowed in section 4.1.3 and 4.1.4, (except for Japan F****) shall be uploaded to Connect. If the test is carried out at an IKEA approved laboratory, either the quarterly test result summary or individual test report shall be uploaded to Connect.

The following shall be included in the summary of test results:

- Material description and material identification, as described in section 4.2.4 as part of required sample description for test reports;
- For each test result, the following shall be given:
 - Production batch number and/or production date of the material
 - Test result
 - Date of testing
 - For hot-pressed layer-glued, where different shapes may be regarded as the same material, as long as the same thickness etc., see section 1.5.1.1, the actual tested shape shall also be given for each test result.

4.2.6 Test method clarification

For EN ISO 12460-5, Perforator, the results are expressed as mg/100 g dry materials recalculated to 6.5 % moisture content according to the standard.

For ASTM D6007 or E1333, note the different loading factors: 0.43 m²/m³ for particleboard and plywood, and 0.26 m²/m³ for MDF/HDF.

4.3 Archiving

4.3.1 Connect document uploading and renewal

Verification documents as required in sections 1, 2 and 4 including relevant documents for comparison test and alternative test methods, shall be available in the IKEA Connect Database for below cases, unless otherwise stated. (For instance if it is instead stated that the document shall be available to IKEA on request):

- before first delivery,
- and then renewed according to the frequency stated in the requirements tables,
- or when any changes are made which may increase the formaldehyde level (e.g. change of material producers, change of glue, and adjustment of gluing process).

4.3.2 Connect registration

All the documents that shall be uploaded in Connect are summarized in *Appendix B*, which also gives the rules for how they should be registered.

4.3.2.1 Material combination

- For wood-based board listed in section 1.4 a separate material combination shall be created in Connect for each separate thickness.
- When a material combination has material type: "board material, flat" in Connect, the type of board material must be selected from the "sub type" menu under "board material, flat" in Connect. E.g. "Particleboard Foiled".



4.3.2.2 US EPA Declaration

The IKEA supplier shall create a US EPA declaration in Connect for each article that contains any board in *section 1.4* (except for listed certified structural plywood). Exception: The US EPA declaration is not required if Connect defines that article number as voluntary.

Note: Voluntary in Connect means that the article is not listed under the dashboard indicator "Article without valid US EPA TSCA VI", even when there is no US EPA declaration for that article.

The US EPA declaration is a collection of TPC certificates, and their covered board materials used in a specific IKEA Article. A TPC certificate covers the boards produced after its issuing date. "Applies to Unit Load (UL) date stamp week from" is the first week when all boards covered by selected TPC certificates are placed in a unit load of the IKEA Article. A TPC certificate shall not be selected for US EPA Declaration, if the certificate covered board has not been placed in a unit load of the specific IKEA Article.

The IKEA supplier shall replace an existing US EPA declaration for the IKEA article in Connect in the following cases:

- A new board with a new TPC certificate is used in this article
- A board is no longer used in this_article
- A new TPC certificate is issued for a board in this article

4.3.3 Production test results

Production test results shall be retained for minimum 5 years and shall be available to IKEA upon request.

4.4 Special documentation and marking requirements for flat particleboard, flat dry process fibreboard and flat plywood

This section only applies to board materials regulated by US EPA § 770.10, which are the board materials in *section 1.4* except listed certified structural plywood.

Any incoming material like unfinished board, component or pre-fabricated part, which contains the regulated board materials shall not be used for IKEA products if they are not labelled as compliant to US EPA TSCA Title VI, or missing any verifying document in *section 1.4*.

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Table 19: Documentation and marking requirements along the supply chain for board materials covered in section 1.4 for flat particleboard, flat dry process fibreboard and flat plywood

Type of documents and marking	Board producers	Distributor, formatters and applicators of a surface covering or coating	Component producer	IKEA supplier
TPC certificate Proof of continued TPC certification CARB approval or TPC approval according to US EPA TSCA VI for ULEF TPC exemption, ULEF test frequency reduction or NAF. Certificate of PS1, PS2, ASTM D5456, ANSI A190.1 Compliance document to IKEA special limits by EN ISO 12460-5 Compliance document to IKEA lower limit of 0.11ppm for thin MDF SD of gluing system for certified plywood according to PS1, PS2, ASTM D5456, ANSI A190.1	Provide to their customer			Upload to Connect
Quarterly or yearly test report for certified plywood according to PS1, PS2, ASTM D5456, ANSI A190.1	Test done by anyone in the supply chain and then uploaded to Connect by IKEA supplier.			
General Statement of Compliance (GSoC) See <i>Table 20</i> for content requirements.	Issue a GsoC and provide to its customer.	Issue a GsoC and provide it together with all GsoCs received from its sub-suppliers, to its customer.		Upload GsoCs received from its sub-supplier
US EPA declaration	Not required			Create for each IKEA article, when not defined as voluntary in Connect
Statement of Compliance for each delivery (SoC) See <i>Table 20</i> for content requirements	Make Statement of Compliance, on bill of lading or invoice for each delivery and provide to their customer. Archive for at least 5 years at the buyer of the material and be available to IKEA upon request. If Statement of Compliance is missing the board may not be used.			Issue Statement of Compliance for each individual IKEA product and include it in one of the following: <ul style="list-style-type: none"> • ECIS • EDI/EDIFACT • On bill of lading or invoice, then scan it and upload to Connect for each delivery

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Table 19: Documentation and marking requirements along the supply chain for board materials covered in section 1.4 for flat particleboard, flat dry process fibreboard and flat plywood

Type of documents and marking	Board producers	Distributor, formatters and applicators of a surface covering or coating	Component producer	IKEA supplier
Marking See Table 21 for content requirements	Mark with necessary information on the label of each pallet/bundle as defined by TPC. For distributors, formatters and applicators of a surface covering or coating, the information from the original board bundle marking is to be included.			Mark on permanent marking of IKEA products. See Table 23 for format requirements
Marking placement	On each bundle	On each bundle or each unit load	On each unit load or package	On the product near permanent marking

Table 20: Content of General Statement of Compliance (GSoc), Statement of Compliance for each delivery (SoC) and Marking along the supply chain for board material covered in section 1.4 for flat particleboard, flat dry process fibreboard, flat plywood

Type of documents	Board producer	Distributors, formatters and applicators of a surface covering or coating	Component producer	IKEA supplier
GSoc	<p>A template is provided by IKEA on supplier portal, other format can be used as long as below content are included:</p> <ul style="list-style-type: none"> • Issuer's position on the supply chain (board manufacturer, distributor, component producer). • Board name with its types (particleboard, MDF, Plywood) and thickness. • Board manufacturer's name and address. • Compliance level for US EPA TSCA VI (US EPA TSCA VI §770.10, ULEF test frequency reduction, ULEF TPC exemption, NAF TPC exemption) • Compliance level to IKEA special limit of 4mg/100g, or 5mg/100g and 0.11ppm. • TPC number for each board, • Name and address of issuer's production site, • Signature and/or company stamp, • Signing date, • In case of components, the links between board and component need to be shown. 			Not required
SoC or bill of lading	<ul style="list-style-type: none"> • Material type or, in case of components, list of all material types. • Compliant with <board certification level> according to US EPA. • Compliant with IOS-MAT-0003 version 14, unless section 1.4.5 applies. Note: This statement of compliance with IOS-MAT-0003 version 14 is not required in SOC from IKEA supplier, as they already state compliance through IKEA through the Purchasing Agreement which includes the Product Documentation, with this specification <p>When different board certification levels are provided in one component or IKEA Article, the compliance level for the final component or IKEA Article shall use the worst emission level, see Table 22 for details.</p>			

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Table 21: Marking along the supply chain for board material covered in section 1.4 for flat particleboard, flat dry process fibreboard, flat plywood

Type of marking	Marking content	On board bundles at board producer	On split board bundles and on bundles of pre-formatted board pieces	On component packages	On finished goods
Marking of goods	Producer name	X	X	X	
	Compliant with US EPA TSCA VI	X	X	X See Table 22 for details	X See Table 22 for details
	Production date and/or batch number	X	X	X	X See Table 23 for details
	TPC number	X	X		

Table 22: Codes for board certification level in SoC and for marking on goods which includes board materials covered in section 1.4 for flat particleboard, flat dry process fibreboard, flat plywood

If there are more than one board certification level for materials in a component or an IKEA product, the corresponding text in uppermost position shall be chosen for the component's or IKEA product's compliance level.

Compliance level with or without CARB, CARB P2 on the top of US EPA TSCA VI are also accepted

Board certification level	<board certification level> in SoC	<board certification level> in Label
US EPA TSCA TITLE VI	US EPA TSCA TITLE VI compliant	US EPA TSCA VI compliant
US EPA TSCA TITLE VI ULEF	US EPA TSCA TITLE VI compliant ULEF	US EPA TSCA VI compliant ULEF
US EPA TSCA TITLE VI NAF	US EPA TSCA TITLE VI compliant NAF	US EPA TSCA VI compliant NAF
PS1, PS2, ASTM D5456 or ANSI A190.1	US EPA TSCA TITLE VI	US EPA TSCA VI Exempt

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Table 23: Format for permanent marking on IKEA product containing board materials regulated in section 1.4	
<p>Layout for date stamp and board certification level</p> <p>Note: PQNA is only one of several types of permanent marking</p>	<p>No changes are allowed in the pre-printed information from IKEA. (YYYY-MM-DD) shall be printed under the date as shown in the following examples. Compliance level with or without CARB, CARB P2 on the top of US EPA TSCA VI are also accepted. Date stamp shall be placed vertically, and board certification level shall be placed either vertically or horizontally, as in the examples below: Allowed to extend towards the bottom of the original IKEA printed area.</p> <p>Made in Romania © Inter IKEA Systems B.V. 1999</p> <p>802.485.73</p> <p>14036 IKEA of Sweden AB SE-343 81 Älmhult</p> <p>Design and Quality IKEA of Sweden</p> <p>PQNA</p> <p>US EPA TSC VI compliant</p> <p>2017-05-20 (YYYY-MM-DD)</p> <p>20 - 2017-04-04</p>
	<p>Allowed to extend towards the bottom of the original IKEA printed area.</p> <p>Made in Romania © Inter IKEA Systems B.V. 1999</p> <p>802.485.73</p> <p>14036 IKEA of Sweden AB SE-343 81 Älmhult</p> <p>Design and Quality IKEA of Sweden</p> <p>PQNA</p> <p>US EPA TSCA VI Compliant ULEF</p> <p>W2017-05-15 (YYYY-MM-DD)</p> <p>20 - 2017-04-04</p>
<p>Approved alternative permanent marking.</p>	<p>This applies for IKEA suppliers which have a documented approval to use other permanent marking than those based on the IKEA label template.</p> <p>The marking shall follow the first two sections table 23, i.e. "General marking requirements", and "Format for date stamp".</p> <p>The marking shall be placed in conjunction to the permanent marking with the same text size as the "IKEA of Sweden" and "Country of origin" in that marking.</p>



5 Definitions

Term	Definition
ANSI	The American National Standards Institute
Approval for: <ul style="list-style-type: none"> • ULEF Test frequency reduction • ULEF TPC Exemption • NAF TPC Exemption 	Applies to materials in <i>section 1.4</i> . To qualify for an exemption, the manufacturer shall be able to demonstrate a sufficiently low emission level over a period of time as specified in the US EPA regulation 40 CFR § 770 and in the California Code of Regulation (CCR) 93120, § 93120.3.d.2 Title 17. This can be achieved by using ULEF or NAF adhesives to manufacture wood-based materials.
Batch	See definition <i>Mill batch</i> .
Board	A general term for different wood-based board materials: particleboards, wet- and dry process fibreboards, OSB and laminated boards such as plywood.
Build-in products	Build-in products and building materials intended for permanent fixture to the building by corner or similar steel angles, e.g. system bathroom, kitchen and wardrobes, and intended to be sold in Japan. For such cases the TED requires to comply with requirements according to <i>section 2.3</i> .
Cap value	Cap value means a value that is never allowed to be exceeded. (Note: All limit values stated in this specification are cap values unless otherwise stated.) Specifically, for NAF and ULEF board, cap values mean: <ul style="list-style-type: none"> • For NAF: All results of the three months of routine quality control testing data and the results of one ASTM E1333 or ASTM D6007 test must be shown to be no higher than the cap value. • For ULEF: All results of the six months of routine quality control testing data and the results of two quarterly ASTM E1333 or ASTM D6007 tests must be shown to be no higher than the cap value.
CARB	California Air Resources Board (California ARB), the body responsible for the official implementation of the California Code of Regulation 93120 Title 17.
CARB P2	One of the formaldehyde levels in the California Code of Regulation (CCR) 93120 Title 17. CARB Phase 2 went into effect in 2010. Quarterly audit is required.
CCR	California Code of Regulation. In this specification, it refers to California Code of Regulation 93120 Title 17.
CFR	USA Code of Federal Regulation. In this specification, it refers to Code of Federal Regulations 40 CFR §770 on Formaldehyde Standards for Composite Wood Products Act, which added Title VI to the Toxic Substances Control Act, TSCA.
Comparison test	A calibration test to verify the accuracy of a laboratory compared to IKEA approved laboratory. The IKEA approved laboratory who provide such service can send stable samples to the other laboratory. One set tested at IKEA approved laboratory, and one set at the laboratory to be calibrated. Both carry out the test during the same period.
Component part	Part of a product made by a sub-supplier of the IKEA supplier and which is finished in shape and size.

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Term	Definition
Composite wood products in the scope of California Code of Regulation (CCR) 93120 Title 17 and Code of Federal Regulation (CFR) 40 CFR § 770 TSCA Title VI	The regulations include: Plywood made with a veneer or composite core Dry processed fibreboard (MDF including HDF) Particleboard
Covering	A material applied to a substrate that already has a two-dimensional shape before application, e.g. paper and plastic foil, surface laminate, and edge-band. Note: Veneer is not defined as a covering.
Cross-section	A document illustrating the material composition, construction. It is used to completely identify the material and support the evaluation of F**** test laboratory and Japan authority. Template is available through supplier portal. <ul style="list-style-type: none"> • For individual wood and wood-based material (e.g. particle board without any surface treatment), it gives information about thickness, density, glue and water content etc. • For combined material, it shows the complete construction and each material's thickness, applied volume, etc.
Curved layer-glued material (also termed moulded plywood, curved plywood)	Layers of veneers are joined together with adhesive in a curved shape with surface materials either of veneers or of surface coverings pressed together with the core veneers at the same time. Curved layer-glued material is exempted from CARB and US EPA certification. Note: Plywood which is shaped into a curved shape from a flat panel does not qualify as curved plywood.
Dispersion/emulsion glues with very low formaldehyde content	Polymer glues (e.g. some PVAc or VAE glues) with very low formaldehyde content that is below 600 ppm in liquid ready-to-use glue mixture. Note: Addition of formaldehyde or formaldehyde donor as biocides in the glue is not allowed. See IOS-MAT-0069.
Dry process fibreboard	A panel composed of cellulosic fibres (usually wood) made by dry forming and pressing of a resinated fibre mat. It includes MDF and LMDF.
ECIS	ECIS (Electronic commerce for IKEA suppliers) is an application created by IKEA which allows the suppliers to handle orders and consignment flows including invoice transfer from the supplier to IKEA.
Edge-glued wood panel	A panel made with solid wood material (excluded veneer), joined together by glue. (Earlier the term "glued solid wood panel" was used.)
EDI/EDIFACT	A system which, among other functions, generates an electronic invoice to IKEA as well as adding a Statement of Compliance to IKEA article on the invoice.
EPI	Emulsion Polymer Isocyanate: two-component adhesives based on a mixture of water-based emulsions of SBR, EVA and/or PVAc with isocyanate hardener (crosslinker, usually MDI), forming water-resistant bonds.
Finished product (finished goods)	A product ready for sale in an IKEA store.

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Flat layer-glued material	Layers of veneers are joined together with adhesive in a flat shape. The veneer-layers shall be laid approximately parallel to be flat layer-glued. Note: If there is cross veneer in the core it is considered as plywood.
Fleece	A thin layer of paper, non-woven or simply threads glued to the backside of veneers or reconstituted veneers, to improve the strength and flexibility. The thin layer is called fleece. The composite material made of fleece, adhesive between fleece and veneer and veneer are all together called fleeced veneer.
Formaldehyde-free materials (and processes)	Formaldehyde-free materials are materials which fulfil all three of the following criteria: <ul style="list-style-type: none"> • No formaldehyde had been added in the production of the material. • There is no release of formaldehyde from this material (e.g. glue, coating), including the phase of application and curing, or from the final cured material. • The formaldehyde level is similar to or lower than that of natural wood. Formaldehyde that is used for chemical synthesis and disappears is not considered as "added" as long as it is bonded in the molecules and not part of cross-linking structure. 0.015 mg/m ³ by EN 717-1 can be used as a limit for formaldehyde-free materials in the case of verifying test. For glue to be classified as formaldehyde-free, 0.015 mg/m ³ is the maximum allowed increase if the glue is tested when it has been applied to a hardboard substrate that was produced using the wet process without addition of resins/glues. Note: Gluing with dispersion/emulsion glues with very low formaldehyde content even below 600 ppm is not considered as formaldehyde-free glue.
General Statement of Compliance (GSoC)	A statement made by each producer along the supply chain, starting from board producer, stating their board material, component or IKEA product, compliant with US EPA Federal Regulation (CFR) 40 CFR §770 TSCA Title VI, with board certification levels, and IKEA specification IOS-MAT-0003, version 14. There is a template on supplier portal.
Hardboard	A composite panel composed of cellulosic fibres, made by wet forming and hot pressing of a fibre mat with or without glue, which complies with one of the following ANSI standards: basic hardboard (ANSI A135.4-2004), pre-finished hardboard panelling (ANSI A135.5-2004), or hardboard siding (ANSI A135.6-2006). Wet process hardboard is exempted from TPC certification.
HDF, High density fibreboard	A sub-type of MDF with density above 800 kg/m ³ . HDF is higher density than "normal" MDF, but otherwise the same (i.e. no clear density limit between the two can be identified from definitions in standards).
Impregnated paper	A paper material soaked in a chemical mixture that penetrates into paper.
Individual material	The term is relevant in <i>section 2</i> . It includes not only the wood-based material(s) of a product, but all homogenous materials such as glue (adhesive), lacquer, foil, melamine, edge-band, etc. Components on the fitting list for IKEA articles are excluded.

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Internal laboratory	A laboratory owned by IKEA suppliers or a material producer supplying to IKEA suppliers. IKEA supplier shall have full access to the information regarding original test data, equipment calibration, standard operation procedures and operator's qualification. See more in <i>sections 4.2.1 and 4.2.2.</i>
Laminate	In this specification, it is a covering material with thickness maximum 2 mm. It contains several layers of impregnated paper pressed together to form a thicker and strong covering.
Laminated product	A laminated product is a veneer affixed to a core made from particleboard, dry process fibre board or from a plywood which requires a TPC certificate or a TPC exempt. A laminated product is the finished goods as delivered by the fabricator or a component part in its final shape and size of use in a finished goods as delivered by the manufacturer of the component part. Note: The laminating process of applying veneer to a core material shall use formaldehyde-free glue according to requirement in <i>Table 16.</i> (As laminated product is not plywood, section 1.4 does not apply.)
Layer-glued material	See definition of <i>Curved layer-glued material</i> and <i>flat layer-glued material.</i>
Listed certified structural plywood	Plywood certified as structural plywood according to standards listed in <i>Table 4,</i> as per definition in US EPA TSCA VI and only containing PF glue or formaldehyde-free glue.
LBWP	Low Base Weight Paper
LMDF, Low density MDF	A sub-type of dry process fibreboard with density less than 450 kg/m ³ (or 500 kg/m ³ , depending on different standards)
Manufacturer	Any person/company who manufactures or produces a composite wood product.
MDF, Medium density fibreboard	A panel composed of cellulosic fibres (usually wood) made by dry forming and pressing of a resinated fibre mat (ANSI A208.2-2002). According to the standard referred to, typical densities vary between 500 kg/m ³ (31 lbs/ft ³) and 1000 kg/m ³ (62 lbs/ft ³). MDF includes HDF as well.
MDI	Methylene diisocyanate (hardener used for EPI glue)
Medium board	Wet process fibreboard with lower density than hardboard. This material is exempted from CARB certification.
MFC	Melamine-Faced Chipboard. See also definition of <i>Uncured impregnated paper.</i>
MF glue	Melamine-formaldehyde glue
MFN certificate	A certificate issued by Japan Ministry (Ministry of Agriculture, Forestry and Fisheries, MAFF, when solid wood is main material, and Ministry of Land, Infrastructure, Transport and Tourism, MLIT, when other wooden materials are main material), which certifies that the listed individual/combined materials or products are compliant with F****.
Mill batch	A production batch manufactured on the same occasion with constant process parameters. Even under same production parameters it becomes a new mill batch after 48 hours. Note: change of board thickness also changes process parameters.

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Monday of that week	The first calendar week number starts on the Monday of the first week with 4 days or more of the year. This means that the: <ul style="list-style-type: none"> • first calendar week number of the year can include up to 3 days from the previous year. • last calendar week number of the year can include up to 3 day from the following year.
3D moulded particleboard	A particleboard with 3D structure created by pressing of a resinated mat with a heated die. It contains of cellulosic particles from wood chips or wood-like natural materials e.g. straw.
3D moulded dry process fibreboard	A dry process fibreboard with 3D structure created by pressing of a resinated fibre mat with a heated die. It contains cellulosic fibres from wood chips or natural materials.
MUF glue	Melamine urea formaldehyde glue
NAF exempt	One of the formaldehyde levels in the US EPA regulation 40 CFR 770 and in the California Code of Regulation (CCR) 93120 Title 17, in which TPC certification is exempted after CARB and US EPA approval based on production control test results during three months, and one ASTM E1333 or ASTM D6007 test results, and on glue and production parameter information.
NAF, No-added Formaldehyde resins	Resins/glues formulated with no-added formaldehyde as part of the resin/glue cross-linking structure. Only relevant for particle board and dry process fibreboard as well as plywood requiring TPC certification or TPC.
North America	North America includes the whole NAFTA region, i.e. Canada, USA and Mexico.
OSB	Oriented Strand Board
Paper covering with coating	Often called finish foil/finished foil
Particleboard (PB)	Board typically made of wood particles and glue, but may also be made from other cellulosic materials. It is also called chipboard.
Permanent label/ Permanent marking	Label or marking identifying IKEA, product, supplier as well as production date stamp. The label or marking often includes additional information than required by law.
PF glue	Phenol-formaldehyde glue
Plywood (PW)	In this specification, flat plywood described in <i>section 1.4</i> includes only plywood veneer core and plywood composite core. Other types of plywood (also called plywood by some standards) are excluded from the requirements listed in <i>section 1.4</i> and shall follow relevant requirements in <i>sections 1.5</i> and <i>1.6</i> . E.g.: <ul style="list-style-type: none"> • Plywood lumber core • Curved plywood (Curved layer-glued materials)
Plywood composite core	A panel composed of an assembly of layers or plies of veneers, joined by an adhesive with a composite core, which can be particleboard, MDF or a combination core (a combination of layers of veneer and particleboard or MDF). Note: Gluing of veneer to a board at the producer of component parts or at the producer of the finished goods is not regarded as manufacturing of composite core plywood.
Plywood veneer core	A panel composed of an assembly of layers or plies of veneers with, at least, two adjacent veneer layers glued with the fibre direction perpendicular to each other.
ppm	Parts per million. In chamber testing, 1 ppm = 1 ml/m ³ . In Test Report, values are sometimes also reported as mg/m ³ ; for formaldehyde, 0.10 ppm = 0.10 ml/m ³ = 0.124 mg/m ³ (i.e. conversion factor 1.24).

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Primary test method	Defined as ASTM E1333-96 (2002) (Large chamber method)
Production test result	Test result generated as a part of the running production control. The tests are normally performed at factory laboratory.
Proof of continued TPC certification (PoCTC)	A document issued by the TPC showing that the board producer still is approved after latest TPC audit and that a continued auditing between the TPC and the producer exists.
PVAc	Polyvinyl acetate: an adhesive based on a polyvinyl acetate emulsion in water made by polymerization of vinyl acetate monomers. PVAc is also known as e.g. "white glue".
Quality control limit (QCL)	When the producer of a board material in the scope of CCR and CFR uses a different test method than ASTM D6007 or E1333 at their factory for their routine quality control test, they must work out the correlation between the quality control test method and ASTM D6007 or E1333 together with their TPC. And based on that correlation, the producer and TPC decide the value corresponding to the upper limit by ASTM D6007 or E1333.
Reconstituted veneer	Veneer made from glued panel, e.g. glued bamboo panel, cut into thin layers, and sometimes glued with fleece to improve the strength.
Self declaration (SD)	A declaration confirming that a requirement is fulfilled, issued by a manufacturer of a board material, a covering, a coating, a glue or any other material or chemical product, or of a component, or by a gluing-process operator.
Softboard	Wet process fibreboard with low density and much lower physical properties than MDF (Medium Density Fibreboard). Typical uses: insulation board, sound insulation, pin board, and similar. This material is exempted from CARB certification.
Statement of Compliance for each delivery (SoC)	For each delivery, a statement from producer to its customer that the board material, component or IKEA product is compliant with California Code of Regulation (CCR) 93120, §93120.2(a) Title 17 with the board certification levels, US EPA Federal Regulation (CFR) 40 CFR §770 TSCA Title VI, with the board certification levels, and IKEA specification IOS-MAT-0003, version 14. It can be made on invoice or bill of lading. IKEA supplier may add SoC in ICIS, EDI, EDIFACT or Connect.
Supervision	An agreement allowing an IKEA approved laboratory to carry out assessment and audit on quality assurance system, test laboratory, production control, etc. according to the principles of European Supervision (DIBt 100). It is one of the systematic approaches to secure the formaldehyde level below given limits.
Target value	Used for NAF and ULEF board: For NAF: Ninety percent of the three months of routine quality control testing data and the results of one ASTM E1333 or ASTM D6007 test must be shown to be no higher than this value. For ULEF: Ninety percent of the six months of routine quality control testing data and the results of two quarterly ASTM E1333 or ASTM D6007 tests must be shown to be no higher than this value.
TED	Technical description, TED – A document defining materials to be used in the production of an IKEA article, as well as some other written requirements, The TED is one part of the complete set of requirements which applies to the article, together with all other requirements listed in the Product Documentation Index Supplier ("supplier index").

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Test report (TR)	The term test report in this specification refers to verifying tests performed by IKEA-approved laboratories. These are to be distinguished from running tests in production, which will be necessary to monitor production, and which should be performed with a frequency adapted to the variations in the process. The running tests may be performed by another laboratory (e.g. factory laboratory), provided correlation tests or comparison tests with IKEA approved laboratory are carried out properly.
Thin MDF	Medium density fibreboard that has a maximum thickness 8 mm.
Third party certifier (TPC)	A TPC: <ol style="list-style-type: none"> A. verifies the accuracy of the emission test procedures and facilities used by manufacturers to conduct formaldehyde emission tests, B. monitors manufacturer quality assurance programs, and C. provides independent audits and inspections, D. makes approvals of TPC exempt and TPC frequency reduction. <p>For certification of materials intended for IKEA products, the TPC shall also be approved by IKEA.</p>
TPC certification	Certification made by a TPC based on the Quality Assurance Requirements defined by US EPA regulation 40 CFR 770 and the California Code of Regulation (CCR) 93120, §93120.12 Title 17.
ULEF Test Frequency Reduction	One of the formaldehyde levels in the US EPA regulation 40 CFR 770 and in the California Code of Regulation (CCR) 93120 Title 17, in which TPC audits are allowed to be reduced from quarterly to half yearly after approval based on production control test results during six months, and two ASTM E1333 or ASTM D6007 test results, and on glue and production parameter information. The approval is renewed by submitting new test reports as required in the approval.
ULEF TPC exemption	One of the formaldehyde levels in the US EPA regulation 40 CFR 770 and in the California Code of Regulation (CCR) 93120 Title 17, in which TPC certification is exempted after approval based on production control test results during six months, and two ASTM E1333 or ASTM D6007 test results, and on glue and production parameter information. The approval is renewed by submitting new test reports as required in the approval.
ULEF, Ultra-Low-Emitting Formaldehyde resins	Resins/glues formulated and used in such a way that average formaldehyde emissions are consistently below the ULEF limits as defined in US EPA regulation 40 CFR 770 and the California Code of Regulation (CCR) 93120. <p>Depending on the formaldehyde emission level, board produced with such resin/glue may get approval for test frequency reduction or TPC exemption after submitting necessary information to CARB or to a US EPA TSCA Title VI TPC.</p>
Uncured impregnated paper	Impregnated paper that cures during application to its substrate when exposed to heat in a press. Uncured impregnated paper is for instance used when making MFC (melamine faced chipboard, meaning melamine foil and particle board pressed together with heating).
Unfinished material	Wood-based and solid-wood material without any surface coating or covering. This includes both materials that are to be used in a product without surface coating or covering and materials which will be coated/covered. Note that sampling for testing in the latter case is to be done in the stage immediately preceding the application of the surface coating.

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Term	Definition
US EPA	US Environmental Protection Agency, the federal body responsible for the official implementation of 40 CFR §770 – <i>Formaldehyde standards for composite wood products.</i>
US EPA Declaration	An electronic declaration created in Connect for final IKEA article containing flat particleboard, flat dry-process fibreboard, plywood composite core, or plywood veneer core (except listed US-certified structural plywood). The declaration lists board type, board mill name and address, compliance level, TPC name, which are generated from the registration of TPC certificate and the material combination
US EPA TSCA TITLE VI	TSCA Title VI is a legislation related to chemical substances issued by the US Environmental Protection Agency (US EPA.) The rules for formaldehyde in board materials is covered in 40 CFR 770 – <i>Formaldehyde standards for composite wood products.</i>
VAE	Vinyl acetate ethylene: an adhesive based on a vinyl acetate/ethylene emulsions in water made by copolymerization of vinyl acetate and ethylene. (Note: VAE has higher content of vinyl acetate than of ethylene. VAE is different from ethylene vinyl acetate, EVA, a copolymer that has higher content of ethylene than of vinyl acetate and that is a solid material used in hot-melt applications.)
Veneer	A sheet of wood or woody grass (e.g. bamboo) with maximum thickness of 6.4 mm.
Verifying test	Unless otherwise stated, a test made at an IKEA approved laboratory to verify the material or product.
Voluntary as defined in Connect for US EPA declaration	Voluntary in Connect means that the article is not listed under the dashboard indicator "Article without valid US EPA TSCA VI", even when there is no US EPA declaration for that article. Note: generally, article numbers which are not possible to deliver to North America will be defined in Connect as voluntary for US EPA declaration.
Wet process fibreboard	A panel composed of cellulosic fibres made by dry forming and pressing of a wet fibre mat with glue or without any glue. One side of the board is rough, as this side was placed on a metal net (screen mesh) to drain water. It includes hardboard, mediumboard and softboard.



6 References

Table 24: References related to specification	
Standard	Name
ANSI A190.1	American National Standard – Standard for Wood Products - Structural Glued Laminated Timber
ANSI HPVA HP-1	American National Standard – Standard for Hardwood and decorative Plywood
ASTM D5456	Standard Specification for Evaluation of Structural Composite Lumber Products
ASTM D6007	Standard Test Method for Determining Formaldehyde Concentration in Air from Wood Products Using a Small-Scale Chamber
ASTM E1333	Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large chamber
EN 717-1	Wood-based panels – Determination of formaldehyde release – Formaldehyde emission by the chamber method.
EN 14374	Timber structures. Structural laminated veneer lumber. Requirements.
EN ISO 12460-3	Wood-based panels – Determination of formaldehyde release – Part 3: Gas analysis method
EN ISO 12460-5	Wood-based panels – Determination of formaldehyde release – Part 5: Extraction method (called the perforator method)
ISO 15373	Plastics – Polymer dispersions – Determination of free formaldehyde
JIS A 1460	Japanese Industrial Standard. Determination of the emission of formaldehyde from building boards – Desiccator method
JIS A 1901	Japanese Industrial Standard. Determination of the emission of volatile organic compounds and aldehydes by building products – Small chamber method
JAS MAFF for plywood	Japanese Agricultural Standard for Plywood – MAFF Notification. (The notification valid at the time of publication of this specification is No. 303.)
JAS MAFF for glued solid wood panel	Japanese Agriculture Standard for glued solid wood panel – MAFF Notification. (The notification valid at the time of publication of this specification is No. 1587.)
PS 1	Voluntary Product Standard for Structural Plywood PS 1, National Institute of Standards and Technology, NIST, US Dept. of Commerce.
PS 2	Voluntary Product Standard PS 2, the Performance Standard for Wood-Based Structural-Use Panels, National Institute of Standards and Technology, NIST, US Dept. of Commerce.



Appendix A: Test methods and limits for testing final products or materials of final products (produced according to *section 1* and *section 2*)

Table A: Sampling of finished products for investigation and auditing				
Materials	Sample	Test method	Limit	Comments
Products made with particle-board, dry process fibreboard (e.g. MDF/HDF (non flooring)), plywood or layer-glued and where the surface is untreated or has been finished with lacquer, paint or high pressure laminates have been used.	Finished product	EN 717-1, Chamber method	0.074 mg/m ³ (0.060 ppm)	
All other product or product parts, including products or product parts with foil, paper and melamine			0.124 mg/m ³ (0.1 ppm)	
Finished product of the build-in product type for the Japanese market (i.e. to fulfil demands according to <i>section 2.3</i>)	Finished product	Desiccator methods: <ul style="list-style-type: none"> • JIS A 1460 for particle-board and fibreboard • JAS MAFF for plywood • JAS MAFF for glued solid wood panel 	0.340 mg/l (average) Single value: max 0.400 mg/l	
Finished particleboard	Materials from a finished product	EN ISO 12460-5, Perforator method	5.0 mg/100 g	Material from finished product is prepared by sanding to maximum 0.5 mm below surface treatment
Finished MDF/HDF non-flooring			6.0 mg/100 g	
Finished MDF or HDF for flooring			10.0 mg/100 g	
Finished board-material other than particleboard, dry process fibreboard (e.g. MDF/HDF)		EN ISO 12460-3, Gas analysis	4.0 mg/m ² h	
Finished plywood and layer-glued material			2.0 mg/m ² h	
Finished glued solid wood			0.7 mg/m ² h	

Note: it is not in all cases possible to test the compliance of all materials of a product by sampling a final product, e.g. to check compliance of gluing of veneer, for very thin veneers, the removal of a lacquer-layer by sanding may prove impossible; so the feasibility shall be assessed by the laboratory in each individual case.

The extra tolerance indicated in the limits in *Table A* above, for tests performed after sanding, are motivated by the increase in error in testing, which may be caused by the sanding operation.

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Appendix B: Connect document summary and registration

Note: For document required to be renewed weekly, monthly, quarterly or six-monthly, the given "Active to date" below for Connect registration is normally longer. This means the active document shall not be older than the given time, but renewal shall be carried out once every calendar week, calendar month, calendar quarter or calendar half-year, respectively.

Note: For wood-based board in the scope of US EPA (flat particle board, flat dry process fibreboard and flat plywood) a separate material combination shall be created in Connect for each separate thickness of the same kind of board.

Note: Documented by section 1.4 the Connect compliance level registered as both CARB and US EPA are also accepted.

Table B: Connect document summary and registration						
Documentation	Document details			Document content description (requirement source)		Connection in Connect
	Document type	Active from date	Latest active to date	Sub-type	Level	
Section 1.4 Particle board, dry process fibreboard and plywood						
US EPA Declaration (electronic file)	Not applicable	First week when all boards covered by selected TPC certificates are placed in a unit load of the IKEA Article	9999	Not applicable	Not applicable	IKEA article
General Statement of Compliance (GSoC) from board producer, distributor, board formatters	Statement of Compliance/ Decl of Conformity	Issue date	1 year	1.4	General statement of Compliance	Material combination

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Documentation	Document details			Document content description (requirement source)		Connection in Connect
	Document type	Active from date	Latest active to date	Sub-type	Level	
General Statement of Compliance (GsoC) from surface treatment applicator or component producer	Statement of Compliance/ Decl of Conformity	Issue date	1 year	1.4	General statement of Compliance	Material, component or process combination
Statement of Compliance (SoC) for each delivery from IKEA supplier, if not in ECIS, EDIFACT or EDI.	Statement of Compliance/ Decl of Conformity	Issue date	Issue date	1.4	Bill of lading	IKEA article
TPC certificate for: <ul style="list-style-type: none"> US EPA § 770.10 ULEF test frequency reduction 	3 rd Party Certificate. Additionally, "US EPA TSCA/CARB Certification" as sub-type	Valid date in the certificate. If no valid date, issue date.	According to the validity in certificate, 9999 if no limit in the certificate.	1.4	(according to certificate level) US EPA TSCA VI US EPA TSCA VI ULEF	Material combination
Proof of continued TPC certification for: <ul style="list-style-type: none"> US EPA § 770.10 	Audit report	Valid date in the certificate. If no valid date, issue date.	5 months	1.4	US EPA TSCA VI	Material combination
Attestation or other accepted document for compliance on 4mg/100g for particleboard, or 5mg/100g for MDF	Audit report	Valid date in the document. If no valid date, issue date.	8 months	1.4	4mg/100g (for particleboard) 5mg/100g (for MDF)	Material combination

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	Document type	Active from date	Latest active to date	Sub-type	Level	
Attestation or other accepted document for IKEA lower limit - 0.11ppm on thin MDF with US EPA § 770.10	Audit report	Valid date in the document. If no valid date, issue date.	8 months	1.4	US EPA TSCA VI	Material combination
Proof of continued TPC certification for: <ul style="list-style-type: none"> • ULEF test frequency reduction 	Audit report	Valid date in the certificate. If no valid date, issue date.	8 months	1.4	US EPA TSCA VI ULEF	Material combination
Approval from CARB or TPC for: <ul style="list-style-type: none"> • ULEF test frequency reduction • ULEF TPC exemption • NAF TPC exemption 	3 rd Party Certificate. Additionally, "US EPA TSCA/CARB Certification" as sub-type	Issue date	According to the validity in the document	1.4	(according to certification level) US EPA TSCA VI ULEF US EPA TSCA VI NAF	Material combination
Mill batch TR by EN ISO 12460-5, when compliance with the limits of EN ISO 12460-5 is not verified by TPC for: <ul style="list-style-type: none"> • PB • Dry process fibreboard 	Test report	Issue date	Suggest 3 months and could be prolonged	1.4	4mg/100g (for particleboard) 5mg/100g (for MDF)	Material combination

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Documentation	Document details			Document content description (requirement source)		Connection in Connect
	Document type	Active from date	Latest active to date	Sub-type	Level	
Quarterly test result summary for mill batch test by EN ISO 12460-5 from qualified internal test laboratory	Test report	First test result date in the summary	7 months	1.4	4mg/100g (for particleboard) 5mg/100g (for MDF)	Material combination
Yearly TR by EN ISO 12460-5 for: <ul style="list-style-type: none"> • ULEF TPC exempted particleboard • ULEF TPC exempted dry process fibreboard 	Test report	Issue date	1 year	1.4	4mg/100g (for particleboard) 5mg/100g (for MDF)	Material combination
Mill batch TR by ASTM D6007 performed at IKEA approved test laboratory when using non IKEA-approved TPC, or internal lab. complying with section 4.2.1 for: <ul style="list-style-type: none"> • US EPA § 770.10 • ULEF test frequency test reduction 	Test report	Issue date	Suggest 3 months and could be prolonged	1.4	(according to its certificate) US EPA TSCA VI US EPA TSCA VI ULEF	Material combination

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	Document type	Active from date	Latest active to date	Sub-type	Level	
Quarterly Test result summary for mill batch test by ASTM D6007 from qualified internal laboratory	Test report	First test result date in the summary	7 months	1.4	(according to certificate level) US EPA TSCA VI US EPA TSCA VI ULEF	Material combination
Certificate for flat plywood only contains PF or formaldehyde-free glue, according to: <ul style="list-style-type: none"> • PS1 • PS2 • ASTM D5456 • ANSI A190.1 	3 rd Party Certificate. Additionally, "3 rd party Certificate - others" as sub-type	Valid date in certificate. If no valid date, issue date.	According to the validity in certificate, 9999 if no limit in the certificate.	1.4	(according to its certificate) PS1 PS2 ASTM D5456 ANSI A190.1	Material combination
Quarterly TR by EN ISO 12460-3 for plywood that contains only PF glue and is certified according to: <ul style="list-style-type: none"> • PS1 • PS2 • ASTM D5456 • ANSI A190.1 	Test report	Issue date	4 months	1.4	(according to its certificate) PS1 PS2 ASTM D5456 ANSI A190.1	Material combination

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	Document type	Active from date	Latest active to date	Sub-type	Level	
Yearly TR by EN ISO 12460-3 for plywood that only contains formaldehyde-free glue and is certified according to: <ul style="list-style-type: none"> • PS1 • PS2 • ASTM D5456 • ANSI A190.1 	Test report	Issue date	1 year	1.4	(according to its certificate) PS1 PS2 ASTM D5456 ANSI A190.1	Material combination
SD of the gluing system for plywood that only contains PF glue or formaldehyde-free glue certified according to: <ul style="list-style-type: none"> • PS1 • PS2 • ASTM D5456 • ANSI A190.1 	Self declaration	Issue date	5 years	1.4	(according to its certificate) PS1 PS2 ASTM D5456 ANSI A190.1	Material combination
TPC certificate for US EPA § 770.10, renewed after each audit (Scenario C, see Table 18)	3 rd Party Certificate. Additionally, "US EPA TSCA/CARB Certification" as sub-type	Issue date	5 months	1.4	CARB P2 & US EPA TSCA VI	Material combination

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	Document type	Active from date	Latest active to date	Sub-type	Level	
TPC certificate for ULEF test frequency reduction, renewed after each audit (Scenario C, see Table 18)	3 rd Party Certificate. Additionally, "US EPA TSCA/CARB Certification" as sub-type	Issue date	8 months	1.4	CARB & US EPA TSCA VI ULEF	Material combination
Section 1.5 Layer-glued materials, edge-glued wood panel, wet process fibreboard, OSB, moulded particle board, moulded dry process fibreboard						
Audit report or attestation for supervision	Audit report	Valid date in certificate. If no valid date, issue date.	8 months	1.5	(according to respective limits) 1.2 mg/m ² h 0.7 mg/m ² h 4.0 mg/100g 5.0 mg/100g	Material, process or component combination
Production control TR by EN ISO 12460-3 for: <ul style="list-style-type: none"> Layer-glued material with documented internal process control 	Test report	Issue date	1 month	1.5	(according to respective limits) 1.2 mg/m ² h 0.7 mg/m ² h	Material process or component combination
Quarterly test result summary for documented internal production control test or mill batch test by EN ISO 12460-3 from qualified internal test laboratory for: <ul style="list-style-type: none"> Layer-glued material 	Test report	First test result date in the summary	7 months	1.5	(according to respective limits) 1.2 mg/m ² h 0.7 mg/m ² h	Material process or component combination

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Documentation	Document details			Document content description (requirement source)		Connection in Connect
	Document type	Active from date	Latest active to date	Sub-type	Level	
Mill batch TR by EN ISO 12460-3 for: Layer-glued materials	Test report	Issue date	Suggest 3 months and could be different or prolonged	1.5	(according to respective limits) 1.2 mg/m ² h 0.7 mg/m ² h	Material process or component combination
Quarterly test result summary for mill batch test by EN 12460-3 from qualified internal test laboratory	Test report	First test result date in the summary	7 months	1.5	(according to respective limits) 1.2 mg/m ² h 0.7 mg/m ² h	Material process or component combination
Yearly TR by ISO 15373 or similar for polymer glues with very low formaldehyde content for: <ul style="list-style-type: none"> • Layer-glued materials • Edge-glued wood panel • Wet processed fibreboard 	Test report	Issue date	1 year	1.5	600 ppm	Material process or component combination
SD of polymer glues with very low formaldehyde content for: <ul style="list-style-type: none"> • Layer-glued materials • Edge-glued wood panel • Wet processed fibreboard 	Self declaration	Issue date	1 year	1.5	600 ppm	Material process or component combination
SD for flat layer-glued material, stating the veneer layout	Self declaration	Issue date	1 year	1.5	Other	Material process or component combination

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	Document type	Active from date	Latest active to date	Sub-type	Level	
Monthly TR by EN ISO 12460-3 for: <ul style="list-style-type: none"> Flat layer-glued material using PF glue Edge-glued wood panel 	Test report	Issue date	2 months	1.5	(according to respective limits) 0.7 mg/m ² h 0.6 mg/m ² h	Material process or component combination
Quarterly TR by EN ISO 12460-3 for: <ul style="list-style-type: none"> Flat layer-glued material using PF glue Edge-glued wood panel 	Test report	Issue date	4 months	1.5	0.4 mg/m ² h	Material process or component combination
Quarterly representative TR by EN ISO 12460-3 for: <ul style="list-style-type: none"> Edge-glued solid wood panel 	Test report	Issue date	4 months	1.5	0.3 mg/m ² h	Material process or component combination
Mill batch TR by EN ISO 12460-5 for: <ul style="list-style-type: none"> Wet process fibreboard OSB 3D Moulded particleboard 3D Moulded dry process fibreboard 	Test report	Issue date	Suggest 3 months and could be prolonged	1.5	(according to respective limits) 1.2 mg/m ² h 0.7 mg/m ² h 4.0 mg/100g 5.0 mg/100g	Material combination

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Documentation	Document details			Document content description (requirement source)		Connection in Connect
	Document type	Active from date	Latest active to date	Sub-type	Level	
Quarterly test result summary for mill batch test by EN ISO 12460-5 from qualified internal test laboratory for: <ul style="list-style-type: none"> Wet process fibreboard OSB Moulded particleboard Moulded dry process fibreboard 	Test report	First test result date in the summary	7 months	1.5	(according to respective limits) 1.2 mg/m ² h 0.7 mg/m ² h 4.0 mg/100g 5.0 mg/100g	Material combination
Quarterly TR by EN ISO 12460-5 for: <ul style="list-style-type: none"> Wet process fibreboard only contains PF glue OSB only contains PF glue 	Test report	Issue date	4 months	1.5	2.0 mg/100g	Material combination
Yearly TR by EN ISO 12460-5 for: <ul style="list-style-type: none"> Wet process fibreboard and OSB that only contains formaldehyde-free glue 	Test report	Issue date	1 year	1.5	2.0 mg/100 g	Material combination
SD of PF glue for: <ul style="list-style-type: none"> Flat layer-glued materials using PF glue Wet process fibreboard OSB 	Self declaration	Issue date	1 year	1.5	(according to respective limits) 0.7 mg/m ² h 2.0 mg/100g	Material combination

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Documentation	Document details			Document content description (requirement source)		Connection in Connect
	Document type	Active from date	Latest active to date	Sub-type	Level	
SD of formaldehyde-free glue for: <ul style="list-style-type: none"> Layer-glued material Edge-glued wood panel Wet process fibreboard OSB 	Self declaration	Issue date	1 year	1.5	Formaldehyde-free	Material process or component combination
SD of no glue used for: <ul style="list-style-type: none"> Wet process fibreboard 	Self declaration	Issue date	1 year	1.5	Other	Material combination
Section 1.6 Surface covering, edge band made of wood, reconstituted veneer and gluing process						
Audit report or attestation for supervision	Audit report	Valid date in proof. If no valid date, issue date.	8 months	1.6	1.3 mg/m ² h	Material combination
Yearly TR by EN ISO 12460-3 for: <ul style="list-style-type: none"> Covering other than uncured impregnated paper Edge-band made of wood using formaldehyde-containing glue 	Test report	Issue date	1 year	1.6	1.3 mg/m ² h	Material combination
Yearly TR by EN ISO 12460-3 for: <ul style="list-style-type: none"> Uncured impregnated paper (test done after application to substrate and curing) 	Test report	Issue date	1 year	1.6	1.3 mg/m ² h	Material process or component combination

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Documentation	Document details			Document content description (requirement source)		Connection in Connect
	Document type	Active from date	Latest active to date	Sub-type	Level	
Monthly TR by EN ISO 12460-3 for: <ul style="list-style-type: none"> Reconstituted veneer 	Test report	Issue date	1 month	1.6	1.2 mg/m ² h	Material combination
Quarterly TR by EN ISO 12460-3 for: <ul style="list-style-type: none"> Reconstituted veneer 	Test report	Issue date	4 months	1.6	0.6 mg/m ² h	Material combination
Yearly TR by ISO 15373 or similar for: <ul style="list-style-type: none"> Polymer glues with very low formaldehyde content 	Test report	Issue date	1 year	1.6	600 ppm	Material process or component combination
SD of polymer glues with very low formaldehyde content	Self declaration	Issue date	1 year	1.6	600 ppm	Material process or component combination
SD of formaldehyde-free material (process) for: <ul style="list-style-type: none"> Covering Edge-band made of wood Reconstituted veneer Gluing process 	Self declaration	Issue date	1 year	1.6	Formaldehyde-free	Material process or component combination
SD of formaldehyde-free ink on covering	Self declaration	Issue date	2 years	1.6	Formaldehyde-free	Material combination

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Documentation	Document details			Document content description (requirement source)		Connection in Connect
	Document type	Active from date	Latest active to date	Sub-type	Level	
SD of material type and no coating on covering for: <ul style="list-style-type: none"> Plastic covering 	Self declaration	Issue date	1 year	1.6	Other	Material combination
Section 2.3 Japan F**** for build-in products and building materials to be sold in Japan						
MFN certificate for: <ul style="list-style-type: none"> Individual wood and wood-based material 	3 rd Party Certificate. Additionally, "3 rd party certificate – others" as sub-type"	Issue date	9999, as long as there is no change	2.3	F****	Material combination
F**** Mill batch TR for: <ul style="list-style-type: none"> Individual wood and wood-based material 	Test report	Issue date	Suggest 3 months and could be prolonged	2.3	F****	Material combination
Cross section for: <ul style="list-style-type: none"> Individual wood and wood-based material from material producer 	Cross section details JP	MFN certificate approved date	1 year	2.3	F****	Material combination
MFN certificate for: <ul style="list-style-type: none"> Combined material 	3 rd Party Certificate. Additionally, "3 rd party certificate – others" as sub-type"	Issue date	9999, as long as there is no change in cross-section or process control	2.3	F****	Component combination or process combination

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	Document type	Active from date	Latest active to date	Sub-type	Level	
F**** mill batch TR for: <ul style="list-style-type: none"> Combined material 	Test report	Issue date	Suggest 3 months and could be prolonged	2.3	F****	Component combination or process combination
MFN certificate for: <ul style="list-style-type: none"> Individual wood and wood-based materials in the combined material 	3 rd Party Certificate. Additionally, "3 rd party certificate – others" as sub-type"	Issue date	9999, as long as there is no change in cross-section or process control	2.3	F****	Material combination
Yearly TR for: <ul style="list-style-type: none"> Individual wood and wood-based materials in the combined material 	Test report	Issue date	1 year	2.3	F****	Material combination
Cross section for: <ul style="list-style-type: none"> Combined material 	Cross section details JP	MFN certificate approved date	1 year (can be prolonged if no change)	2.3	F****	Component combination or process combination
SD for: <ul style="list-style-type: none"> Formaldehyde-free materials in the combined material 	Self declaration	Issue date	1 year	2.3	F****	Material combination
SDS for: <ul style="list-style-type: none"> Chemical product used in the combined material 	(Material) Safety Data Sheet	The latest revision date	5 years	2.3	F****	Material combination

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Table B: Connect document summary and registration

Documentation	Document details			Document content description (requirement source)		Connection in Connect
	Document type	Active from date	Latest active to date	Sub-type	Level	
SD according to <i>section 2.3.3</i>	Self declaration	Issue date	1 year	2.3	F****	IKEA article
4.2.1 Requirements for internal test laboratory using same test methods as required according to this specification						
Quarterly Comparison TR between approved laboratory and internal test laboratory	Test report	Issue date	4 months	4.2	Comparison test	Material component or process combination
Quarterly TR from the materials for IKEA product performed at IKEA approved laboratory	Test report	Issue date	4 months	4.2	Other	Material component or process combination
Reports for established correlation between two different test methods	Test report	Issue date	8 months	4.2	Correlation test	Material component or process combination



Summary of changes in version 14

Changes are marked with a line in the left-hand margin. A double line to the left of a heading means that a new section has been added or that the vast majority of the content in the section has been changed.

Table 25: Summary of Changes in version 14			
Page	Section	Requirement	Amendment
1-2		Purpose & Scope	Rephrasing compared to earlier sections: "content", "about this specification" & "about the requirements" based on feedback from IKEA suppliers. Specification does not apply to: Added "wood plastic composite" and clarification related to plywood.
1		Scope & 1.5.5 & 1.5.6	Clarification that moulded wood-based materials are included
2		Implementation of changes	The US EPA requirements have already been implemented for IKEA shipments to enable import into USA. (As required according version 13: "No non-compliant products are allowed to be shipped so that the products arrives to the USA after 2018-12-11.) Clarification that products with documentation not compliant to this version of the specification are not allowed to be shipped so that the products arrive to the USA after 2019-03-21, and verification documents that contain references to previous versions of this specification do not need renewal in advance of the normal renewal time.
5	1.1	Due care	Situations that can trigger additional precautionary actions are clarified.
5	1.4	Requirements for flat particleboard, flat dry process fibreboard and flat plywood	Note from version 13 on non-continuous production has been deleted, as US EPA now addresses this similar to CARB does.
6	1.4: Table 1 Table 2 Table 3	Requirements for flat particleboard, flat dry process fibreboard and flat plywood	Added note with clarification that compliance according to the perforator limit can be confirmed by test at the TPC. This gives the possibility for the board producer to use other production control methods. (The IKEA direction is to move away from the perforator method due to insufficient correlations in particular for lower emission boards.)
6	1.4: Table 1 Table 2 Table 3	Requirements for flat particleboard, flat dry process fibreboard and flat plywood	Perforator documentation is clarified with more options.

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Table 25: Summary of Changes in version 14			
Page	Section	Requirement	Amendment
6	1.4: Table 1 Table 2 Table 3 Table 4	Documentation requirement for all boards	Added documentation requirement concerning US EPA declaration for final IKEA article containing such board material with direct link to new archiving section 4.1.2.2 on "US EPA Declaration"
6	1.4: Table 1 Table 2 Table 3 Table 4	Documentation requirement for level: US EPA § 770.10 (and CARB P2)	Update of documentation based on US EPA requirements and CARB accepting US EPA certificates. Clarification about quarterly test reports from TPC.
10	1.4: Table 2	Documentation requirement for level: US EPA § 770.10 (and CARB P2)	Clarification about options for additional documentation for showing compliance on the lower 0.11ppm limit.
6	1.4: Table 1 Table 2 Table 3 Table 4	Documentation requirement for level: ULEF test frequency reduction	Update of documentation based on US EPA requirements and CARB accepting US EPA certificates, including the option for US EPA ULEF test frequency reduction via TPCs. Clarification about half-yearly test reports from TPC.
6	1.4: Table 1 Table 2 Table 3 Table 4	Documentation requirement for level: ULEF TPC exemption & NAF TPC exemption	Clarify that approval document for TPC exemption can be either CARB approval or US EPA approval issued by the TPCs
20	1.5 Table 5	Flat layer-glued materials using PF glue	Added option with less stringent requirement.
23	1.5.1.2	Layer-glued materials with veneer core, and board material as surface formed in the same pressing	Note added to clarify a layer-glued material can be a flat plywood to comply with the requirement in section 1.4, if one surface is board and the core is with veneer in cross direction.
24	1.5.2	Edge-glued wood panel	Updated documentation requirement for very low emitting materials
27	1.5.5	3D moulded particleboard	Updated note that also particles moulded directly into a flat final shape falls under 1.4
27	1.5.6	3D moulded dry process fibreboard	Updated note that also fibres moulded directly into a flat final shape falls under 1.4
36	4	Documentation	Clarification by moving text from section 4.3.1
36	4.1.1	TPC certification	Clarification of TPC certification earlier in the section Added note with reference to section 4.4 for document content requirement on GSoC, SoC, Markings on goods.
37	4.1.1.1	Document content of TPC certificate and proof of continued TPC certification	Clarification, if no certification level is indicated, it shall be considered as § 770.10 level.
38	4.1.1.2	For production control using different test methods from the TPC test methods	Note about IKEA plan to move away from the perforator towards emission based methods.
38	4.1.2.1	Required documents	Clarification of required documents related to supervision

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Table 25: Summary of Changes in version 14			
Page	Section	Requirement	Amendment
39	4.1.3.1	Required documents	Clarification of required documents related to internal process control
39	4.1.4	Mill batch test	Clarification of options for mill batch testing
42	4.2.6	Test method clarification	Adjusted
42	4.3.1	Connect document uploading and renewal	Text removed that is already included in IOS-PRG-0089.
42	4.3.2	Connect registration	The entire text is updated corresponding to the changes in Connect with two new sub-headings.
43	4.4	Special documentation and marking requirements for flat particleboard, flat dry process fibreboard and flat plywood	Updated text and clarification that any incoming material shall not be used for IKEA products if they are not labelled as compliant to US EPA TSCA Title VI. Update of table 19, 20, 21 & 22. Clarification on permanent marking (table 23)
49	5 (and in entire document)	Definitions	Change from glued solid wood panel to Edge-glued wood panel
49	5 (and in entire document)	Definitions	Terms added: Listed certified structural plywood, US EPA Declaration, Voluntary as defined in Connect for US EPA Declaration.
49	5	Definitions	Definitions adjusted for General Statement of Compliance, Laminated product, Mill batch and Third party certifier.
59	Appendix B	Connect document summary and registration	Appendix B is adjusted according to US EPA. Clarifications: <ul style="list-style-type: none"> • Board under section 1.4 need to link to material combination, • EPA declaration added, • Related to TPC certificate added sub-type for document type, • Compliance levels for section 1.5 and 1.6 have been updated (change not needed before ordinary renewal).