

ECO(MAKE(

TECHNICAL REQUIREMENTS



The sustainability showcase

2012 EDITION

| USER GUIDE

FOREWORD

ECOMAKE® aims at becoming a forum where to deal with the opportunities for the construction sector offered by the productive system at a national and international level, in order to achieve healthy workplaces and homes, indoor environmental comfort and energy efficiency.

ECOMAKE® is the first initiative addressed to the companies that are committed to create materials, technologies, installations and processes for sustainable building. Such products have to meet specific energy-environmental technical requirements.

The technical requirements were defined by a panel composed by experts who represent some of the most important Italian associations of producers of construction materials: ANDIL ASSOLATERIZI (the Italian association of brick producers), ASSOCIAZIONE ITALIANA ZINCATURA (the Italian association for zinc coating), ASSORESTAURO (the Italian association for architecture, art and urban restoration), ASSOLEGNO-Gruppo Costruttori (representing the whole Italian wood-furniture sector), all of them coordinated by the Metadistretto veneto della Bioedilizia (Venetian Metacluster for Sustainable Building). The regulations set within the technical requirements are light though consistent, and were defined by people possessing an understanding of materials and the ways of producing them; such regulations can also prove and highlight the sustainable characteristics of products and technologies.

The producers of materials, technologies and installations for the construction industry who are interested in becoming ECOMAKE® partners are required to prove their products compliance with the requirements mentioned above. Therefore, they're asked to fill in the tables concerning the proper product group and to provide the scientific advisory board with the necessary documents, as follows.

HOW TO COMPLETE THE FORMS

The technical requirements form will have to be filled in by the manufacturers who are interested in displaying their products, technologies or processes inside Ecomake®'s showcase. Each form must be filled in with the technical specifications of only one product, technology or process. If the product is compliant, its sustainability specifications will have to be clearly visible.

Once the technical requirements form is completed –together with any optional technical documents–, it will have to be sent with the subscription form and will have to subsequently be transmitted to the Venetian Metacluster for Sustainable Building by mail, fax or e-mail.

EVALUATION COMMITTEE

The Evaluation Committee will be composed of the technical staff belonging to Treviso Tecnologia and the Venetian Metacluster for Sustainable Building.

PROCESS ENVIRONMENTAL CRITERIA

Tick the declared criterion. It is not compulsory to tick all the criteria below

MATERIALS FOR SUSTAINABLE BUILDING

	CRITERIA	MAXIMUM SCORE	ACTUAL SCORE				
PROCESS	A1	Kind of raw materials included (weight)	3	0;2;3	<input type="checkbox"/> Synthetic	<input type="checkbox"/> Natural, up to 50% renewable	<input type="checkbox"/> Natural, more than 50% renewable
	A2	Supply range (main raw material/s)	3	0;2;3	<input type="checkbox"/> More than 400 km (250 mi)	<input type="checkbox"/> Within 200 km (125 mi)	<input type="checkbox"/> Within 100 km (62 mi)
	A3	% of recycled raw materials	4	1;2;4	<input type="checkbox"/> 5%-14%	<input type="checkbox"/> 15%-30%	<input type="checkbox"/> >30%
	A4	Production waste collection (% measured in weight on the total of raw materials used)	4	1;2;4	<input type="checkbox"/> 5%-29%	<input type="checkbox"/> 30%-50%	<input type="checkbox"/> >50%
	A5	Water consumption (harvesting techniques used in a standard process)	3	1;2;3	<input type="checkbox"/> 5%-14%	<input type="checkbox"/> 15%-30%	<input type="checkbox"/> >30%
	A6	Energy consumption (saving measures used in a standard process)	4	1;2;4	<input type="checkbox"/> 5%-9%	<input type="checkbox"/> 10%-30%	<input type="checkbox"/> >30%
	A7	Renewable energy sources (% of total consumption), self-production	4	1;2;4	<input type="checkbox"/> 1%-5%	<input type="checkbox"/> 6%-15%	<input type="checkbox"/> >15%
	A8	Energy consumption (recovery factors used in a standard process)	4	1;2;4	<input type="checkbox"/> 5%-9%	<input type="checkbox"/> 10%-25%	<input type="checkbox"/> >25%
	A9	% of dangerous waste (measured in weight) reintegrated in a new industrial process	3	0;1;3	<input type="checkbox"/> <4%	<input type="checkbox"/> 5%-20%	<input type="checkbox"/> >20%
	A10	Curb on air polluting emissions (best practices used in a standard process)	5	1;3;5	<input type="checkbox"/> <9%	<input type="checkbox"/> 10%-15%	<input type="checkbox"/> >15%
	A11	Greenhouse effect (CO2 reduction –Best practices used in a standard process)	4	1;2;4	<input type="checkbox"/> <9%	<input type="checkbox"/> 10%-15%	<input type="checkbox"/> >15%
	A12	Atmospheric acidification – Reduction with respect to the limits of the law (no-yes)	2	0;2	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
	A13	Rainwater – treatment and harvesting	3	1;2;3	<input type="checkbox"/> None	<input type="checkbox"/> First rain only	<input type="checkbox"/> Complete
	A14	Process certification	5	1;3;5	<input type="checkbox"/> ISO 9001	<input type="checkbox"/> ISO 14001	<input type="checkbox"/> EMAS
	TOTAL	51					

The minimum score required to become ECOMAKE® partner is equal to 21

PRODUCT ENVIRONMENTAL CRITERIA

(*)Tick the option corresponding to the predominant VOC

(**)If the product is devoid of the mentioned VOCs, tick score 5 in any of the boxes referring to VOCs

(***)For the products regulated by Ministerial Decree, “average” must be considered the minimum score

PRODUCT	SUSTAINABILITY CHARACTERISTICS	CRITERIA	MAXIMUM SCORE	ACTUAL SCORE			
		B1	Supply range (average of delivered product)	3	0;1;3	<input type="checkbox"/> More than 400 km (250 mi)	<input type="checkbox"/> Within 200 km (125 mi)
ECOLOGICAL CHARACTERISTICS	B2	Primary energy content (give reasons for the answer)	5	1;3;5	<input type="checkbox"/> High	<input type="checkbox"/> Average	<input type="checkbox"/> Low
	B3	Durability (give reasons for the answer)	5	1;3;5	<input type="checkbox"/> Low	<input type="checkbox"/> Average	<input type="checkbox"/> High
	B4	Recovery potential	5	1;3;5	<input type="checkbox"/> Low	<input type="checkbox"/> Average	<input type="checkbox"/> High
	B5	Recycle potential	5	1;3;5	<input type="checkbox"/> Low	<input type="checkbox"/> Average	<input type="checkbox"/> High
	C1.1	VOC-Formaldehyde release: balance concentration they cause in the air $\geq 0,1\mu\text{g}/\text{m}^3$ during 30 minutes. (WHO) (*) (give reasons for the answer)	5(**)	1;3;5	<input type="checkbox"/> High	<input type="checkbox"/> Average	<input type="checkbox"/> Low
	C1.2	VOC-Toluene release: balance concentration (WHO) they cause in the air $\geq 0,26\mu\text{g}/\text{m}^3$, weekly average (*) (give reasons for the answer)	5(**)	1;3;5	<input type="checkbox"/> High	<input type="checkbox"/> Average	<input type="checkbox"/> Low
	C1.3	VOC-Benzene release: balance concentration they cause in the air $\geq 5\mu\text{g}/\text{m}^3$ during 8 hours (ASHRAE) (*) (give reasons for the answer)	5(**)	1;3;5	<input type="checkbox"/> High	<input type="checkbox"/> Average	<input type="checkbox"/> Low
	C2	Mineral fibres release (Circular of the Italian Ministry of Health n° 23; 25/11/1991) (give reasons for the answer)	5	1;3;5	<input type="checkbox"/> High	<input type="checkbox"/> Average	<input type="checkbox"/> Low
	C3	Radioactivity (radium-226 and thorium-232) (give reasons for the answer)	5	1;3;5	<input type="checkbox"/> 50 Bq/kg	<input type="checkbox"/> 40 Bq/kg	<input type="checkbox"/> 30 Bq/kg
	C4	Reaction to fire (give reasons for the answer)***	3	0;1;3	<input type="checkbox"/> High	<input type="checkbox"/> Average	<input type="checkbox"/> Low
C5	Environmental certifications (if any)	5	5	<input type="checkbox"/> Anab, Ecolabel, Sentinel-Haus, etc.			
		TOTAL	46				

The minimum score required to become ECOMAKE® partner is equal to 19

NOTES

Please enclose the product’s certification of compliance with the proper CE conformity marking.

For those criteria that specify to “give reasons for the answer”, please enclose the suitable accompanying documents.

GUIDELINES TO COMPLETE THE FORMS CORRECTLY

The technical requirements specified in this document don't intend under any circumstances to substitute any product's energy-environmental certification, but they rather aim at suggesting the manufacturers a way to highlight their product's compliance with strict technical requirements, which distinguish different environmental sustainability areas for construction products. This would be useful for technical users such as companies, professionals and public administrations.

The range of interest of these technical requirements consists in the product's life cycle, and the files it consists of try to highlight its environmental performance starting from production/manufacturing, and then they delve into the elements that characterize the product with respect to its environmental sustainability and biological quality.

Compliance with law obligations (if any) was the minimum starting point of reference; therefore, if there is a specific law obligation for a single criterion, the score indicates an improvement of the law obligation(s).

The producer/manufacturer will have to enclose documents with technical specifications providing reasons for the score assigned, and/or enclose technical documentation, research or lab analyses backing the choice of the score chosen.

The technical requirements refer to a wide array of product areas, and cannot take into account the specific characteristics of each product area, but rather they're designed to be used as a basic instrument useful for representing the products' sustainability characteristics, as well as a methodological path given to companies in order to make them aware of the main features to be aware of and to highlight if a product is to be distinguished for its sustainability or compliance with well-being needs.

The reference of the technical criteria consists of:

- Existing regulations for a specific context. If there aren't any specific/binding regulations, the term of reference is based on suggestions/indications given by internationally recognized bodies (WHO, ASHRE, directives of the European Union, etc.). In order to help while filling in the criteria, some of them will be further specified.
- The standard production process of single products; therefore each criterion refers to the solutions used by the producer in the standard process in order to improve its environmental performance.

CRITERIA SPECIFICATIONS

A1 – The technical requirements stem from a specific choice, consisting in giving priority to those products that derive from natural raw materials: therefore, the products containing more than 4% (in weight) of synthetic products are not admitted in ECOMAKE®. The second positive feature consists in the raw materials’ recyclability: the score is 2 if the product is made of recyclable raw materials up to 50%, and 3 if the percentage exceeds 50%;

A5, A6, A7, A8, A10, A11 – Refer to standard production processes for which the producer will have to describe the solution employed to improve the standard or law obligations (if any). Such description will have to be enclosed within the technical specifications attached to the technical requirements. The solutions improving any criterion according to the company’s will and not determined by law obligations may be included. If the production process doesn’t foresee to carry out the activity dealt with in a criterion, the score to be assigned will have to be the highest. For example, if the production process doesn’t need any water (A5), the score to be assigned for that specific element is the highest.

A6, A8 – The first refers to energy savings obtained by introducing in the process any machinery or components that are energetically more efficient and able to reduce the energy consumption of the production process. The second refers to any modifications implemented to the standard production process in order to reuse the energy within the process or as sub-supply towards third parties.

B1 – Considering all the goods delivered during the year before that in which the technical requirements are filled to be equal to 100 (2011 if the technical requirements were filled in 2012, etc.), the participants must specify the distance of the average product delivery from the production plant (specifying the range within which it took place).

B2 – The content of primary energy to which the I.T.A.C.A. protocol refers is enclosed, in order to provide all the producers with the same term of reference to relate to when having to determine the score for this criterion;

B1 – C4 – Reasons for the score must be provided with when it comes to the criteria included in this interval;

C.1.1 – The reference for wood based panels/semifinished products and finished products made of wood based panels is E1 class (Italian Law Decree October 10, 2008). The score has to be assigned considering the limit set by the E1 class.

TECHNOLOGIES FOR WELL-BEING AND THE ENVIRONMENT

D	CRITERIA	MAXIMUM SCORE	ACTUAL SCORE			
D1	Process certification	5	1;3;5	<input type="checkbox"/> ISO 9001	<input type="checkbox"/> ISO 14001	<input type="checkbox"/> EMAS
D2	Recyclability of components	3	1;2;3	<input type="checkbox"/> Low	<input type="checkbox"/> Average	<input type="checkbox"/> High
D3	Recyclability of materials	3	1;2;3	<input type="checkbox"/> Low	<input type="checkbox"/> Average	<input type="checkbox"/> High
D4	Contribution to the indoor well-being (thermal, acoustic, visual, air, accessibility)	5	1;3;5	<input type="checkbox"/> Low	<input type="checkbox"/> Average	<input type="checkbox"/> High
D5	Contribution to the product's energy efficiency	3	1;2;3	<input type="checkbox"/> Low	<input type="checkbox"/> Average	<input type="checkbox"/> High
D6	Contribution to the system's energy efficiency	5	1;3;5	<input type="checkbox"/> Low	<input type="checkbox"/> Average	<input type="checkbox"/> High
TOTAL		24				

The minimum score required to become ECOMAKE® partner is equal to 10

The criteria ranging from D2 to D6 must be integrated with the following documents: technical reports, technical specifications, laboratory tests, technical-scientific documents, compliance of the score declared with the product performance, comparing it to the market standard. If such documents are signed or directly provided by a public/external research body, the score they refer to is multiplied by 1.5.