



绿色建材产品认证政策解读
与技术进展
Policy Interpretation and Technical Development of
Certification of Green Building Materials

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Technical Development of Certification of Green Building Materials



一、CTC绿色建材工作简介

I. Introduction to CTC's Work in Green Building Materials

科研基础 Research Basis

- Research on green building material technology, analysis, and assessment methods
- Research on the detection technique and the assessment system of ecological building materials

- 绿色建材技术及分析评价方法的研究
- 生态建材制品检验技术和评价体系的研究

十五

10th Five-year Plan

- Research on the standards, the assessment technologies and the certification system of green building materials
- Ecological design, technological development of chemical products, and key building material products

11th Five-year Plan

十一五

- 绿色建材产品标准、评价技术和认证体系研究
- 化工产品和建筑材料关键产品生态设计技术开发

- Technical research and application of whole life cycle assessment on classic regional building materials
- Inspection and certification service platform of building materials, formulation and research of standards

- 典型地区建筑材料全生命周期评价技术研究与应用
- 建筑材料检验认证服务平台与标准制定研究

十二五

12th Five-year Plan

13th Five-year Plan

十三五

- 家居消费品绿色产品认证关键技术研究
- 功能型装饰装修材料绿色度评价与选材技术

- Key technical research on the certification of household green products
- Assessment and selection technology to evaluate to which degree the functional decoration materials are more environmentally friendly (green).

基础方法学
Basis methodology

评价体系
Assessment system

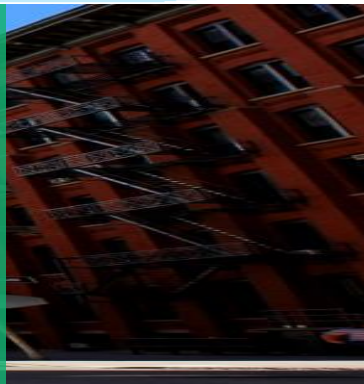
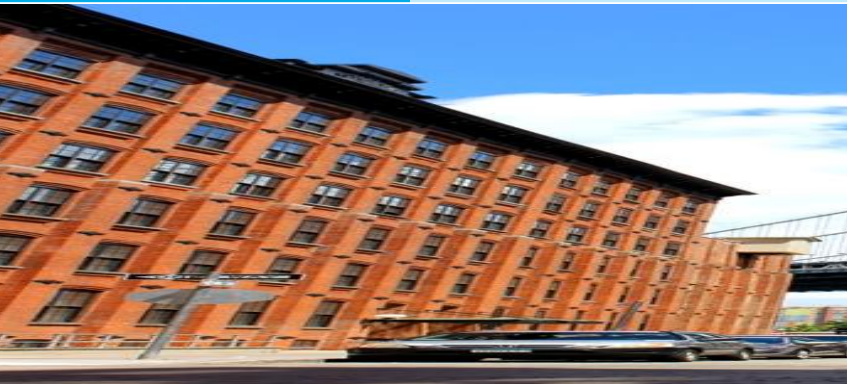
认证技术
Certification technology

数据库建设
Establishment of database

标准制定
Standards development

政府服务
Government services

示范工程应用
Application of demonstration projects



支撑国家绿色建材产品认证工作

Support the certification of national green building materials

绿色建材评价认证重要力量

Important player of the assessment and certification of green building materials

- 绿色建材评价标识三星级机构
- 3-star institute for the assessment and labeling of green building materials
- 绿色产品国家标准化总体组成员
- Member of national standardization general team for green products
- 绿色产品认证建材组组长单位
- Leading entity of the building materials team for the certification of green products

编制绿色建材评价标准

Prepare assessment standards for green building materials

- 主编5项建材类绿色产品评价的国家标准
- Editor-in-chief of 5 national standards for assessment of green building materials
- 主导26项绿色建材评价标准编制工作
- Organize the preparation of 26 green building materials assessment standards
- 主导编制两部门绿色建材评价技术导则
- Organize the preparation of the technical guidelines for the assessment of green building materials on behalf of two ministries
- 主导编制雄安新区绿色建材导则
- Organize the preparation of the guidelines for green building materials for Xiongan New Area

制定建材类认证实施规则

Develop implementation rules for the certification of building materials

- 牵头制定绿色产品（建材类）的认证实施规则。
- Organize the development of the implementation rules for the certification of green products (building materials).



二、绿色建材产品认证的需求

II. Demands for the Certification of Green Building Materials

政策需求
Policy
requirements

- 工信部和住建部印发《促进绿色建材生产和应用行动方案》，明确提出到**2018年**，新建建筑中绿色建材应用比例达到**30%**，绿色建筑应用比例达到**50%**，试点示范工程应用比例达到**70%**
- According to the Action Plan for Promoting the Production and Application of Green Building Materials printed and issued by the MoHURD and the MIIT, at least to **30%** green building materials shall be used in newly constructed buildings, to **50%** in green buildings, and to **70%** in pilot projects.
- 建筑业发展“十三五”规划提出到**2020年**，新建建筑中绿色建材应用比例达到**40%**
- According to the 13th Five-Year Plan for the development of the construction industry, by 2020, green building materials shall be used at least to **40%** in newly constructed buildings.



二、绿色建材产品认证的需求

II. Demands for the Certification of Green Building Materials

政策需求
Policy
requirements



雄安新区 Xiongan New Area

要求使用绿色建材。引导选用绿色建材，开发选用当地特色的自然建材、清洁生产 and 更高环保认证水准的建材、旧物利用和废弃物再生的建材，积极稳妥推广装配式、可循环利用的建筑方式。

Use green building materials. Guide the selection of green building materials, develop and select natural building materials with local characteristics, building materials that comply with clean production and higher environmental certification standards and building materials that are recycled through old materials and waste, and actively promote prefabricated and recyclable construction methods.



北京城市副中心 Beijing's sub-centers

北京城市副中心要求建设过程中涉及到的相关建材产品全部使用绿色建材。

In the construction of Beijing's sub-centers, all building materials involved must be green building materials.

二、绿色建材产品认证的需求

II. Demands for the Certification of Green Building Materials

市场需求
Market
requirements



开发商、设计院的一些绿色地产与绿色建筑等项目需要相应的绿色建材认证来支撑。
The certification of green building materials is required to support for some green real estate and green building projects of developers and design institutes.



普通消费者希望能够有权威的机构提供绿色建材的认证供其采信和选择。
Ordinary consumers hope that authoritative organizations can provide the certification of green building materials for their adoption and selection.

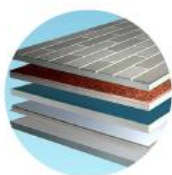


三、绿色建材产品认证政策解读

III. Policy Interpretation of the Certification of Green Building Materials



砌体材料
Brickwork materials



保温材料
Insulation materials



预拌混凝土
Premixed concrete



建筑节能玻璃
Building energy-saving glass



陶瓷砖
Ceramic tiles



卫生陶瓷
Sanitary wares



预拌砂浆
Pre-mixed mortar

1

2013.01

《绿色建筑行动方案》
(国办发〔2013〕1号)
Action Plan on Green Buildings (GUO BAN FA [2013] No.1)

2

2013.09

住建部与工信部发布《关于成立绿色建材推广和应用协调组的通知》(建办科〔2013〕30号)
MoHURD and MIIT issued the Notice on the Establishment of Coordination Team for Promotion and Application of Green Building Materials (JIAN BAN KE [2013] No. 30)

3

2014.05

住建部与工信部印发了《绿色建材评价标识管理办法》(建科〔2014〕75号)。
MoHURD and MIIT issued the Administrative Measures for Assessment and Labeling of Green Building Materials (JIAN KE [2014] No. 75)

4

2015.08

工信部和住建部印发了《促进绿色建材生产和应用行动方案》(工信部联原〔2015〕309号)
MoHURD and MIIT issued the Action Plan for Promoting Production and Application of Green Building Materials (GONG XIN BU LIAN YUAN [2015] No. 309)

5

2015.10

住建部与工信部印发了《绿色建材评价标识管理办法实施细则》和《绿色建材评价技术导则》(建科〔2015〕162号)。
MoHURD and MIIT issued the Implementation Rules for Administrative Measures for Assessment and Labeling of Green Building Materials and the Technical Guidelines for Assessment of Green Building Materials (JIAN KE [2015] No. 162)

6

2016.05

正式开展标识评价工作,并发布了第一批绿色建材标识。
Carried out labeling and assessment and released the first batch of logos for green building material.



三、绿色建材产品认证政策解读

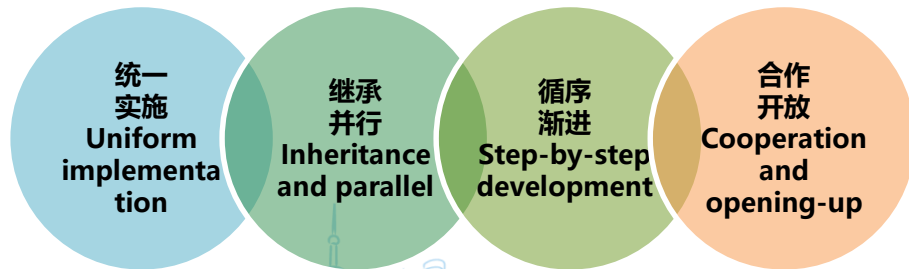
III. Policy Interpretation of the Certification of Green Building Materials

2015年9月18日，中共中央、国务院于印发《生态文明体制改革总体方案》（中发[2015]25号）。第四十六条：

On September 18, 2015, the CPC Central Committee and the State Council issued the Overall Reform Program for the Ecological Civilization System (ZHONG FA [2015] No.25) Article 46:

建立统一的绿色产品体系。将目前分头设立的环保、节能、节水、循环、低碳、再生、有机等产品统一整合为绿色产品，建立统一的绿色产品标准、认证、标识等体系

Establish a unified green product system. Integrate environmental protection, energy conservation, water conservation, recycling, low carbon, regeneration and organic products that have been established separately into green products, and establish a unified green product system containing standards, certification, labeling, etc.



2016年12月07日，国办发[2016]86号
December 7, 2016 Guo BAN FA [2016] No.86

国务院办公厅关于建立统一的绿色产品标准、认证、标识体系的意见

Opinions of the General Office of the State Council on Establishing a Unified Standards, Certification and Labeling System for Green Products

基本原则

Basic principles

Adhere to market orientation and stimulate endogenous motivation

坚持统筹兼顾，完善顶层设计。

Make overall plans in a coordinated way and improve top-level design

坚持市场导向，激发内生动力。

Adhere to joint development and sharing, and promote social co-governance

坚持继承创新，实现平稳过渡。

Insist on innovation and achieve a smooth transition

坚持开放合作，加强国际接轨。

Adhere to open cooperation and bring domestic standards in line with international standards

坚持共建共享，推动社会共治。

三、绿色建材产品认证政策解读

III. Policy Interpretation of the Certification of Green Building Materials

2017年12月29日，质检总局、住房城乡建设部、工业和信息化部、国家认监委、国家标准委等五部委联合印发《关于推动绿色建材产品标准、认证、标识工作的指导意见》（国质检认联〔2017〕544号）

On December 29, 2017, the AQSIQ, MoHURD, MIIT, CNCA and SAC jointly issued the Guidelines for Promoting Standards, Certification and Labeling of Green Building Materials (GUO ZHI JIAN REN LIAN [2017] No.544)

- 五部门共同成立绿色建材评价认证工作组，**建立统一的绿色建材产品标准与认证体系；**
- The five ministries and commissions jointly set up a working team for the assessment and certification of green building materials, **and established a unified green building materials standards and certification system;**
- 评价标识**纳入认证统一管理**，统一清单和目录内的**三星级证书可转化为中国绿色产品认证证书；**
- Include assessment and labeling **into unified certification management**, and convert the **three-star certificate** in the unified list and catalogue into **China Green Product Certification;**
- 到2020年绿色建材应用比例达到**40%**。
- By 2020, green building materials shall be used at a minimum of **40%** in new buildings.



国家认监委关于发布绿色产品认证标识的公告

2018年第13号

Announcement of CNCA on the Issuance of Certification and Labeling of Green Products

No.13 in 2018



基本标识
Basic label



变形标识
Altered label

市场监管总局首批绿色产品标准清单与认证目录

The first batch of green product standard list and certification catalogue of the State Administration for Market Regulation

1. GB/T 35601-2017 绿色产品评价 人造板和木质地板
1. GB/T 35601-2017 Green Product Assessment - Wood-based Panels and Wooden Flooring
2. GB/T 35602-2017 绿色产品评价 涂料
2. GB/T 35602-2017 Green Product Assessment - Coating Materials
3. GB/T 35603-2017 绿色产品评价 卫生陶瓷
3. GB/T 35603-2017 Green Product Assessment - Sanitary Wares
4. GB/T 35604-2017 绿色产品评价 建筑玻璃
4. GB/T 35604-2017 Green Product Assessment - Building Glass
5. GB/T 35606-2017 绿色产品评价 太阳能热水系统
5. GB/T 35606-2017 Green Product Assessment - Solar Water Heating System
6. GB/T 35607-2017 绿色产品评价 家具
6. GB/T 35607-2017 Green Product Assessment - Furniture
7. GB/T 35608-2017 绿色产品评价 绝热材料
7. GB/T 35608-2017 Green Product Assessment - Thermal Insulation
8. GB/T 35609-2017 绿色产品评价 防水与密封材料
8. GB/T 35608-2017 Green Product Assessment - Waterproof Materials and Sealants
9. GB/T 35610-2017 绿色产品评价 陶瓷砖(板)
9. GB/T 35610-2017 Green Product Assessment - Ceramics Tiles (Board)
10. GB/T 35611-2017 绿色产品评价 纺织产品
10. GB/T 35611-2017 Green Product Assessment - Textile Products
11. GB/T 35612-2017 绿色产品评价 木塑制品
11. GB/T 35612-2017 Green Product Assessment - Wood Plastic Composites Products
12. GB/T 35613-2017 绿色产品评价 纸和纸制品
12. GB/T 35613-2017 Green Product Assessment - Paper and Paper Products



三、绿色建材产品认证政策解读

III. Policy Interpretation of the Certification of Green Building Materials

国家认监委关于支持湖州市开展绿色产品认证试点的复函

国认证函〔2018〕12号

Reply of CNCA on Supporting the Establishment of Green Product Certification Pilot in Huzhou

GUO REN ZHENG HAN [2018] No.12

结合湖州市基础优势及产业需求，制定科学、合理的绿色产品认证试点实施方案并开展先行先试。

Formulate a scientific and reasonable pilot program for green product certification and carry out pilot tests based on the basic advantages of Huzhou and industrial requirements.



人造板与
木质地板
Wood-based panels
and wooden flooring

纺织品
Textile
products

家具
Furniture

浙江绿色认证联盟成立

Zhejiang Green Certification Alliance Established

由中国质量认证中心、国检集团、方圆标志认证集团、杭州万泰认证公司发起组建，负责具体策划、实施、推广浙江绿色认证活动，合力推进国家绿色认证改革试点工作。

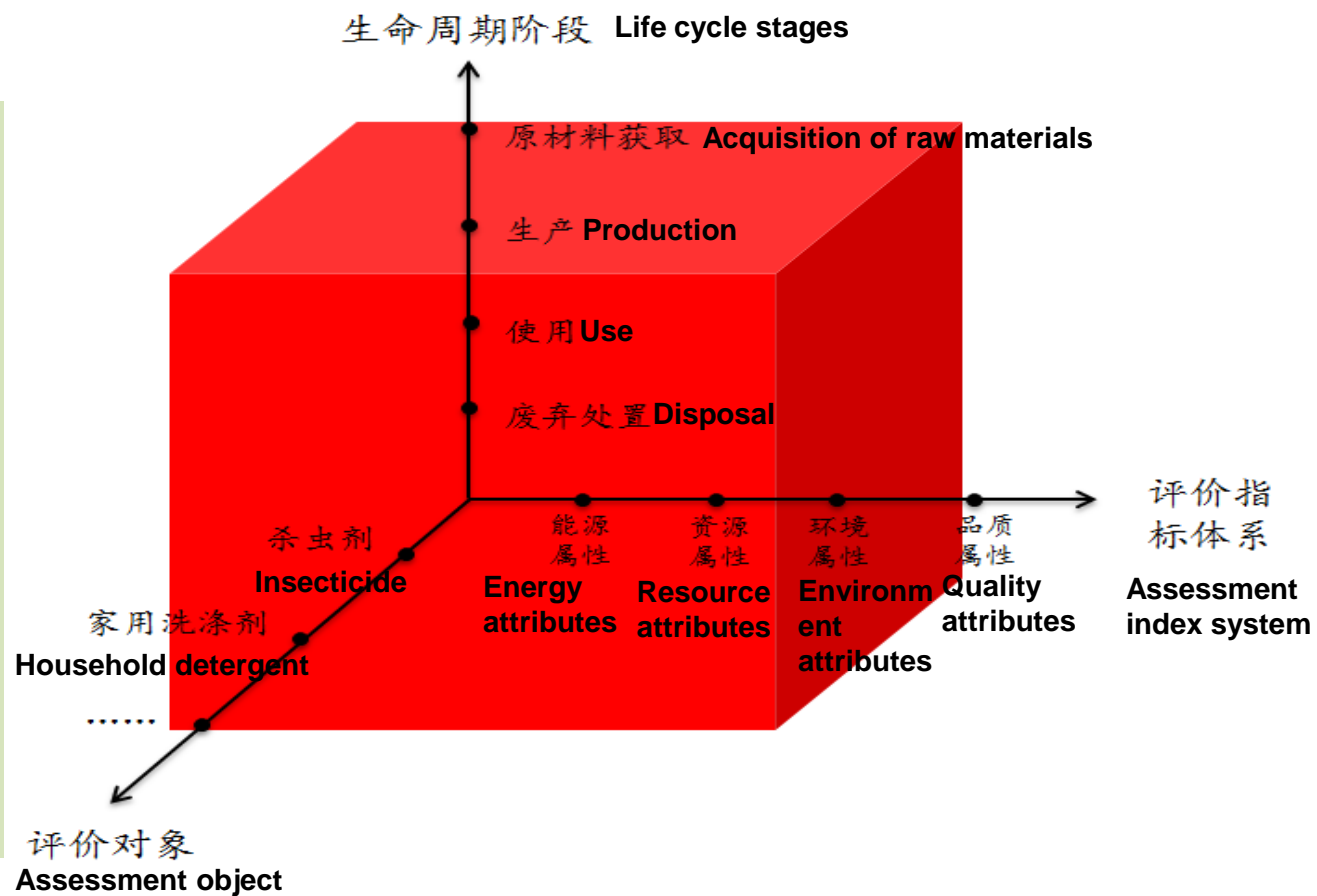
Initiated by the CQC, CTC, CQM and WIT, the alliance is responsible for the specific planning, implementation and promotion of green certification activities in Zhejiang Province, and jointly putting national green certification reform pilots in place.



绿色产品标准基本框架

Basic framework for green product standards

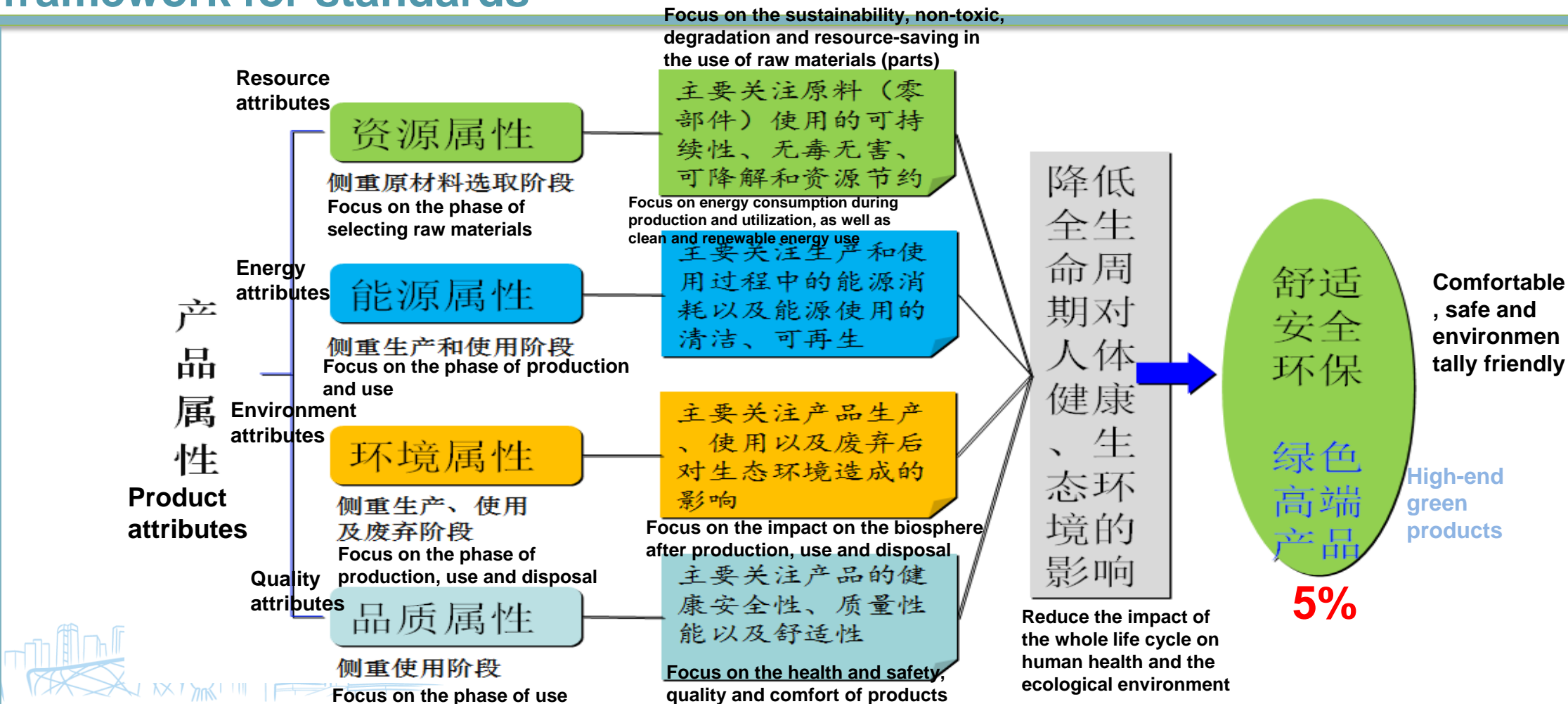
- 依据GB/T 33761 《绿色产品评价通则》
- GB/T 33761-2017 General Principles for Green Product Assessment
- 基于生命周期理念;
- Based on concept of the life cycle assessments (LCA)
- 对企业和产品提出参评基本要求
- Basic participation requirements for companies and products
- 统筹考虑资源、能源、环境、品质四个属性
- Overall consideration of resources, energy, environment and quality
- 符合性评价
- Conformity assessment



标准基本框架

Basic framework for standards

评价指标体系
Assessment index system



举例：GB/T 35603-2017 《绿色产品评价 卫生陶瓷》

Example: GB/T 35603-2017 Green Product Assessment - Sanitary Wares

基
本
要
求

企业基本要求

污染物排放达标、安全生产标准化、采用清洁能源与先进工艺设备、管理体系建立等。

Basic requirements for companies

Qualified pollutant emissions, standardization of workplace safety, adoption of clean energy and advanced process equipment, establishment of management systems, etc.

产品基本要求

满足现行相关产品标准。

Basic requirements for products

Meet existing relevant product standards.



Basic
require
ments

四、绿色建材产品认证技术进展

IV. Technical Development of the Certification of Green Building Materials

GB/T 35603-2017 《绿色产品评价 卫生陶瓷》

GB/T 35603-2017 Green Product Assessment - Sanitary Wares

评价指标
Assessment indexes

一级指标 Tier-I indexes	二级指标 Tier-II indexes		单位 Unit	基准值 Benchmark value	判定依据 Judgment basis
资源属性 Resource attributes	单位产品取水量 Water intake quantity / product unit		m ³ /t	≤8.0	按附录A的计算方法进行计算, 并提供相关证明材料 Calculate based on the calculation methods stipulated in Appendix A and provide relevant supporting materials
	生产废料回收利用 Recycling of production waste	废瓷利用率 Utilization rate of waste porcelain	%	≥98	按附录A的计算方法进行计算, 并提供相关证明材料 Calculate based on the calculation methods stipulated in Appendix A and provide relevant supporting materials
		废坯(含釉坯)利用率 Utilization rate of waste scrap (glazed body)		≥98	按附录A的计算方法进行计算, 并提供相关证明材料 Calculate based on the calculation methods stipulated in Appendix A and provide relevant supporting materials
		废釉浆回收利用率 Utilization rate of waste glaze		≥98	按附录A的计算方法进行计算, 并提供相关证明材料 Calculate based on the calculation methods stipulated in Appendix A and provide relevant supporting materials
		废污泥回收利用率 Utilization rate of waste sludge		≥98	按附录A的计算方法进行计算, 并提供相关证明材料 Calculate based on the calculation methods stipulated in Appendix A and provide relevant supporting materials

四、绿色建材产品认证技术进展

IV. Technical Development of the Certification of Green Building Materials

GB/T 35603-2017 《绿色产品评价 卫生陶瓷》

GB/T 35603-2017 Green Product Assessment - Sanitary Wares

评价指标
Assessment
indexes

一级指标 Tier-I indexes	二级指标 Tier-II indexes		单位 Unit	基准值 Benchmark value	判定依据 Judgment basis	
资源属性 Resource attributes	石膏模具使用率 (每吨陶瓷产品的石膏粉用量) Utilization rate of plaster mold (gypsum powder consumption per ton of ceramic products)		t/t	≤0.2	按附录A的计算方法进行计算, 并提供相关证明材料 Calculate based on the calculation methods stipulated in Appendix A and provide relevant supporting materials	
	产品包装 Product packaging		—	—	依据GB/T 31268、GB/T 16716、JC/T 694检测, 并提供相关证明材料 Test according to GB/T 31268, GB/T 16716 and JC/T 694, and provide relevant supporting materials	
	产品轻量化 Light weight of product s	坐便器单件质量 (不含配件) Quality of single toilet (excluding accessories)	连体 Integrated type	kg	≤45	依据GB/T 6952测试, 并提供相关测试报告 Test according to GB/T 6952, and provide relevant test report
			分体 (不含水箱) Split type (excluding water tank)		≤25	
		蹲便器单件质量 (不含配件) Quality of single squatting pan (excluding accessories)			≤20	
壁挂式小便器单件质量 (不含配件) Quality of single wall-mounted urinal (excluding accessories)		≤15				
洗面器 Washing basin		≤20				

GB/T 35603-2017 《绿色产品评价 卫生陶瓷》

GB/T 35603-2017 Green Product Assessment - Sanitary Wares

评价指标

Assessment indexes

一级指标 Tier-I indexes	二级指标 Tier-II indexes	单位 Unit	基准值 Benchmark value	判定依据 Judgment basis
能源属性 Energy attributes	单位产品综合能耗 Comprehensive energy consumption / product unit	kgce/t	≤500	依据GB/T 2589、GB 21252计算产品综合能耗，并提供能耗证明 Calculate the comprehensive energy consumption of the product according to GB/T 2589 and GB 21252, and provide proof of energy consumption
环境属性 Environment attributes	提供产品EPD或碳足迹报告 Provide product EPD or carbon footprint report	—	—	依据GB/T 24025测试，并提供相关检测报告 Test according to GB/T 24025, and provide relevant test reports



四、绿色建材产品认证技术进展

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GB/T 35603-2017 《绿色产品评价 卫生陶瓷》

GB/T 35603-2017 Green Product Assessment - Sanitary Wares

评价指标

Assessment indexes

一级指标 Tier-I indexes	二级指标 Tier-II indexes			单位 Unit	基准值 Benchmark value	判定依据 Judgment basis		
品质属性 Quality attributes	用水量 Water consumption	坐便器 Toilet	双冲式 Double flushing	全冲最大值 Full flushing value	L	≤5.0	依据GB/T 6952测试, 并提供相关测试报告 Test according to GB/T 6952, and provide relevant test report	
				平均值 Average value		≤4.0		
			单冲式 Single flushing	平均值 Average value		≤4.0		
		蹲便器 Squatting pan		平均值 Average value		≤5.0		
		小便器		平均值 Average value		≤2.0		
	使用寿命 Service life	重力式冲水 装置		进水阀 Inlet valve	次 Times	≥100000	依据GB/T 26730测试, 并提供相关测试报告 Test according to GB/T 26730, and provide relevant test report	
				排水阀 Drain valve		≥100000		
		压力冲水装置 Pressure-type flushing device					≥200000	依据GB/T 26750测试, 并提供相关测试报告 Test according to GB/T 26750, and provide relevant test report
		坐便器坐圈和盖 Toilet seat and cover				摇摆试验 Swing test	≥25000	依据JC/T 764测试, 并提供相关检测报告 Test according to JC/T 764, and provide relevant test report
						慢落试验 Slow-fall test	≥30000	
	强压试验 High pressure test			≥10000				

四、绿色建材产品认证技术进展

IV. Technical Development of the Certification of Green Building Materials

家居领域绿色产品认证关键技术研究
Research on key technologies of household green product certification

多指标
量化模型

Multi-index
quantitative
model

Process
traceability
model

过程溯
源模型

Implementation
effect evaluation
model

实施效
果评估
模型

任务1：家居领域绿色产品认证特性技术研究

基于LCA方法：生产→安装→使用→回收利用
关键绿色属性甄选识别方法与量化赋值方法

Task 1: Research on the **special technical characteristics** of the certification of household green products
Based on LCA method: production→installation→use→recycling
Key selection and recognition method and quantization and value assignment method for green attributes

任务2~3
卫生陶瓷、陶
瓷砖

约束：
水效、放射性、
耐磨性

重点：单位产
品能耗、材耗

Task 2-3 Sanitary wares, ceramic tiles
Constraints: Water efficiency, radioactivity, wear resistance
Focus: Energy consumption and material consumption per product unit

任务4
水嘴

约束：
水效、重金属
析出量

重点：污染物
控制、耐用性

Task 4 Water nozzle
Constraint: Water efficiency, heavy metal precipitation
Focus: Contaminant control, durability

任务5~7
木质地板、橱柜、壁
纸

约束：甲醛、TVOC
释放量和重金属含量

重点：原材料来源、
单位产品能耗、污染
物控制、耐用性

Task 5-7 Wooden flooring, cabinets, wallpaper
Constraints: Formaldehyde, TVOC release and heavy metal content
Focus: Source of raw materials, energy consumption of unit product, contaminant control, durability

任务8
塑料管道

约束：卫生性能、
排水噪声

重点：原材料来
源、连接可靠性

Task 8: Plastic pipes
Constraint: Hygienic performance, drainage noise
Focus: Source of raw materials, connection reliability

7类产品认证溯源指标量化模型

Quantitative model of certification traceability indexes for 7 categories of products

7类实施效果评估指标量化模型

Quantitative model of implementation effect evaluation indexes for 7 categories of products

技术规范与实施规则

Technical specifications and implementation rules

与绿色建筑评价标准的衔接

Connection with the assessment standards for green buildings

相关标准 Applicable standards	针对建筑材料环境负荷的要求 Requirements for environmental load of building materials
DGNB	完全量化考察运营和建筑材料生产过程能耗及碳排放造成的环境影响。 Fully quantify the environmental impacts due to energy consumption and carbon emissions from operation and the production of building materials.
BREEAM	建立材料数据库，对1500多种材料及部品环境影响量化分析。选用不同等级材料的得分不同。 Establish a material database to quantify the environmental impacts of more than 1,500 kinds of materials and parts. Different points for different grade of materials
CASBEE	计算建筑材料总含能和碳排放；以建筑材料的含能和碳排放为基础评价材料的循环利用率和再利用率。 Calculate the total embodied energy and carbon emissions of building materials; assess the recycling rate and reuse rate of building materials based on their embodied energy and carbon emissions.
LEED	建材产品提交LCA报告和EPD报告等可加分。 Bonus points for LCA reports and EPD reports of building materials.
中国绿色建筑评价标准 China's assessment standards for green buildings	对选用不同比例的绿色建材予以加分 Bonus points for adopting different proportions of green building materials 对耐久性、环保性等单项指标参照绿色产品标准提出要求 Express requirements for individual indicators such as durability and environmental friendliness based on green product standards

和国外存在差距，任重道远！ There is a gap with foreign countries. There is a long way to go!

感谢聆听
Thank you!