Pending Amendment Requests - Global Biochar C-Sink Standard - 02/04/2026

CARBON STANDARDS international

4000116EN

Request number	Standard	Section	Chapter	Currently valid text	Change request received Date	Request submitted by	Request content	Status of request	Proposal of Scientific Committee
1	Gobal Biochar C-Sink	12	3	Depending on the individual systems in place, appropriate tracking of the materials to the construction site, and thus to the carbon sink site, must be developed and submitted to Carbon Standards for approval.	07/16/2025	Carbon Future, Anna Lehner	Depending on the individual systems in place, appropriate tracking of the materials to the construction site, and thus to the carbon sink site, must be developed and submitted to Carbon Standards for approval. In cases where the biochar content of construction materials amounts to 1.000w% or less based on dry mass biochar per unit of the product representing the durable matrix, these units can be considered as diffuse sinks and tracking may stop at the creation of this durable sink. -> please also consider extending this to the diffuse matrix definition in general & mention in the update of the GBCS Positive Matrix List	Technical Committee, 15.09.2025. As of now, diffuse biochar C-Sinks in construction materials are already handled in Chapter 12.3 of the GBCS. From 15.10.2025 onwards, tracking of biochar C-Sinks will only be required until creation of the durable sink (matrix application). Thus, geo-location of the carbon sink site will be no longer required (see CSI newsletter from 16.09.2025, https://intranet.easy-cert.com/qm/SitePages/ABG%20-%20AgroVet%20Group%20SEARCH%20CENTER.aspx).	not necessary to submit to the Scientific Committee
3	Global Biochar C-Sink V3.1 - Matrix positive list for Biochar C-Sink v3_12		1			Carbuna AG, Benedikt Zimmerman n	Please add matrix "substrates for trees". This is meant for substrates with a high content of mineral material with only small amounts of perishable organic material (like compost) usually for urban enviroments or roadside-construction. Examples: Stockholm System substrate; FLL1 and FLL2 substrate for urban trees. This matrix should be compatible with EBC urban unless the substrate is particularily used for growing food (which is not done in reality as trees for growing foods/fruits are all planted in real soil). Since the matrix usually remains in the ground or is landfilled like soil or purely mineral substrates, it should count as permanent removal (> 1000 years) and not have any leakage counted in. This matrix should be allowed as a diffuse sink as the substrates often contain small amounts of biochar on a mass/mass basis (since the mineral components are very heavy), so even large trucks cannot carry more than 1 t of CO2-eq. Also, please rename B-10 to substrates for "non-food application" to clarify what is meant in this matrix. • Important clarification/discrimination from potting soil substrates • Important clarification/discrimination from potting soil substrates • Substrates for trees are different from compost and potting soil, since they are used in large volumes and set by heavy machinery. These substrates are largely made from mineral components (mostly stone) and are meant to remain in the ground for at least decades and usually stay in the ground indefinitly. Unlike compost they hardly rot and are used for structural reasons in construction. If they are removed they are landfilled or reused, as the material is soil-like and inert. As a substrate they are a stark contrast to the throw-away potting soils described in B-09 and B-10.	Technical Committee, 15.09.2025: The substrates for trees described here are already covered by the Agricultural Soil and Urban Soil classes in the GBCS matrix list. These matrices are already approved for diffuse sinks, for instance when biochar is incorporated into soil substrates transported by truck. This will be included in an updated version of the matrix list, which will show that the diffuse sinks in Agricultural Soil and Urban Soil encompass shipments of tree substrates.	not necessary to submit to the Scientific Committee

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5	Global Biochar C-Sink V3.1 - Matrix positive list for Biochar C-Sink v3_12	1	1		09/09/2025	Carbuna AG, Benedikt Zimmerman n	Please split "Asphalt" into "Hot Asphalt" and "Cold Mix Asphalt". The current ruling may only be suitable for hot asphalt. Since cold mix asphalt is not heated up at any time, biochar mixed within the matrix is not threatened to be burned during recycling and thus should be counted as a permanent (1000 year) carbon sink, like concrete. Cold Mix Asphalt (CMA) is not heated up at all (whereas hot asphalt is heated during recycling and road construction itself). CMA relys on evaporation and/or chemical setting of binders. Since the product is not heated up, the biochar cannot catch fire and remains chemically stable set in a matrix. As the binders in CMA are a fire hazard in hot asphalt recycling plants it is strictly separated from hot asphalt. 1) The type of asphalt that is used on a construction site is usually documented on GIS/RIS or in construction documentation 2) In road construction rules (like TL Asphalt-StB in Germany) it is mandatory to do a quality analysis of recovered (to be recylced) asphalt to make sure that only suitable material is mixed in for saftey reasons and quality assurance. Modern CMA is expected to be easily recycled at recycling rates close to 100% and CMA needs less energy to produce, as it does not have to be heated up.	12.11.2025: Request forwarded to Scientific Commitee to assess integration into the standard	Request forwarded to Scientific Commitee to assess integration into the standard

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6	Global Artisan C-Sink version 2.1A (also relevant for Gobal Biochar C-Sink)	14	2	The standard refers to absolute global warming potential (AGWP) in "tons aCO2e". However, AGWP is NOT measured in "tons aCO2e"; as an absolute value it is explicitly NOT referring to CO2, but directly derived from the integral of radiative forcing (RF). Only GWP is measured in CO2e! GWP is calculated as AGWP of a specific greenhouse gas devided by the AGWP of CO2. Also, using AGWP, a metric that is not very well known in the LCA community, instead of GWP and using AGWP and GWP in the certificate results tables side-by-side is extremly confusing. This issue also effects the GBCS 3.1 standard. Absolute global warming potential is mentioned in GBCS 3.1 but there is no defintion how it should be determined. AGWP is also shown on GBCS certificates with the wrong unit, which is a major issue.	11/03/2025	Carbuna AG, Benedikt Zimmerman n	AGWP should be completly replaced by GWP20 (or GWP100) for the purpose of showing methan emission effects. GWP20 and GWP100 are set by the IPCC, on basis of AGWP and already include the dynamic characteristics of methan emissions so there is no complicated calculation necessary to determine the value. It is also well known in the LCA community and can be shown side by side with the other GWP-values on a certificate without causing confusion.	Request forwarded to Scientific Commitee to assess integration into GACS and GBCS methodologies.	Request forwarded to Scientific Commitee to assess integration into GACS and GBCS methodologies.

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7	Global Biochar C-Sink V3.1 - Matrix positive list for Biochar C-Sink v3_12	12	3	Upper particle-size constraint for biochar used in construction materials. Specifically, deleting the requirement: "The maximum particle size of the biochar used must be < 1 mm"	02/11/2026	Carbon Future, Anna Lehner	The removal of the upper particle-size constraint for biochar used in construction materials. Specifically, deleting the requirement: "The maximum particle size of the biochar used must be < 1 mm" The current < 1 mm restriction is technically unsupported and poses a significant barrier to the scaling of biochar-integrated building materials. Technical & Process Obstacles: Standard EBC-certified biochars (e.g., Carbuna) frequently exceed 1 mm. Enforcing this limit requires additional milling and screening, increasing energy consumption and costs for both biochar suppliers and manufacturers. Furthermore, particle sizes vary by application; while mortar requires finer grains, concrete does not. Obsolescence for C-Sink Potential: The size of a biochar particle does not determine its carbon permanence when embedded in a mineral matrix. The risk of reversal is dominated by chemical stability and encapsulation, both of which are already addressed by the standard's existing decay functions and end-of-life requirements. Lack of Auditability: The standard currently lacks the necessary sampling, measurement, and reporting protocols to make a < 1 mm rule auditable, leading to uncertainty for producers and verifiers. Provide evidence to support your justification: Process Dynamics: In practice, biochar particles often break down during the high-shear mixing operations inherent to cement and concrete production, rendering a pre-mixing size limit functionally irrelevant. Encapsulation & Permanence: GHG reversal risk of biochar in concrete is mitigated by mineral encapsulation. Even at end-of-life (e.g., demolition and crushing), biochar remains largely embedded in mineral fragments. Existing Safety Margins: Chapter 12.3 (page 70) already applies a conservative "applied to soil" decay function to biochar in concrete to account for potential exposure. This existing safety margin makes an additional particle-size restriction redundant. Industry Precedent: The EBC-certification classes for biochar do not impose an upper particle-size limit, and many high-quality biochars currently on the market would be unnecessarily excluded by this < 1 mm rule. Cross-Application Consistency: This restriction is similarly applied to Asphalt (Chapter 12.4) without technical justification and should be removed to ensure a consistent, science-based approach across all construction materials.	26.03.2026: After evaluation, a standard amendment was not deemed necessary. The Global Biochar C-Sink Standard states: 2.2 Geological C-Sink (biochar applied to soil) […] Biochar-containing building materials such as cement-, lime-, or geopolymer-based concrete, clay, or gypsum are usually recycled into aggregates or deposited in land or road fills at the end of the product life. If reused as aggregate, the biochar is protected from decomposing by the new matrix. When deposed in land- or other soil-located fills, the biochar becomes a geological C-sink. Eventually, biochar-containing building materials will enter the soil and, thus, become a geological C-sink. Therefore, when biochar is embedded in a concrete matrix, its PAC fraction is eligible for a geological CSink (CINK1000+). The PAC fraction is currently considered to be 75% for H/C_org < 0.4 of the biochar carbon. Nevertheless, we understand the room for interpretation cited by the applicant. The next regular standard update will therefore include a clarification stating that the particle-size restriction prevents the exposure of biochar particles after the shredding of construction debris. The restriction on particle size is needed to bridge the decades between the demolition of the building and the 100-year mark, after which the modeling of SPC degradation according to the soil degradation curve begins. For clarity, the following rules apply to biochar used in concrete construction materials: **Biochar particle size ≤ 1 mm** 100% persistence for 100 years → CINK100 = 100% 75% persistence for 1000+ years → CINK1000+ = 75% **Biochar particle size > 1 mm** 100% persistence for 60 years → CINK60 = 100% 75% persistence for 1000+ years → CINK1000+ = 75%	