

**Partial Revisions of Certificate Criteria for Eco Mark Product Category No. 131  
“Products for Civil Engineering Version 1.4”**

Partial revisions have been made to Eco Mark Product Category No. 131 “Products for Civil Engineering Version 1.4” criteria, as provided in the following Proposed Revisions:

Proposed Revisions (Underlined text has been added, and text marked with = has been deleted.)

4. Certification criteria

4-1 Environmental criteria

H. Landscaping/revegetation materials

(36) As for the products, the total mass of “recycled materials” given in Table 4 shall be 70% or more of the entire product mass (excluding vegetation sheets and other seeds). Products in which concrete and other materials are combined for use, the ratio of recycled materials to the product mass excluding the concrete portion shall be 70% or more. As for products composed of concrete only, or a portion of concrete, they shall use the standard mixture rates for “recycled materials” given in Table 4 or a higher standard. The combination of recycled materials shall be either aggregates only or cement and admixture.

As for products whose purpose of use is terminated after a certain period and that may be left in the environment, only Category A recycled materials shall be used.

When using Category C recycled materials, high-stability treatment, burning or vitrification shall be conducted in the stage of pre-treatment of raw materials or production process, based on the “Guideline of construction sludge recycling” (compiled and written by the Advanced Construction Technology Center, October 1999).

(37) The product shall not elute harmful substances including heavy metals during construction or at use of the objectives. As for elution of harmful substances, the following six kind of substances are set among all specific substances given in Attachment 2, which are provided in the detailed enforcement regulations (Ministry of the Environment Ordinance No. 29, December 26, 2002) of the Soil Pollution Control Law: cadmium, lead, hexavalent chromium, arsenic, total mercury, and selenium.

- (38) As for harmful substances contained in the concrete portions, the product shall conform to the requirements of those substances including cadmium, lead, arsenic, and total mercury, among the specific harmful substances given in Attachment 3, which are provided in the detailed enforcement regulations (Ministry of the Environment Ordinance No. 29, December 26, 2002) of the Soil Pollution Control Law.
- (39) Each stage from resource extraction to the recycling of the product shall give consideration to the quantity of new resources used, energy consumption and CO<sub>2</sub> emissions.
- (40) Information regarding Certification Criteria 4-1-3.H. (37) and (38) shall be made available.
- (41) The packaging of the products shall give consideration to ease of recycling. Plastic materials used for packaging shall not have polymers added that contain halogens and organic halogenides as prescribed constituents. When the packaging materials include metals, they shall be designed to allow separation/sorting to facilitate recycling after disposal.

Table 4 Recycled materials usable for landscaping/revegetation materials  
(excluding concrete portions)

Recycled material			
Category A	Reused/unused wood		
	Waste plant fibers (Rice straw, palms, moss, etc.)		
	Waste paper		
Category B	Coarse aggregates in conformity with Criteria C (15) for applicable 'aggregates'		
	Cements in conformity with Criteria D (19) to D (20) for applicable 'cement'		
	Fiber	Unused fibers	
		Recycled fibers	Recovered fibers
			Recycled polymer fibers [50]
			Recycled chemical fibers [50]
	Unused cloth, recycled cloth		
	Mining/quarrying industry wastes	Quarrying and ceramic industry waste soil, micro-silica sand obtained during the water washing of silica sand (mica powder)	
	Metal industry wastes	Steel slag, foundry sand, ceramic waste, copper slag, ferro-nickel slag, electric furnace slag	
	Other industrial type wastes	Coal ash, recycled plastics [50], shells, Recycled rubber, glass cullet, gypsum (including desulfurized gypsum), glass wool, rock wool	
Non-industrial wastes and vitrified materials in sewage sludge			
Category C	Living/self-generating sludge	Waterworks sludge, sludge from the bottom of lakes	

	Industrial sludge	Paper-manufacturing sludge, aluminum sludge, galvanizing sludge, polishing sludge
	Construction sludge	

Note 1: The percentage mass of wooden parts means the mass ratio of the product or each material in an air dried state\*1 or at the point of constant weight\*2 at a temperature of 20±2°C and humidity of 65±5%.

\*1: Indicates leaving in a well-ventilated room for seven days or more.

\*2: Change is less than 0.1% when the weight is measured every 24 hours.

Note 2: As for recycled plastics and recycled fiber, combined use of recycled polymers and virgin polymers shall be permitted. Products using post-consumer materials as raw materials shall be permitted if the mass ratio of plastics and fiber products composed of post-consumer materials conforms to the requirement in [ ] given in the table.

Table 5 Recycled materials usable for concrete portions

Recycled material	Standard mixture rate
Criteria C (15) for applicable aggregates	50% by mass of the coarse aggregates used, provided that 50% by mass of fine aggregates are used as 'vitrified material aggregates'
Criteria D (19) to D (20) for applicable 'cement', and concrete admixture in conformity with Criteria E (24) for the applicable 'concrete admixture'.	(Weight of recycled materials/weight of cement + weight of admixture) × 100 ≥ 50

I. Traffic signs/traffic lane lines

I-2. Traffic sign materials

(45) As for products, the total mass of "recycled materials" given in Table 6 shall be 70% or more of the entire product mass. However, as for products in which the total mass of concrete and plastics is 50% or more of the entire product mass, the total mass of recycled materials shall be 50% or more. At the same time, each material product shall conform to the standard mixture rate given in Table 6.

Table 6 Recycled materials usable as traffic sign materials

Recycled material	Standard mixture rate (as % by mass)	
Aggregates	Coarse aggregates in conformity with Criteria C (15) for applicable 'aggregates'/total coarse aggregates $\times 100 \geq 50$ ; provided that those using vitrified materials shall be as follows: Vitrified material aggregates in conformity with the applicable 'aggregates'/total fine aggregates $\times 100 \geq 50$	
Criteria D (19) to (20) for applicable 'cement', and concrete admixture in conformity with Criteria E (24) for the applicable 'concrete admixture'.	(Weight of recycled materials/weight of cement + weight of admixture) $\times 100 \geq 50$	
Cement	Cement in conformity with Criteria D (19) to D (20) for applicable 'cement'/total cements $\times 100 \geq 50$	
Recycled plastics	Road rivets	Recycled plastics/total plastics $\times 100 = 100$
	Other traffic sign materials	Recycled plastics/total plastics $\times 100 \geq 70$ [60]
Glass cullet	Glass cullet/total glass materials $\times 100 = 100$	
Reused/unused wood	(Forest thinnings and small-diameter logs + waste wood + less useful wood)/total wooden materials $\times 100 = 100$	

Note 1: The mass percentage of the wooden portion means the mass ratio of the product or each material in an air dried state\*<sup>1</sup> or at the point of constant weight\*<sup>2</sup> at a temperature of 20±2°C and humidity of 65±5%.

\*<sup>1</sup>: Indicates leaving in a well-ventilated room for seven days or more.

\*<sup>2</sup>: Change is less than 0.1% when the weight is measured every 24 hours.

Note 2: As for recycled plastics, combined use of recycled polymers and virgin polymers shall be permitted. Products using post-consumer materials as raw materials shall be permitted if the mass ratio of plastics composed of post-consumer materials to the plastic part conforms to the requirement in [ ] given in the table.

- (46) The product shall not elute harmful substances including heavy metals during construction or at use of the objectives. As for elution of harmful substances, the following six kind of substances are set among all specific substances given in Attachment 2, which are provided in the detailed enforcement regulations (Ministry of the Environment Ordinance No. 29, December 26, 2002) of the Soil Pollution Control Law: cadmium, lead, hexavalent chromium, arsenic, total mercury, and selenium.
- (47) As for harmful substances contained in the concrete portions, the product shall conform to the requirements of those substances including cadmium, lead, arsenic, and total mercury, among the specific harmful substances given in Attachment 3, which are provided in the detailed enforcement regulations (Ministry of the Environment Ordinance No. 29, December 26, 2002) of the Soil Pollution Control Law.
- (48) Each stage from resource extraction to the recycling of the product shall give consideration to the quantity of new resources used, energy consumption and CO<sub>2</sub> emissions.

- (49) Materials shall be clearly known and designed to allow separation/sorting. Replacement of parts shall be easily carried out.
- (50) The products shall not have chromium, cadmium or arsenic added to them as prescribed constituents.
- (51) An instruction manual shall accompany the product concerning its construction/use/maintenance/management/disassembly/disposal/ recycling, and be given to the constructor and the owner of an architectural structure who use the relevant product. The instruction manual shall provide the following information:
- a. Information regarding hazardous substances in the use/construction of the recycled materials and in the use/maintenance/management of the product (clearly stating that details may be obtained upon inquiry)
  - b. Information on the product regarding construction/use/maintenance/management of the architectural structure
  - c. Information on the product regarding specifications and durability
  - d. Information on the product regarding disassembly/disposal of the architectural structure
  - e. Information regarding the recycling of the product
  - f. The requirement to retain the instruction manual (The manual shall be kept until the architectural structure is disassembled, disposed of, and/or the recycling of the product.)
- (52) The packaging of products shall give consideration to ease of recycling. Plastic materials used for packaging shall not have polymers added that contain halogens and organic halogenides as prescribed constituents.

#### J. Materials for temporary structures

- (58) As for products, the mixture ratio of “recycled materials” given in Table 7 shall be 70% or more of the entire product mass. However, as for products in which the total mass of concretes and plastics is 50% or more of the entire product mass, the total mass of recycled materials shall be 50% or more. The mixture ratio of recycled plastic of plastic mold shall be 50% or more (25% or more for the product which contains post-consumer materials as polymers) of the entire product mass.
- The mixture ratio of recycled materials shall be 20% or more of the entire product mass for a temporary road mat and a road mat which contains recycled rubber as main material.
- At the same time, each material product shall conform to the standard mixture rate given in Table 7.

Table 7 Recycled materials usable as materials for temporary structures

Recycled material	Standard mixture rate (% by weight)
Aggregate	Coarse aggregates in conformity with Criteria C (15) for applicable 'aggregates'/total coarse aggregates $\times 100 \geq 50$ ; provided that those using vitrified materials shall be as follows: Vitrified material aggregates in conformity with applicable 'aggregates'/total fine aggregates $\times 100 \geq 50$
Criteria D (19) to (20) for applicable 'cement', and concrete admixture in conformity with Criteria E (24) for the applicable 'concrete admixture'.	(Weight of recycled materials/weight of cement + weight of admixture) $\times 100 \geq 50$
Cement	Cement in conformity with Criteria D (19) to D (20) for the applicable 'cement'/total cement $\times 100 \geq 50$
Recycled plastics	Recycled plastics/total plastics $\times 100 \geq 50$ [25]
Glass cullet	Glass cullet/total glass materials $\times 100 = 100$
Reused/unused wood	(Forest thinnings and small-diameter logs + waste wood + less useful wood)/total wooden materials $\times 100 = 100$
Waste paper pulp	Waste paper pulp/pulp $\times 100 = 100$ [Waste paper pulp/pulp $\times 100 \geq 95$ (Mixture rate for mold without using release agent)]
Recycled rubber	Recycled rubber/total of rubber $\times 100 = 100$ [50]

Note 1: The percentage mass of wooden parts means the mass ratio of the product or each material in an air dried state\*1 or at the point of constant weight\*2 at a temperature of 20±2°C and humidity of 65±5%.

\*1: Indicates leaving in a well-ventilated room for seven days or more.

\*2: Change is less than 0.1% when the weight is measured every 24 hours.

Note 2: As for recycled plastics, the combined use of recycled polymers and virgin polymers shall be permitted. Products using post-consumer materials as raw materials shall be permitted if the mass ratio of the plastics composed of post-consumer materials conforms to the requirement in [ ] given in the table.

Note 3: As for recycled rubber, products using post-consumer materials as raw materials shall be permitted if the mass ratio of the recycled rubber composed of post-consumer materials conforms to the requirement in [ ] given in the table.

(59) The product shall not elute harmful substances including heavy metals during construction or at use of the objectives. As for elution of harmful substances, the following six kind of substances are set among all specific substances given in Attachment 2, which are provided in the detailed enforcement regulations (Ministry of the Environment Ordinance No. 29, December 26, 2002) of the Soil Pollution Control Law: cadmium, lead, hexavalent chromium, arsenic, total mercury, and selenium.

(60) As for harmful substances contained in the product, the product shall conform to the requirements of those substances including cadmium, lead, arsenic, and total mercury, among the specific harmful substances given in

Attachment 3, which are provided in the detailed enforcement regulations (Ministry of the Environment Ordinance No. 29, December 26, 2002) of the Soil Pollution Control Law.

- (61) The products shall not have chromium, cadmium or arsenic added as prescribed constituents.
- (62) The products shall not be of a disposable type, however, if they are “disposable products” as defined above, in the cases where a collection and recycling system after disposal has been established and such products are actually recycled, this requirement is not applicable.
- (63) Information regarding Certification Criteria 4-1-3. (59) and (60) shall be made available.

L. Sewage/waterworks materials

- (74) As for products, the mixture ratio of “recycled materials” given in Table 9 shall be 70% or more of the entire product mass, and at the same time, each material product shall conform to the standard mixture rate given in Table 9.

Table 9 Recycled materials usable as sewage/waterworks materials

Recycled material	Standard mixture rate (% by mass)
Aggregates	Coarse aggregates in conformity with Criteria C (15) for applicable ‘aggregates’/total coarse aggregates $\times 100 \geq 50$ ; provided that those using vitrified materials shall be as follows: Vitrified material aggregates in conformity with applicable ‘aggregates’/total fine aggregates $\times 100 \geq 50$
Criteria D (19) to (20) for applicable ‘cement’, and concrete admixture in conformity with Criteria E (24) for the applicable ‘concrete admixture’.	(Weight of recycled materials/weight of cement + weight of admixture) $\times 100 \geq 50$
Cement	Cement in conformity with Criteria D (18) to D (20) for applicable ‘cement’/total cement $\times 100 \geq 50$
Recycled hard vinyl chloride	Recycled vinyl chloride/total hard vinyl chloride $\times 100 \geq 50$
Recycled plastics other than recycled hard vinyl chloride	Recycled plastics/total plastics $\times 100 \geq 70$ [60]

Note 1: As for recycled plastics, the combined use of recycled polymers and virgin polymers shall be permitted. Products using post-consumer materials as raw materials shall be permitted if the mass ratio of plastics composed of post-consumer materials to the plastic part conforms to the requirement in [ ] given in the table.

- (75) The product shall not elute harmful substances including heavy metals during construction or at use of the objectives. As for elution of harmful substances, the following six kind of substances are set among all specific substances given in Attachment 2, which are provided in the detailed enforcement regulations (Ministry of the Environment Ordinance No. 29, December 26, 2002) of the Soil Pollution Control Law: cadmium, lead, hexavalent chromium, arsenic, total mercury, and selenium.
- (76) As for harmful substances contained in the product, the product shall conform to the requirements of those substances including cadmium, lead, arsenic, and total mercury, among the specific harmful substances given in Attachment 3, which are provided in the detailed enforcement regulations (Ministry of the Environment Ordinance No. 29, December 26, 2002) of the Soil Pollution Control Law.
- (77) Each stage from resource extraction to the recycling of the product shall give consideration to the quantity of new resources used, energy consumption and CO<sub>2</sub> emissions.
- (78) The products shall not have chromium, cadmium or arsenic added as prescribed constituents.
- (79) As for products using recycled hard vinyl chloride or recycled plastics, it shall be assured that the recycling route after disposal has been established, 70% or more of the plastic parts contained in the product are collected (50% or more of them are acceptable for two years after the establishment of the criteria), 60% or more of the collected plastics are material-recycled. The remainder of the collected plastics are to be used for other purposes, including energy recovery.
- (80) Information regarding Certification Criteria 4-1-3. (75) and (76) shall be made available.
- (81) The packaging of the products shall give consideration to the ease of recycling. Plastic materials used for packaging shall not have polymers added that contain halogens and organic halogenides as prescribed constituents.

#### M. Materials for bridges/rivers/harbors

- (82) As for fenders/rubber ship gangways, the mass ratio of “recycled rubber” shall be 100% of the total rubber used in the products.
- (83) Regarding impermeable-type steel erosion control weirs, a double-wall type (weirs structured using steel sheet piles for the wall surface facing upstream/downstream and connection of the wall materials with tie rods) shall be able to utilize earth and sand/gravel generated at the site as hearting materials for 70% or more of the weir volume. A steel frame type

- (weirs structured by combining shaped steel pieces) shall be able to utilize gravel generated at the site as hearting materials for 70% or more of the weir volume, provided that regarding the hearting materials to be used for the steel frame type, the diameter of the gravel shall be 150 mm or larger, and for the steel frame type using expanded metal for the wall materials, gravel with a diameter of 50 mm or larger shall be used.
- (84) Permeable-type steel erosion control weirs shall be weirs equipped for the purpose of trapping avalanches of sand and stone and at normal times to allow water, sand and gravel to flow in order to control the lowering of the river bed or the erosion of beaches, as well as to allow the movement of flora and fauna.
- (85) Special-type mat cylinders shall be mat cylinders structured with highly rigid materials such as welded wire mesh or shape steel. Harbor embankment mats, wire-cylinders and special type mat cylinders shall be able to utilize earth and sand/gravel extracted at the site as hearting materials for 70% or more of the mats or cylinders.
- (86) As for fenders/rubber ship gangways ~~and harbor embankment mats~~, the total mass of “recycled materials” given in Tables 4 and 5 of H. Landscaping/revegetation materials shall be 70% or more of the total mass of the product.
- (87) Planting fins for revegetation, which it shall be possible to mount on steel sheet pile banks and to hold soil to provide a base growing medium for perennial emergent plants; landscaping functions to cover the steel sheet pile surface with plants shall be provided without the loss of structural functions required for revetment, such as vibration proofing, corrosion proofing, durability, etc. and planting on the banks shall be made possible.
- (88) As for fish-breeding reefs, the proportion of shells to the entire product mass excluding the steel portion shall be 70% or more. Recycled materials in the mixture shall have been fabricated so as not to scatter in the surrounding ocean area in case of any failures or damage of facilities.
- (89) As for elustio of harmful substances from fish-breeding reefs, including heavy metal, the fish-breeding reef shall conform to the requirements for the six kinds of harmful substances, namely cadmium, lead, arsenic, and total mercury and selenium, among the specific harmful substances provided in Attachment 2 of the detailed enforcement regulations of the Soil Pollution Control Law (Ministry of the Environment Ordinances No. 29, December 26, 2002).

## N. Other materials

### N-9. Foundation improvement materials

- (108) The mixture rate of the coal ash, gypsum (including desulfurized gypsum), and steelmaking slag for foundation improvement materials in the product shall be 60% or more of the entire product mass.
- (109) As for harmful substances contained in the product, the product shall conform to the requirements of those substances including cadmium, lead, hexavalent chromium, arsenic, and total mercury, among the specific harmful substances given in Attachment 3, which are provided in the detailed enforcement regulations (Ministry of the Environment Ordinance No. 29, December 26, 2002) of the Soil Pollution Control Law.

The product shall not contain asbestos.

If recycled products of gypsum boards, which were discarded along with dismantling buildings, are proved to include asbestos, arsenic and cadmium, the products shall be separated and eliminated. ~~In addition, the products shall be proved not to include asbestos by a result of either qualitative test: “Analysis for Content Rate of Asbestos in Building Materials, Kiankahatsu No. 0622001, June 22, 2005” or “JIS A1481 Determination of Asbestos in Building Material Products”,~~ As for concrete information of waste gypsum boards which shall be eliminated, refer to the “Asbestos Contained in Gypsum Board Products” (Gypsum Board Industry Association) and “Proper Treatment of Harmful Substances along with Dismantling Buildings” (The Committee for the Promotion of Recycling of Construction By-Product).

For products which were recycled from waste gypsum boards only discarded at manufacturing plants of gypsum boards processed products or construction sites for new building, ~~the analysis of asbestos~~ is not required because recycled materials do not contain asbestos.

## 4-2. Quality criteria

### M. Materials for bridges/rivers/harbors

- (139) Quality requirements for the products, for which the JIS, Minister of Land, Infrastructure and Transport’s certification, standards established by local government units, standards of industrial associations or other equivalent standards have been established, shall conform to the relevant standards. Other products, for which the JIS or the equivalent has established measuring methods for quality requirement items, shall conform to the relevant similar JIS or its equivalent.
- (140) Impermeable-type steel erosion control weirs and permeable-type steel erosion control weirs shall be given type certification from the Sabo Technical Center.

- (141) Fish-breeding reefs shall have been designed in accordance with the guidelines for designing facilities for fishing ports and grounds, and the safety, decay durability, functionality, and economic efficiency as a fish-breeding reef shall have been confirmed.

## 5. Certification Procedures

Any certification verifying conformity with the criteria shall be signed by the applicant and submitted.

### 5-1. Certification procedures for environmental criteria

#### M. Materials for bridges/rivers/harbors

(74) For Criterion 4-1-3.(82), the mass ratio of recycled rubber to the total amount of rubber materials shall be stated in the Application Form for Certification and Use of the Eco Mark and a raw materials certificate and a pretreatment certificate issued by the raw materials supplier shall be attached.

(75) For Criterion 4-1-3.(83), the following items shall be verified.

- a. A document shall be submitted specifically describing the product specifications, including the dimensions, shape and materials.
- b. A document shall be submitted specifically describing the construction method; if multiple methods are used, each of such methods shall be indicated.
- c. A document shall be submitted specifically stating evidence that for 70% or more of the weir volume, the double-wall type is able to utilize earth and sand/gravel generated at the site and the steel frame type uses gravel generated at the site as hearting materials; if multiple construction methods are used with different evidence, the evidence for each of the respective methods shall be indicated. The types of products for application with the gravel diameters of the hearting materials shall be stated in the Application Form for Certification and Use of the Eco Mark.

(76) For Criterion 4-1-3.(84), the following items shall be verified.

- a. A document shall be submitted specifically describing the product specifications, including the dimensions, shape and materials.
- b. A document shall be submitted specifically describing the construction method; if multiple methods are used, each of such methods shall be indicated.
- c. A document shall be submitted specifically stating evidence that the product, under normal conditions, allows water, sand and gravel to flow to

control the lowering of the river bed and erosion of the beaches.

d. A document shall be submitted specifically stating evidence that the product does not hinder the movement of flora and fauna; if multiple construction methods are used with different evidence, the evidence for each of such methods shall be indicated.

(77) For Criterion 4-1-3.(85), the following items shall be verified.

a. A document shall be submitted specifically describing the product specifications, including the dimensions and materials.

b. A document shall be submitted specifically describing the construction method; if multiple methods are used, each of such methods shall be indicated.

c. A document shall be submitted specifically stating evidence that the product is able to utilize earth and sand/gravel extracted at the site as hearting materials for 70% or more of the mats or cylinders; if multiple construction methods are used with different evidence, the evidence for each of such methods shall be indicated.

(78) For Criterion 4-1-3.(86), a raw materials certificate issued by the recycled materials supplier shall be attached. The types and the content ratio of recycled materials shall be stated in the Application Form for Certification and Use of the Eco Mark.

(79) For Criterion 4-1-3.(87), the following items shall be verified.

- A document shall be submitted specifically describing the product specifications, including the dimensions and materials.

- A document shall be submitted specifically describing the construction method; if multiple methods are used, each of such methods shall be indicated.

- A document shall be submitted specifically stating evidence that the steel sheet pile is able to be covered by plants; if multiple construction methods are used with different evidence, the evidence for each of such methods shall be indicated.

(80) As for criterion 4-1-3.(88), a certificate issued by the supplier shall be attached. The types of recycled materials and the content ratio of recycled materials and materials other than recycled materials in the mixture shall be stated in the Application Form for Certification and Use of the Eco Mark. In addition, information materials specifically describing the product specifications of fish-breeding reefs, including dimensions, shape and quality of material, shall be submitted together with a document stating that the materials in the mixture will not scatter under the sea.

(81) As for criterion 4-1-3.(89), a certificate stating the test results carried out by any independent testing institution or public institution shall be submitted.

N. Other materials

N-9. Foundation improvement materials

(95) For Criteria 4-1-3.(108), a raw materials certificate issued by the supplier shall be attached. Especially, as for products to reuse dismantling-line gypsum boards, certificates of test results conducted by third party testing body or public institution shall be submitted.

(96) For Criterion 4-1-3.(109), the applicant shall indicate whether the product under application is in conformity with the requirement or not in attached certificates, or demonstrate conformity based on a certificate shall be submitted describing the results of tests carried out by an independent testing institution or public institution. Measurement of the rate of content of asbestos shall be performed in accordance with JIS A1481 Determination of Asbestos in Building Material Products. Determination of asbestos inclusion shall be implemented in conformity with the Analysis for Content Rate of Asbestos in Building Materials, Kiankahatsu No. 0821002, August 21, 2006, and Points to Consider Concerning Analysis for Content Rate of Asbestos in Building Materials, Kiankahatsu No. 0821001, August 21, 2006.

5-2. Certification procedures for quality criteria

M. Materials for bridges/rivers/harbors

(121) For Criterion 4-2-3.(137), a certificate shall be submitted verifying conformity with the relevant quality standards.

(122) For Criterion 4-2-3.(138), a certificate shall be submitted verifying conformity with the relevant quality standards.

(123) As for certification criterion 4-2-3.(138'), a document stating that it was designed in accordance with the the guidelines for designing facilities for fishing ports and grounds shall be submitted.

Established: January 15, 2005

Revised: Feb. 23, 2005 (4-1-3.L (75), (76), Environment Information)

Revised: May 13, 2005 (4-1-3.(35),(94),5-1-3.(73) Environment Information)

Revised: Sept. 8, 2005 (Terminology)

Revised: April 28, 2006 (Terminology, Environmental Criteria, Attachment 1, Attachment 4, etc.)

Revised: Oct. 19, 2006 (Environmental Criteria, Attachment 1, Attachment 4, etc.)

Term of Validity: January 14, 2010

These certification criteria and/or the product categories may be revised or abolished as when necessary.

Attachment 1 Applicable Products

Classification			Product name	
Materials	Wood		(1) Wooden tiling/blocks	
	Steel construction materials		(2) Permeable steel sheet piles (3) Low displacement steel piles	
	Concrete materials	Aggregates	Vitrified material aggregates	(4) Fine aggregates for concrete using vitrified materials such as non-industrial waste and sewage sludge
			Slag aggregates	(5) JIS A5011-1: Blast furnace slag aggregates (6) JIS A5011-2: Ferro-nickel slag aggregates (7) JIS A5011-3: Copper slag aggregates (8) JIS A5011-4: Electric furnace oxidation slag aggregates
			Recycled aggregates	(9) Recycled aggregates
		Cement		(10) JIS R5210: Portland cement (11) JIS R5211: Portland Blast Furnace Slag Cement (12) JIS R5213: Portland Fly Ash Cement (13) JIS R5214: Eco-cement
		Admixture		(14) JIS A 6206 Powder dust of blast furnace slag (15) JIS A 6201 Fly ash (16) JIS A 6207 Silica fume
	Concrete product		(17) JIS A5371 Precast plain concrete products, Category II (18) JIS A5372 Precast ferroconcrete products, <u>Category I and Category II</u> (19) JIS A5373 Precast prestressed concrete products (20) JIS A5409 Prefabricated ferroconcrete fence components (21) JIS A5412 Prestressed concrete double-T slabs (22) JIS A6511 Hollow prestressed concrete panels	
	Pavement materials		(23) Rubber pavement materials (24) Rubber particle-containing antifreezing pavement materials (25) Recycled sub-base materials and recycled asphalt mixture	
	Landscaping/revegetation materials		(26) Vegetation mat (27) Vegetation sheet (28) Vegetation net (29) Vegetation net with fertilizer bags attached (30) Planters (excluding small planters for household use) (31) indication panels (Name plate is applicable for "Commodity") (32) Mulching protectors for trees (33) Waterside revegetation materials (34) Tree protector materials/lawn protector materials (35) Artificial trees	

Classification		Product	
Materials	Landscaping/revegetation materials (cont'd)	(36) <u>Bench/Stool/Table (Made of concrete or secured to a concrete foundation during construction practice)</u> (37) Sprinklers (irrigation pipes, etc.) (38) Prefabricated glass greenhouses (39) Pergolas (40) Arbors (41) Drinking fountains (42) Shelters (43) Trellises (44) Artificial lawns (45) Street materials (design fences) (46) Rootstock control materials (weed control mats, excavation materials) (47) Artificial landscaping materials (48) Protective materials (elasticity protecting material) (49) Buffer stops (50) Fake stones	
	Traffic sign/traffic lane lines	Traffic signboards	(51) Traffic signboards
		Traffic sign materials	(52) Road rivets (53) Delineators (snow poles) (54) Delineators (55) Traffic signposts/road reflection mirrors (56) Traffic signboards/guardrail protection materials
		Traffic lane lines	(57) Glass beads for road marking paint
	Materials for temporary structures	Scaffolding, landing bridges, etc.	(58) Lining board (59) Temporary road mat (60) Road mat
		Molds	(61) Round/rectangular molds (62) Decorative form

Classification		Product
Materials	Road materials	Road lighting (63) Low-grade insect-trap road lighting (64) Balustrade lighting
		(65) High-performance noise reduction equipment
	Other road materials	(66) Sound insulation walls (67) Crossing prevention fences for sidewalks (68) Fall prevention fences (69) Concrete road products for local road use (70) Side ditch lids of the former Ministry of Construction standards (71) Long U/new long U (72) Other concrete road products (73) Free inclination side ditches (74) JIS A5345 Ferroconcrete for road use (75) Other side ditch materials (76) Circular waterways (77) Exterior concrete (78) Water collection/rainwater/wastewater pits (79) Concrete boundary piles (80) Grating (81) High-performance translucent boards (82) Hump
Sewage/ waterworks materials	Rainwater-permeable facilities	(83) Penetration pits (84) Penetration manholes (85) Penetration wells (86) Penetration tubes/penetration trench tubes (87) Rainwater storage penetration perforated board trenches (88) Penetration box culverts (89) Rain penetration tank
	Recycled hard vinyl chloride products	(90) AS-58 Recycled hard vinyl chloride tube for drainage (91) AS-62 Recycled three-layer hard vinyl chloride tube for sewage (92) PMMS 300 Hard vinyl chloride pits and recycled three-layer up edge of manholes

Classification		Product
Materials	Materials for bridges/rivers/harbors	(93) Fenders/rubber ship gangways (94) Harbor embankment mats (95) Wire-cylinders (96) Special type mat cylinders (97) Impermeable-type steel erosion control weirs (98) Permeable-type steel erosion control weirs (99) Steel sheet piles with pots for bank protection and tree planting (100) <u>Fish-breeding reefs</u>
	Other materials	(101) Drainage materials (102) Revegetation base materials (103) Backfill materials (104) Slope protection nets (rock fall protectors and slope fall protectors with less environmental impact) (105) Non-chloride type antifreezing agents/antiskid (106) Buried marker sheets (107) Protective tube for underground cable (108) Water bars (109) Joint filter/joint bars (110) Foundation improvement materials

Attachment 4 Environmental information indication

Applicable product	Environmental information indication	Indication
Impermeable-type steel erosion control weirs (double-wall type) within materials for bridges/rivers/harbors Special-type mat cylinders and gabion within materials for bridges/rivers/harbors <u>Harbor embankment mats</u>	(Indication below the Mark) X% of on-site gravel usable for hearting materials or 70% or more of on-site sand/gravel usable for hearting materials  *: The name of the recycled materials used shall be described and the content ratio in X (in integral numbers, dropping the first digits). *: When products within the same product category have a different content ratio of the relevant recycled materials, the lowest value within the same product category shall be stated.	 (現地発生土砂・礫を〇%中詰利用) X% of on-site gravel usable for hearting materials  (現地発生土砂・礫を70%以上中詰利用) 70% or more of on-site sand/gravel usable for hearting materials
Applicable products using recycled materials other than the above	(Indication below the Mark) Recycle materials used X%, aggregates, cement or Recycle materials used X% or more, aggregates, cement  *: The name of the recycled materials	 再生材料を使用 粗骨材、セメント〇%

	<p>used shall be described and the content ratio in X (in integral numbers, dropping the first digits).</p> <p>*: If using multiple types of recycled materials, the top two types in descending order of their content ratio shall be stated, and the total content ratio of recycled materials shall be stated in X (in integral numbers, dropping the first digits).</p> <p>*: When products within the same product category have a different content ratio of the relevant recycled materials, the lowest value within the same product category shall be stated.</p> <p><del>* For X, indicate the weight percentage of the used recycled materials (round off decimal numbers to integers).</del></p>	<div data-bbox="1166 197 1474 286" style="border: 1px solid black; border-radius: 10px; padding: 5px; margin-bottom: 10px;">       Recycle materials used X%, aggregates, cement     </div> <div data-bbox="1182 293 1437 501" style="text-align: center;">  <p>再生材料を使用 粗骨材、セメント0%以上</p> </div> <div data-bbox="1166 524 1474 640" style="border: 1px solid black; border-radius: 10px; padding: 5px;">       Recycle materials used X% or more, aggregates, cement     </div>
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