Eco-Screening Criteria

Global Green Chemical Public Company Limited

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Purpose/Objective

GGC has established the Eco-Screening Criteria based on ISO14062 standards for consideration of **new product design and assessment of the product qualification** throughout the product life cycle with the following objectives:

- To enhance the understanding of “Eco” qualifications. The criteria can be used to evaluate the new product qualifications that minimize environmental impacts and meet customer needs.
- To create value for GGC by reducing the use of raw materials, energy consumption, biodegradable materials, renewable energy, and GHG emissions.
- To ensure that the new product design in order to be an environmentally friendly product.
- To minimize environmental impacts along the product’s life cycle.

Scope

The Criteria are used to evaluate new or improved products or processes, whether they are in line with Eco-Design and Eco-Screening criteria throughout their life cycle or not.

14 Criteria for assessment of new product/process qualifications

No.	Eco Qualification	Product Qualification
1	Compostable	• A product or associated component allows it to biodegrade, generating a relatively homogeneous and humus-like substance. • No negative effects on the environment such as but not limited to soil, air, and water contamination at any point during decomposition or subsequent use.
2	Degradable	• A product or packaging allows it to break down to a specific extent within a given time. • A product or packaging must break to all types of degradation such as biodegradation and photodegradation. • No negative effects on the environment such as soil and air contamination at any point during degradation.
3	Extended life product	• A product is designed to provide prolonged use, based on either improved durability or an upgraded feature. As a results, it reduces use or waste.
4	Recovered energy (*Production phase)	• A product has been made using energy recovered from materials or energy that would have been disposed of as waste
5	Recyclable	• A product, packaging or associated component can be diverted from the waste stream through available processes. It can be collected, processed, and returned to use in the form of raw materials or products.
6	Recycle content	• A product or packaging has proportion, by mass, of recycled material.
7	Reduced energy and water consumption (After Production Phase)	• Reduction in the consumption of water and energy amount associated with the use of a product performing. The function was conceived when compared with the energy used by other products performing an equivalent function.

14 Criteria for assessment of new product/process qualifications

No.	Eco Qualification	Product Qualification
8	Reduced resource use (Production Phase)*	• Reduction in the amount of material, energy or water used to produce a product or packaging or specified associated component.
9	Reusable	• A product or packaging has been designed to accomplish within its life cycle a certain number of use for the same purpose for which it was conceived.
10	Refillable	• A product or packaging can be filled with the same or similar product more than once, in its original form. In addition, product or packaging should be without additional processing except for specified requirements such as cleaning or washing
11	Water reduction	• Reduction in the quantity (mass) of material entering the waste stream as a result of a change in the product, process or packaging.
12	Renewable material	• Material is composed of biomass from a living source and can be continually replenished.
13	Renewable energy (Production phase)	• Energy derived from sources that are non-exhaustible or capable of continuous replenishment. Renewable energy sources include, but are not limited to, sunlight and wind energy. They also include biomass and geothermal sources.
14	Greenhouse Gas emission (Along life cycle)	• Carbon footprint is a common term used in the provision of information relating to greenhouse gas (GHG) emissions of both processes and products. Moreover, This subclause covers claims related to the “carbon footprint” of products and also claims of “carbon neutral”.

*__Remark:__ Production Phase is cradle to gate which is an assessment of a partial product life cycle from resource extraction (cradle) to the factory gate (i.e., before it is transported to the consumer). The use phase and disposal phase of the product is omitted in this case.

Mapping product life cycle with Eco-Screening Criteria

Product Life Cycle	Eco Screening Criteria
Raw Materials	• Compostable • Degradable • Extended Life Product • Recovered Energy • Recyclable • Recycle Content • Reduced Energy and Water Consumption • Reduced Resource Use • Reusable • Refillable • Waste Reduction • Renewable Material • Renewable Energy • GHG emission
Transportation	• Reduced Energy Consumption • GHG emission
Production	• Recovered Energy • Reduced Resource Use • Waste Reduction • Renewable Energy • GHG emission

Product Life Cycle	Eco Screening Criteria
Use Phase operation and servicing maintenance	• Extended Life Product • Recyclable • Reusable • Refillable • Waste Reduction
End of Life Management	• Compostable • Degradable • Recyclable • Waste Reduction

Thank you