

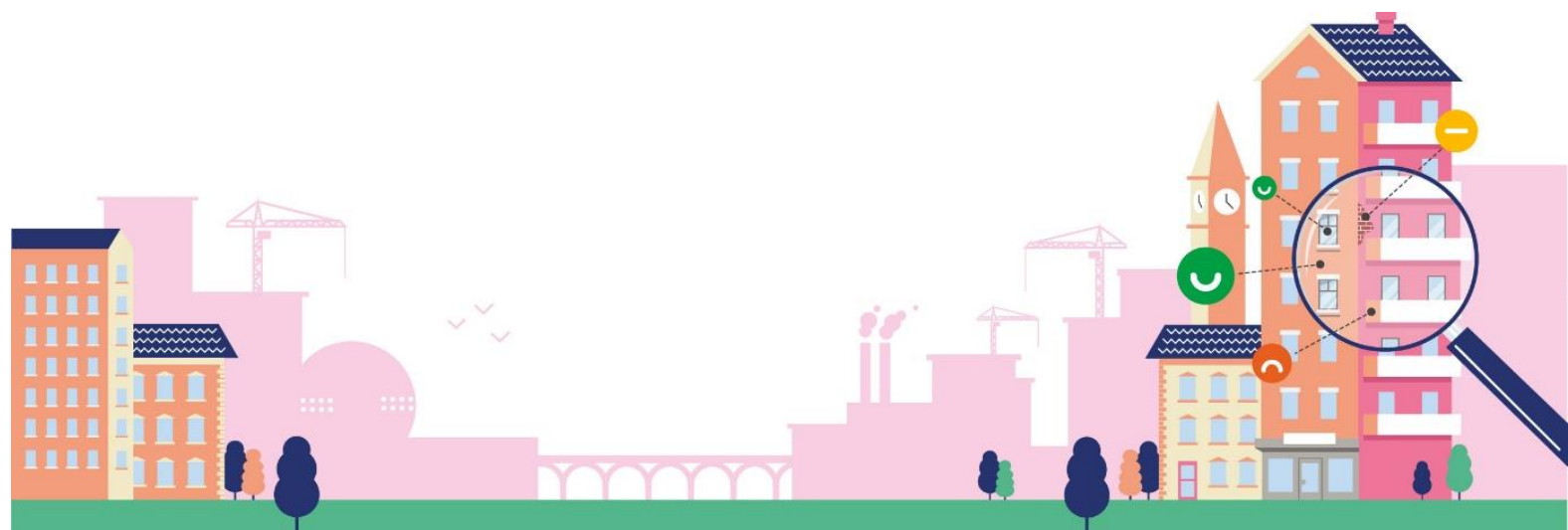


Byggvarubedömningen's criteria for chemical content and lifecycle aspects

Version 5.0

(Updated 2021-04-01)

Valid from 2019-07-01



Amendments from the previous version relate to:

Criterion 0.5 Endocrine disrupting substances (announced 2018-12-21):

Substances listed as endocrine disrupting chemicals on Chemsec's SIN List are introduced at the level Accepted with a concentration limit of 0,1%.

Criterion 0.5 Endocrine disrupting substances (announced 2019-05-27):

Substances listed as endocrine disrupting in EU's EDS database, Category 3, are removed from the criterion.

Criterion 1.3 Sustainable wood raw material:

Clarification of previous criterion text.

Criterion 2 Manufacture of the product:

Clarification of previous criterion text.

New document layout with updated and new information texts.

Updates 2021-04-01

Criterion 6.1 Documentation about emissions:

Clarification of the information text; information text now includes updated information regarding standard method ISO 16000-10. For level Recommended products consisting of industrial powder coated metal now are included.

Information

Byggvarubedömningen is a non-profit business association owned by Sweden's major property owners and building contractors.

Byggvarubedömningen is tasked with:

- Developing and owning a system for the assessment of construction products
- Setting criteria for the assessment of construction products
- Providing web-based information about assessed construction products
- Influencing the product development of construction products.

Byggvarubedömningen's ambition is to contribute to the construction and management of properties using only environmentally evaluated construction products by providing clear criteria regarding chemical contents and lifecycle aspects for construction products in combination with an easy-to-use online system to search for environmentally evaluated products.

Basis for assessment

Assessment of a construction product is based on the supporting documentation that is sent in with the application. Subsequently, the entity applying for an assessment is responsible for ensuring that all supporting documentation required for a correct assessment is enclosed with the application. Suppliers/manufactures of the construction product are in most instances the entity applying for an assessment, although other users of the system can apply for assessments.

The following documentation is required for an assessment:

- A building product declaration in which contents are reported according to the eBVD15 instructions (<https://byggmaterialindustrierna.se/byggvarudeklaration-ebvd1-0/ebvd-english/>).
 - Examples of templates that correspond to eBVD15 are Byggvarubedömningen's guidelines and information requirements for assessment of products, Version 2019-1 and iBVD.
 - If contents are reported in a different template, a BVD3 for example, it will be approved if the date is current and Byggvarubedömningen's certificate of substance content and concentrations, Version 5.0 is enclosed to verify that Byggvarubedömningen's reporting requirements have been followed and thereby, also the eBVD15 instructions.
 - Regardless of which template is used, the product name must be the same as the name on the application.
- Byggvarubedömningen's certificate of substance content and concentrations, Version 5.0 is obligatory in cases where the preferred assessment level is Recommended.
- A safety data sheet designed in accordance with applicable legislation is obligatory for chemical products.
- Certificates concerning sustainable forestry affect assessments towards the level Recommended for products containing wood raw material. Certificates/verifications concerning legal harvesting for products with wood species/origin in CITES appendix of endangered species is obligatory.
- For electronic products, documentation of compliance with the latest version of the RoHS directive is obligatory.

- Emission reports/certificates concerning emissions to the indoor environment are required for products and material intended for indoor use and that contribute with emissions of volatile organic compounds to the indoor air.
- An environmental product declaration (EPD) affects the ability to achieve Recommended level but is not obligatory.

There is other information that is useful and requested by users of the assessment system. For the sake of our customers, product-specific information can therefore be enclosed for the assessment, including for example:

- o Product data sheet
- o Declaration of performance
- o Installation instructions
- o Operation and maintenance instructions

Note

Do not enclose information that is not product specific and is therefore neither used as the basis for an assessment nor is a support for users of the system. This means advertisements or various types of publications such as research or debate articles.



More information in English can be found at our website
(<https://byggvarubedomningen.se/in-english/>).

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Byggvarubedömningen's assessment criteria

Weighting of criteria

An assessment comprises two parts – an assessment of chemical contents and an assessment of selected lifecycle aspects. Each part is assessed separately and then weighed together for an overall assessment. When searching for an assessment in the system, it is the overall assessment that will be shown, although the assessment for each aspect is visible. The terms for weighting are presented below.

Weighting of criteria for the overall assessment	
 <i>Recommended</i>	All the terms below must be fulfilled for the Recommended overall assessment: <ul style="list-style-type: none"> • All content criteria are assessed as Recommended. • No lifecycle criteria are assessed as To be avoided. • At least 50% of the product's relevant lifecycle criteria are assessed as Recommended.
 <i>Accepted</i>	All the terms below must be fulfilled for the Accepted level: <ul style="list-style-type: none"> • No content criteria are assessed as To be avoided. • No lifecycle criteria are assessed as To be avoided.
 <i>To be avoided</i>	If any of the terms below are fulfilled, the overall assessment will be To be avoided: <ul style="list-style-type: none"> • One or more of the content criteria are assessed as To be avoided. • One or more of the lifecycle criteria are assessed as To be avoided.

Information about criteria for chemical contents

The Reach Regulation and CLP Regulation

The criteria concerning chemical content is based primarily on the classification limits according to the Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and the Regulation (EC) No 1272/2008 on the Classification, Labelling and Packing of Substances and Mixtures (the CLP Regulation) (<https://echa.europa.eu/en/home>). Further references to the assessment of chemical content may occur and will then be specified under the criterion in question.

The Swedish Chemicals Agency's Prioritisation Guide (PRIO)

The criteria are based on PRIO, in which properties are identified for so-called prioritised phase-out substances and risk-reduction substances (<https://www.kemi.se/en/prio-start>). Phase-out substances are substances that are hazardous to the environment and health, such as mutagenic and carcinogenic that are such that these should be replaced with less hazardous substances if possible. Risk-reduction substances are substances that have properties that are such that the risk for the intended use should be considered, such as substances classified as allergenic or environmentally hazardous with long-term effects.

The PAH Regulation

In instances that a product consists of plastic or rubber components that contain polycyclic-aromatic hydrocarbons (PAH), and if these components come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity under normal or reasonably foreseeable conditions of use, the concentration limit in accordance with the European Commission's Regulation (EU) No. 1272/2013 to amend Entry 50 of Annex XVII to REACH Regulation (EC) No. 1907/2006 on the restrictions of polycyclic-aromatic hydrocarbons (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1272&from=>) is applied.

Classifications and concentration limits




The substances included are assessed according to harmonised classifications in the CLP Regulation. An assessment is based also on the supplier's self-classifications, if relevant, of the substances included. If a mixture/product has a labelling that is covered by our criteria, the assessment is based on it. Concentration limits specified for each criterion refer to individual substances and aggregation of substances only occurs if it is specified. If an individual substance has been declared multiple times in a table of contents, the levels will be aggregated. If a substance is covered by the specific concentration limits under the CLP Regulation, Annex VI, these must be achieved for an Accepted assessment and a factor 10 times lower is required for Recommended.

Updating of classifications




The Regulation on Classification, Labelling and Packaging can be found in Annex VI in the CLP Regulation and is updated continuously through Adaptation to Technical Progress (ATP) (<https://echa.europa.eu/regulations/clp/legislation>). When a new ATP is published (<https://eur-lex.europa.eu/homepage.html>) the concerned substances are assessed according to the harmonised classification as of the date of publication and not as of the date on which they are legally binding. This applies regardless of the time interval between publication and entering into legal force. In conjunction with our assessment in accordance with a substance's new classification, also existing assessments containing the relevant substance are updated.

Criteria for chemical contents




0.0 Documentation

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
a) Declaration of contents	Documentation for Accepted and Byggarubedömningen's Certificate of substance content and concentrations.	Building product declaration or the equivalent with contents reported according to the eBVD15 requirements Safety data sheet (pertains to chemical products)	Declaration of contents that does not follow the instructions Information about substance contents is lacking
b) Products covered by the RoHS-directive	CE Marking or EU Declaration of conformity documentation ¹	CE Marking or EU Declaration of conformity documentation ¹	CE Marking or EU Declaration of conformity documentation is lacking
<i>Reference/Information</i>	¹ If the product is covered by the RoHS Directive, the enclosed certificate is to show conformity with the current version of the RoHS Directive. The certificate must have a valid date and be product specific. Products that contain electronics but are covered by an exemption are to specify this in the assessment documentation.		




0.1 Carcinogens

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
a) Carcinogenicity, Category 1A or 1B (H350)	≤ 0,01%	<0,1%	≥ 0,1%
b) Carcinogenicity, Category 2 (H351)	≤ 0,1%	<1%	≥ 1%




0.2 Mutagenic

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
a) Germ cell mutagenicity, Category 1A or 1B (H340)	$\leq 0,01\%$	$<0,1\%$	$\geq 0,1\%$
b) Germ cell mutagenicity, Category 2 (H341)	$\leq 0,1\%$	$<1\%$	$\geq 1\%$




0.3 Toxic to reproduction

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
a) Reproductive toxicity, Category 1A or 1B (H360)	$\leq 0,03\%$	$<0,3\%$	$\geq 0,3\%$
b) Reproductive toxicity, Category 2 (H361)	$\leq 0,3\%$	$<3\%$	$\geq 3\%$




0.4 Harmful to infants

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
Reproductive toxicity, effects on or via lactation (H362)	$\leq 0,03\%$	$<0,3\%$	$\geq 0,3\%$




0.5 Endocrine disruptors

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
Endocrine disruptors	≤ 0,01 % ¹	<0,1 % ¹	≥ 0,1 % ¹
Reference/Information	¹ Concerning substances listed as CAT1 or 2 in the EU's EDS database (http://ec.europa.eu/environment/chemicals/endocrine), substances listed as endocrine disruptors on Chemsec's SIN List (https://sinlist.chemsec.org/search/search?query=&healthenvironmentconcerns=1) and substances listed on the Candidate List due to their endocrine disrupting properties (https://echa.europa.eu/candidate-list-table).		




0.6 Persistent, bioaccumulative and toxic organic substances (PBT)

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
PBT substances ¹	≤ 0,01%	<0,1 %	≥ 0,1%
Reference/Information	¹ Criteria according to Kemi PRIO (https://www.kemi.se/en/prio-start/criteria/the-criteria-in-detail/pbtvpvb).		




0.7 Very persistent and very bioaccumulative organic substances (vPvB)

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
vPvB substances ¹	≤ 0,01%	<0,1 %	≥ 0,1%
Reference/Information	¹ Criteria according to Kemi PRIO (https://www.kemi.se/en/prio-start/criteria/the-criteria-in-detail/pbtvpvb).		




0.8 Pure substance or compound of lead

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
Lead	<p>Chemical product: Pure lead (Pb) or compounds of lead may not occur regardless of concentrations.</p> <p>Other products: ≤0,01%</p>	<0,1 %	≥ 0,1%




0.9 Pure substance or compound of mercury

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
Mercury	<p>Total ban Mercury (or its compounds) has not been used in, or added to, the product</p> <p>Possible contamination ≤0,25 mg/kg¹</p>	<p>Total ban Mercury (or its compounds) has not been used in, or added to, the product</p> <p>Possible contamination <2,5 mg/kg¹</p>	<p>Occurrence Mercury (or its compounds) has been used in, or added to, the product</p> <p>Possible contamination ≥2,5 mg/kg¹</p>
Reference/Information	<p>¹In accordance with the Chemical Products (Handling, Import and Export Prohibitions) Ordinance (1998:944), there is a total ban on mercury. The ban refers to products in which mercury has been used or added. Low concentrations of mercury not intentionally added in any phase fall therefore outside the ban. Within Byggvarubedömningen, low concentrations of mercury mean the occurrence of <2.5 mg/kg, deviations exceeding 2.5 mg/kg can be accepted in instances where they stem from natural occurrences in coal, ore or ore concentrate. The concentration limit is set based on regulatory requirements for soil quality to ensure that accepted products do not raise background concentrations through their use or disposal (for example; sludge from sewage treatment works Swedish Ordinance 1998:944, Section 20). The same concentration limits are found in the Swedish Environmental Protection Agency's general guidelines for less sensitive land use, MKM (https://www.naturvardsverket.se/Stod-i-miljoarbetet/Vagledninga/Forenade-omraden/Riktvarder-for-forenad-mark/).</p>		




0.10 Pure substance or compound of cadmium

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
Cadmium	<p>Chemical products: Pure cadmium or its compounds may not occur regardless of concentrations</p> <p>Other products: ≤ 0,001 %</p>	< 0,01 %	≥ 0,01 %




0.11 Hazardous to the ozone layer

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
Hazardous to the ozone layer (EUH 059, H420)	≤ 0,01 %	< 0,1 %	≥ 0,1 %




0.12 Allergenic

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
a) Sensitisation, respiratory (H334)	≤ 0,02 %	< 0,2 %	≥ 0,2 %
b) Sensitisation, skin (H317)	≤ 0,1 %	< 1 %	≥ 1 %




0.13 Acute toxicity

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
Acute toxicity Category 1, 2 or 3 (H300, H310, H330, H301, H311 or H331)	<p>Cat 1 substances: ≤ 0,01 %</p> <p>Cat 2 substances: ≤ 0,1 %</p> <p>Cat 3 substances: ≤ 1%</p>	<p>Based on ATE value of the mixture:¹</p> <p>ATE_{Mixture} > 300 (oral exposure)</p> <p>ATE_{Mixture} > 1,000 (dermal exposure)</p> <p>ATE_{Mixture} > 2,500 (inhalation, gas)</p> <p>ATE_{Mixture} > 10 (inhalation, vapor)</p> <p>ATE_{Mixture} > 1.0 (inhalation, mist/dust)</p>	<p>Based on ATE value of the mixture:¹</p> <p>ATE_{Mixture} ≤ 300 (oral exposure)</p> <p>ATE_{Mixture} ≤ 1000 (dermal exposure)</p> <p>ATE_{Mixture} ≤ 2500 (inhalation, gas)</p> <p>ATE_{Mixture} ≤ 10 (inhalation, vapor)</p> <p>ATE_{Mixture} ≤ 1,0 (inhalation, mist/dust)</p>
<i>Reference/Information</i>	¹ Every relevant exposure route is to be considered. ATE _{Mixture} is calculated according to the CLP Regulation (EU) No. 1272/2008, Annex 1, Chapter 3.		




0.14 Toxicity, single exposure

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
a) Specific Target Organ Toxicity – Single Exposure (STOT-SE), Category 1 (H370)	≤ 0,1 %	< 1 %	≥ 1 %
b) Specific Target Organ Toxicity – Single Exposure (STOT-SE), Category 2 (H371)	≤ 1 %	< 10 %	≥ 10 %




0.15 Toxicity, repeated exposure

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
a) Specific Target Organ Toxicity – Repeated Exposure (STOT-RE), Category 1 (H372)	≤0,1 %	<1 %	≥1 %
b) Specific Target Organ Toxicity – Repeated Exposure (STOT-RE), Category 2 (H373)	≤1 %	<10 %	≥10 %




0.16 Volatile organic compounds (VOC)

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
VOC ¹ with any of the following classifications: Fatal, Toxic or Harmful when inhaled (H330, H331, H332), May cause drowsiness or dizziness (H336), May cause damage to organs (H371), or May cause damage to organs through prolonged or repeated exposure (H373) May be fatal if swallowed and enters airways (H304)	≤1 %	<10 %	≥10 %
<i>Reference/Information</i>	<p>¹VOC refers to substances that have an initial boiling point <250° C measured at a standard atmospheric pressure of 101.3 kPa. The initial boiling point is set in line with the Directive 2004/42/EC.</p> <p>Concentration limits have been set in line with industry agreements for paints, varnishes and glue. Aggregation of concentration occurs for volatile organic compounds with the addressed classifications.</p> <p>Substances classified H304 are aggregated only with other substances classified H304.</p>		

0.17 Environmentally hazardous

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
a) Hazardous to the aquatic environment, Acute Category 1 (H400)	≤2,5% of single substance, if M=1 ¹	<25%, if M=1 ²	≥25%, if M=1 ²
b) Hazardous to the aquatic environment, Chronic Category 1 (H410)	≤0,25% of single substance, if M=1 ¹	<2,5%, if M=1 ²	≥2,5%, if M=1 ²
c) Hazardous to the aquatic environment, Chronic Category 2 (H411)	≤2,5% of single substance	<25% ³	≥25% ³
d) Hazardous to the aquatic environment, Chronic Category 3 (H412)	≤2,5% of single substance	Not a requirement for Accepted	No concentration limit
e) Hazardous to the aquatic environment, Chronic Category 4 (H413)	≤2,5% of single substance	<25% ³	≥25% ³
<i>Reference/Information</i>	¹ Concentration limit depends on the M factor (Annex VI of The Regulation on Classification, Labelling and Packaging of Substances and Mixtures (CLP, (EG) nr 1272/2008). ² Concentration limit depends on the M factor (Annex VI of the CLP Regulation). In the case of the occurrence of several substances with the same classification, these are aggregated in accordance with Annex 1, Chapter 4 of the CLP Regulation. ³ In the case of several substances, these are aggregated in accordance with Annex 1, Chapter 4 of the CLP Regulation on Classification, Labelling and Packaging of Substances and Mixtures (CLP (criterion 0.17c means aggregation of H410 and H411, while criterion 0.17 e substances classified as H410, H411, H412 and H413 are aggregated). Chemical products classified as environmentally hazardous in Chapter 2 of the SDS are given the assessment To be avoided for the addressed criterion (0.17 a-c + e).		

0.18 Potential PBT/vPvB substances

	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
Potential vPvB and PBT substances	≤0,1%	Not a requirement for Accepted	No concentration limit
Reference/Information	Substances that fulfil the PRIO Guide's criteria for potential PBT/vPvB substances, https://www.kemi.se/prio-start/criteria/the-criteria-in-detail/potential-pbtvpvb .		

0.19 Specifically identified substances




	 <i>Recommended</i>	 <i>Accepted</i>	 <i>To be avoided</i>
Specifically identified substances and groups of substances according to Table 1	Total ban	Not a requirement for Accepted	No concentration limit

Table 1. Specifically identified substances and groups of substances

For the assessment Recommended, the substances/groups of substances according to the table may not occur in a product. This is certified with "Byggvarubedömningens Certificate of substance content and concentrations".

Assessed under the content criterion 0.19 Specifically identified substances and groups of substances.

<i>Substance group/Substance</i>
Arsenic and its compounds ¹
Brominated flame retardants
Perfluorooctanoic acid (PFOA)
Perfluorooctanesulfonates (PFOS)
Organotin compounds
Biocidal product applied on products (surface treatments) to provide a disinfectant or anti-bacterial effect.
¹ Arsenic, or arsenic compounds, are not permitted to be added to the product. Contamination levels in used raw materials are not permitted to exceed 10 mg/kg. The concentration limit is set based on regulatory requirements for soil quality to ensure that products assessed as Recommended do not raise background concentrations through their use or disposal (for example; sludge from sewage treatment works Swedish Ordinance 1998:944, Section 20). The same concentration limits are found in the Swedish Environmental Protection Agency's general guidelines for sensitive land use, https://www.naturvardsverket.se/Stod-i-miljoarbetet/Vagledning/Vagledning/Forenaden-omraden/Riktvarde-for-forenaden-mark/ .

Information requirement that does not affect the assessment, Nanomaterial

If a product contains nanomaterial that is actively added to achieve a specific function (refers to, for example, self-cleaning, anti-bacterial and disinfectant products) this can be stated in the supporting documentation for the assessment. The relevant substances are to be clearly stated.




For a definition of nanomaterial, refer to




http://ec.europa.eu/environment/chemicals/nanotech/faq/definition_en.htm .




Criteria, Lifecycle aspects

The criteria for lifecycle aspects highlight parts of the production phase, usage phase as well as the waste and demolition phase. The criteria are based on information provided in the construction product declaration. Certain criteria require that further information be enclosed; refer to each criterion. All criteria are not relevant for all types of products; refer to the information for each criterion.




1. Constituent materials and raw materials




1.1 Renewable raw materials	
 <i>Recommended</i>	Renewable raw materials $\geq 50\%$.
 <i>Accepted</i>	Renewable raw materials $< 50\%$. <i>Alternative</i> Data on renewable raw materials is lacking.
 <i>To be avoided</i>	The criterion cannot give the assessment To be avoided.
<i>Information</i>	<i>A renewable raw material is defined as a raw material that can rapidly be reproduced as new. A tree or sugar cane are examples of renewable raw materials; i.e. they are renewed in the foreseeable future. The criterion includes water as a renewable raw material. The assessment is based on information provided in the list of contents. The criterion is deemed as Not relevant for products that achieve Recommended for criterion 1.2.</i>




1.2 Proportion of recycled material	
 <i>Recommended</i>	Recycled materials $\geq 50\%$.
 <i>Accepted</i>	Recycled materials $< 50\%$. <i>Alternative</i> Data on recycled materials is lacking.
 <i>To be avoided</i>	The criterion cannot give the assessment To be avoided.
<i>Information</i>	<p><i>Recycled material (also designated secondary material in the EPD) refers to material that has fulfilled the criteria for when waste ceases to be waste according to The Waste Framework Directive (2008/98/EC) and that has passed the consumer level. Accordingly, the criterion does not apply to recycled material from proprietary production.</i></p> <p><i>The criterion is deemed as Not relevant for products that achieve Recommended for criterion 1.1.</i></p>

1.3 Sustainable wood raw material	
 <i>Recommended</i>	<p>The supplier is PEFC or FSC certified and the product can be ordered certified, or alternatively, the product is certified.¹</p> <p><i>Alternative</i></p> <p>Product made of a wood species from documented sustainable forestry.²</p>
 <i>Accepted</i>	<p>Supplier cannot present information about the constituent wood raw material that fulfils the requirement for Recommended.</p> <p><i>Alternative</i></p> <p>Wood species or origin in the CITES appendix for endangered species containing certificates for legal harvesting.</p>
 <i>To be avoided</i>	<p>Wood species or origin in the CITES appendix for endangered species</p> <p>Certificates cannot be provided (on request) for verifying legal harvesting.</p>
<i>Information</i>	<p>¹Supplier can prove that they have valid FSC or PEFC certificates (or for other third-party audited systems that include a chain-of-custody certificate). The license number is to be specified in the supporting documentation sent in. Note that the certificate in itself is not proof that the product purchased is certified in terms of wood raw material; further control is required.</p> <p>²Supplier can prove that it is possible that the wood raw material used originates from documented sustainable forestry. Information used to verify this for assessment includes valid FSC or PEFC certificates from all sub-contractors (must cover 100% of the constituent wood raw material). Note that this does not mean that the product can be ordered with traceability certificates or that sustainable wood raw material is used (this requires further control in the form of contracts and invoices).</p> <p><i>The criterion is deemed as Not relevant for products that contain <2% wood raw material.</i></p>




2. Manufacture of the product

2.1 Emissions to air, water or land	
 <i>Recommended</i>	<p>Data is publicly reported about emissions (type of emission and amount per declared or functional unit) for environmental impact categories during the production phase.</p> <ul style="list-style-type: none"> The data is to be based on a product-specific¹, verified (third-party) Environmental Product Declaration (EPD) according to ISO 14025. The EPD is to be registered in one of the international EPD programs. Construction products are to comply with the EN 15804 standard.²
 <i>Accepted</i>	<p>Data is reported about emissions (type of emission and amount per declared or functional unit) for environmental impact categories during the production phase.</p> <p>Information is to be reported according to one of the below:</p> <ul style="list-style-type: none"> Data based fully or partly on a generic³, verified (third-party audited) EPD according to ISO 14025. The EPD is to be registered in one of the international EPD programs. Construction products adhere to the EN 15804 standard.² Data that is not based on a verified EPD is reported. Data about emissions is partly reported. Data on emissions is lacking.
 <i>To be avoided</i>	<p>The criterion cannot give the assessment To be avoided.</p>
<i>Information</i>	<p>¹That which here is referred to as "product-specific" EPD is often simply referred to as the EPD. This can include a product/raw material or a product series. Names of the constituent materials or products are to be clearly stated in the EPD.</p> <p>²Construction products that fall under the Construction Products Regulation (the Regulation (EU) No 305/2011 of the European Parliament and of the Council) are to comply with the EN 15804 standard. The international EPD systems can prepare EPD according to other standards for other types of materials and products. Byggarubedömningen can approve EPD for other types of materials/products after confirmation.</p> <p>³Generic EPDs are prepared for a production sector or product group, often by a trade association. Generic EPDs can also be referred to as regional, sectorial, industry-wide or average EPD.</p>




2.2 Primary energy usage during the production phase	
 <i>Recommended</i>	<p>Renewable resources account for $\geq 50\%$ of the primary energy used as energy carrier/fuel (Directive 2009/28/EC).¹</p> <ul style="list-style-type: none"> Reported data is to be based on a product-specific or generic, verified (third-party audited) EPD according to ISO 14025. The EPD is to be registered in one of the international EPD programs. Construction products adhere to the EN 158042 standard. Refers to data reported in module A1 to A3.² <p><i>Alternative</i></p> <p>Non-renewable resources account for $\geq 50\%$ of the primary energy, but $\geq 50\%$ of the climate-impacting emissions from the production phase is climate compensated and does not contribute to a net increase in atmospheric CO2 equivalents.</p> <ul style="list-style-type: none"> Data reported in a certificate according to Gold Standard®.³ The climate-compensated emissions are to correspond to Scope 3 in the Greenhouse Gas Protocol.⁴
 <i>Accepted</i>	<ul style="list-style-type: none"> Renewable resources account for $< 50\%$ of the primary energy used as energy carrier/fuel (Directive 2009/28/EC).¹ Non-renewable resources account for $\geq 50\%$ of the primary energy, and $< 50\%$ of the climate-impacting emissions from the production phase is climate compensated. Data that is based on a non-verified EPD is reported. Data on primary energy use is reported partly. Data on primary energy use is lacking.
 <i>To be avoided</i>	<p>The criterion cannot give the assessment To be avoided.</p>
<i>Information</i>	<p>¹ Energy from renewable, non-fossil energy sources, namely wind energy, solar energy, aerothermal energy (heat from air), geothermal energy, hydrothermal energy (heat from water) and marine energy, hydropower, biomass (the biologically degradable part of products), waste and residual products with a biological origin, landfill gas, gas from sewage treatment plants and biogas. The biofuel may not include palm oil. (Directive 2009/28/EC)</p> <p>²Construction products that fall under the Construction Products Regulation (the Regulation (EU) No 305/2011 of the European Parliament and of the Council) are to comply with the EN 15804 standard. The international EPD systems can prepare EPD according to other standards for other types of materials and products. Byggvarubedömningen can approve EPD for other types of materials/products after confirmation.</p> <p>³Gold standard: https://www.goldstandard.org/</p> <p>⁴Greenhouse gas protocol, Science-based targets initiative: https://sciencebasedtargets.org/2018/05/25/how-can-companies-address-their-scope-3-greenhouse-gas-emissions/</p>




2.3 Electricity consumption during final production (Sub-criterion assessed only when an EPD is lacking)	
 <i>Recommended</i>	Renewable energy sources account for $\geq 50\%$ of the electricity consumption during final production. ¹ Data is provided either in a BVD, ² or information is provided in certificate from an electricity supplier. ^{3,4}
 <i>Accepted</i>	The criterion cannot give the assessment Accepted. ⁴
 <i>To be avoided</i>	The criterion cannot give the assessment To be avoided. ⁴
<i>Information</i>	<p>¹Energy from renewable, non-fossil energy sources, namely wind energy, solar energy, aerothermal energy (heat from air), geothermal energy, hydrothermal energy (heat from water) and marine energy, hydropower, biomass (the biologically degradable part of products), waste and residual products with a biological origin, landfill gas, gas from sewage treatment plants and biogas. The biofuel may not include palm oil. (Directive 2009/28/EC)</p> <p>²The following data is to be reported in BVD: the type of energy source, for which part of production it applies, a breakdown of the energy sources used (%), how long the agreement has been applied (must be at least 1 year, forward and/or backward in time, and the agreement must be valid at the time of application) and electricity supplier.</p> <p>³The following data is to be reported for electricity use during final production in a certificate from an electricity supplier: Type of energy source, that it is clear that the agreement is valid when the application is made (for example, by providing the date for when the agreement was signed) and electricity supplier.</p> <p>⁴Criterion 2.3 is assessed only when a verified EPD is lacking. Assessment of the criterion will be Recommended or alternatively, the criterion is not relevant for assessment.</p>

3. Packaging




3.1 Packaging	
 <i>Recommended</i>	The product is delivered in bulk or completely without packaging.
 <i>Accepted</i>	The packaging that is used can be recycled or energy recovered. <i>Alternative</i> Information about packaging is lacking.
 <i>To be avoided</i>	The criterion cannot give the assessment To be avoided.
<i>Information</i>	<i>Packaging includes material intended to protect the product. Subsequently, this does not refer to load carriers such as pallets or ratchet straps used to keep the product securely in place.</i>




4. Use phase




4.1 Leaching of substances that could have potential impact on water quality	
 <i>Recommended</i>	<p>No contact with water during the intended function, where at the surface layer there is a risk of leaching of a substance/substances or materials that have properties covered by Byggvarubedömningen's content criteria, or that are defined as particularly polluting substances or prioritised substances in accordance with the EU Water Framework Directive and HVMFS 2019:25.¹</p>
 <i>Accepted</i>	<p>Outdoor products such as posts, fences and grating with lesser contact with water whereby leaching can occur of substances that have properties covered by Byggvarubedömningen's content criteria, or that are defined as particularly polluting substances or prioritised substances in accordance with the EU Water Framework Directive and HVMFS 2019:25.¹</p> <p>HVAC products such as tap water fittings, joints, valves, pipe bends and mixing valves that fulfil the 4MS requirements and alloys that come into contact with drinking water are included in the MS positive list.²</p> <p>Documentation is provided that the product meets Boverket's (the Swedish National Board of Housing, Building and Planning's) recommended requirements for permissible leaching of lead.³</p>
 <i>To be avoided</i>	<p>Roof, facade and dewatering systems as well as water pipes, tanks, boilers, etc. that come into contact with considerable amounts of water where there is leaching of substances that have properties covered by Byggvarubedömningen's content criteria, or that are defined as particularly polluting substances or prioritised substances in accordance with the EU Water Framework Directive and HVMFS 2019:25.¹</p> <p>HVAC products such as tap water fittings, joints, valves, pipe bends and mixing valves that do not fulfil the 4MS requirements.²</p> <p>The product does not meet Boverket's recommended requirements for permissible leaching of lead.³</p>
<i>Information</i>	<p>¹Relevant for products in which copper and zinc can be leached, such as roofing and facade systems (may have an impact locally, thereby necessitating a site-specific risk assessment), as well as copper piping, heat exchangers and water boilers used in open systems (has an impact on levels in sewage sludge).</p> <p>²For information about 4MS, refer to https://www.umweltbundesamt.de/en/node/%2013888</p> <p>³The requirements pertain to HVAC products covered by Boverket's regulations (Section 6:62).</p>




4.2 Energy usage	
 <i>Recommended</i>	<p>The product fulfils the procurement authority's requirement level "advanced requirement" in instances such have been drafted for the product group.¹</p> <p>Mechanical basin and sink mixing valves as well as thermostatic mixing valves meet at least energy classification level C according to the SS 820000 or SS 820001 Standards.²</p>
 <i>Accepted</i>	<p>The product fulfils the procurement authority's requirement level "basic requirement" in instances such have been drafted for the product group.¹</p> <p>Energy classification for HVAC products is lacking or does not meet the energy classification level C according to the SS 820000 or SS 820001 Standards.²</p>
 <i>To be avoided</i>	<p>The product does not meet the requirements for Accepted or labelling is lacking for the relevant product types for which energy labelling is a requirement according to EU directives.</p>
<i>Information</i>	<p><i>The criterion is only relevant for products that have a system for energy labelling. Is applied for light sources and light fittings, for instance. Separate verification may be required.</i></p> <p>¹For basic/advanced requirements, refer to http://www.upphandlingsmyndigheten.se</p> <p>²Energy efficiency tested in accordance with SS 820000 (mechanical basin mixer and sink mixing valves) or SS 820001 (thermostatic mixing valves). Refer to www.kiwa.se</p>

5. Waste and demolition




5.1 Reuse	
 <i>Recommended</i>	<p>Reuse is possible for $\geq 70\%$ of the product.¹</p>
 <i>Accepted</i>	<p>One of the below applies:</p> <ul style="list-style-type: none"> • Reuse is not possible for $\geq 70\%$ of the product.¹ • Data is lacking and cannot be determined from knowledge of the material.
 <i>To be avoided</i>	<p>The criterion cannot give the assessment To be avoided.</p>
<i>Information</i>	<p>¹The assessment is based on the criteria for when waste ceases to be waste in the Waste Directive (2008/98/EC) and based on what is practically feasible given current technology.</p> <p>The criterion is deemed as Not relevant for hardening chemical products.</p>




5.2 Recycling	
 <i>Recommended</i>	Material recycling is possible for $\geq 70\%$ of the product. ¹
 <i>Accepted</i>	One of the below applies: <ul style="list-style-type: none"> • Material recycling is only possible as fill material for $\geq 70\%$ of the product.¹ • Energy recycling is possible for $\geq 70\%$ of the product.¹ • Material recycling is not possible in conjunction with demolition, but there are systems for recycling $\geq 70\%$ of installation waste.
 <i>To be avoided</i>	One of the below applies: <ul style="list-style-type: none"> • The product cannot be material or energy recycled to $\geq 70\%$.¹ • Data is lacking and cannot be determined from knowledge of the material.
<i>Information</i>	<p>¹The assessment is based on the criteria for when waste ceases to be waste in the Waste Directive (2011:927) and based on what is practically feasible given current technology according to the Swedish Construction Federation's "Resource and waste management in construction and demolition". https://byggforetagen.se/foretagsservice/amnen/resurs-och-avfallshantering/</p> <p>The criterion is deemed as Not relevant for chemical products that harden and cannot be separated from the surface to which they are attached (glue, sealants, paints, etc.). Applies also to small products that are expected to be sorted/come with the surface to which they are attached (tapes, joining tapes, etc.).</p>

5.3 Hazardous waste in use/building production	
 <i>Recommended</i>	The product does not give rise to hazardous waste.
 <i>Accepted</i>	The product gives rise to hazardous waste and information is available about special measures for protecting health and the environment.
 <i>To be avoided</i>	One of the below applies: <ul style="list-style-type: none"> • The product gives rise to hazardous waste but information is lacking about special measures for protecting health and the environment. • Data about hazardous waste is lacking or insufficient.

5.4 Hazardous waste in demolition/dismantling	
 <i>Recommended</i>	End-of-life product is not classified as hazardous waste.
 <i>Accepted</i>	End-of-life product or part of product is to be handled as electronic waste.
 <i>To be avoided</i>	One of the below applies: <ul style="list-style-type: none"> • End-of-life product is classified as hazardous waste. • Data about hazardous waste is lacking or insufficient.
<i>Information</i>	<i>The criterion is deemed as Not relevant for products that are not left behind after demolition/dismantling, such as products used in management.</i>

6. Emissions of VOC to the indoor environment

6.1 Documentation about emissions	
 <i>Recommended</i>	One of the below applies: <ul style="list-style-type: none"> • Data is available about emissions of VOC. A complete report that presents all substances that produce emissions.¹ • Goods made of stone, brick, tiles, clinker, cement mosaic, glass or metal.²
 <i>Accepted</i>	Data is available about emissions. TVOC is evident but information about which individual substances produce emissions is lacking/not reported publicly.
 <i>To be avoided</i>	Data about VOC is lacking.
<i>Information</i>	<p><i>The criterion applies to relevant products for indoor use in the form of surface materials or used in applications where emissions reach the indoor air, including wall boards, floor covering, sealing layers, paints, wallpapers, glue, filler, etc. Fixed mounted cabinets and doors are also covered by requirements concerning emissions.</i></p> <p>¹<i>Information is presented in the form of one of the accepted certificates (refer to criterion 6.2) or alternatively an analysis report completed in accordance with ISO 16000-9 (or ISO 16000-10*) standard method in combination with standard ISO 16000-6 and ISO 16000-3 testing method. Alternatively, an analysis report that complies with the EN 16516 Standard. The supporting documents that are enclosed are to show VOC emissions measured after 28 days.</i></p> <p>²<i>Also includes products consisting of industrial powder coated metal hardened at high temperature.</i></p> <p><i>* Analysis report according to standard method ISO 16000-10 is approved if the information is specified in µg/m³.</i></p>

6.2 Assessment of emissions	
 <i>Recommended</i>	Requirements according to one of the following systems are fulfilled: ¹ EMICODE EC1 and EC1 ^{PLUS} , Blue Angel, M1 (RTS), GUT
 <i>Accepted</i>	Requirements according to one of the following systems are fulfilled: ¹ EMICODE EC2, AgBB, M2 (RTS)
 <i>To be avoided</i>	Does not meet requirements according to the criteria set for specified systems.
<i>Information</i>	<p>¹If it is apparent from the supporting documentation that equivalent requirements are complied with, also other certificates or reports are acceptable – for example, fulfil Eurofin's IAC Gold level Recommended and IAC level Accepted. Note that the certificate for Franska A+ is not acceptable.</p> <p>The criterion is relevant for products specified in criterion 6.1. The criterion is not deemed relevant as 6.1 is marked based on information about emissions is lacking/is insufficient.</p>