



Confederation of Indian Industry



# **GreenPro Certification Standard for Cleaning Chemicals**

## **Version 1.0**

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## Acknowledgement

The GreenPro certification for cleaning chemicals has been made possible through the efforts of Green products & Services Council and the Technical Committee on cleaning chemicals members.

We express our gratitude to all the members who had contributed for the development of the certification. Our special thanks to the product Technical Committee Chairman **Dr L Ramakrishnan** and the members:

1. **Mr Nitin Bhatnagar**, Director, Haylide Chemicals Pvt Ltd
2. **Mr Pidintla Chandrasekhar Reddy**, Director, Richie Raffle Biotech Private Limited
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4. **Mr V Manjunath**, Underwriters Laboratories
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## 1. *Introduction*

The construction industry is one of the fastest growing sectors in India contributing significantly to the economic growth. At the same time, the rapid growth of the sector poses a host of challenges for preserving the environment and health of occupants. The Green Building Movement spearheaded by the Indian Green Building Council (IGBC) has enabled the construction industry to incorporate Green Building concepts for the enhanced economic, health and environment performance of buildings.

Thus far, the Council has been instrumental in enabling 3.11 Billion sq.ft. of green buildings in the country. The Green Building market growth has created demand for Green products & services. The demand is expected to grow exponentially in the future.

Against this background, CII-Sohrabji Godrej Green Business Centre (CII-Godrej GBC) has launched the **Green Products and Services Council** with the support of all the stakeholders including product manufacturers, standard developers, architects, Green building developers, conformity agencies etc.

**The key objective of the council is to facilitate Green product market transformation in India through 'Green Product Certification'.**

The initial focus of the council will be on Green building products and related technologies. Over a period of time, the council will expand its focus to other areas such as Industrial products, consumer items, services etc.

### **Why GreenPro Certification?**

The GreenPro Certification is a tool for facilitating Green Product market transformation in the country. The GreenPro Certification is expected to:

1. Enable green building projects in selecting the right product and equipment
2. Increase the market demand for the Green products
3. Put a system in place for a product to be called 'green'

## 2. *GreenPro Certification – Life Cycle Approach*

The Green Products Rating adopts a holistic approach based on the 'Life Cycle' of the product. The rating system encourages the product manufacturers to implement measures that would result in environmental, health and wellbeing benefits at the following stages of the life cycle of the products.

1. Product Design
2. Raw materials
3. Manufacturing Process
4. Product Performance during use
5. Disposal / Recycling



## 3. *Benefits*

GreenPro certification benefits both the product manufacturers and the users. The benefits are both tangible and intangible.

### For Product Manufacturers

Some of the benefits of GreenPro Certification for the product manufacturers are highlighted below:

1. GreenPro Certification differentiates the Green product from the competition
2. Increases the market reach out with credible and precise information on the Green features of the products
3. Enables Green product Innovation
4. Increases resources conservation through enhanced energy efficiency, water efficiency, use of renewable energy, minimization waste etc., during the manufacturing process and hence increase in profitability
5. Acts as a driver for achieving environment excellence
6. Complements National & International Green Building Certification systems

### For Users

Use of rated Green products leads to significant tangible and intangible benefits for the end users.

Some of the benefits for the users are highlighted as below:

1. Time and effort in carrying out due diligence in selecting a green product is saved
2. The user is assured of the performance of the product and equipment
3. Ensures Toxic and hazardous substances free products which in turn decrease “health and wellbeing” risks of the users
4. Improved product performance during use to reduce resource consumption and environmental impacts
5. Recognition and credits for achieving national and international Certification for the buildings

## ***4. National Priorities addressed in Certification***

GreenPro Certification addresses the following which are priorities of the Government at the National level:

### *Water:*

Water is a major concern in most part of the country. Implementation of water efficiency measures and “zero Liquid Discharge” are being encouraged to address the water related issues.

### *Land:*

Availability of land and increase in land pollution are major areas of concern. The Certification system demands for increased recycling of material after use which would result in reduction in landfills and hence reduction in land pollution.

### *Energy Efficiency:*

The Certification system encourages the product manufacturers to adopt energy efficiency improvement measures and reduce their energy consumption which is in line with the National Mission on Enhanced Energy Efficiency. This also addresses

### *Renewable Energy:*

The Certification advocates compliance with Renewable Purchase Obligation (RPO) and encourages product manufacturers to invest in renewable power generation. This is in line with Government of India's objective of increasing the contribution of renewable power sources.

A combination of improving energy efficiency and the use of renewable energy leads to support the government's efforts on Climate Change issues.

## ***5. Development of GreenPro Certification Standards***

GreenPro Certification applies product specific '**Certification Standards**' for evaluating the products. The Certification standards are developed with the support of respective product committees formed under the aegis of Green products and services council.

The product committee involves all major stake holders related to the respective product category including product manufacturers, standard setters, conformity agencies, architects, users *et al.* The product committee is led by an expert who is also an unbiased specifier.

### **5.1 Features of GreenPro Certification**

The Certification system follows prescriptive as well as performance based approach for evaluating a product. The Certification calls for demonstration of product performance through testing as per specified standards and implementation of measures at every stage of the Life Cycle of the product, leading to clearly measurable environmental benefits.

The Certification system evaluates green features for products based on various performance parameters grouped under the following Credit Modules.

- 1. Product Design:** The Certification necessitates the manufacturer to demonstrate its top management commitment towards environmental performance improvement of the product.
- 2. Product Performance:** The required performance parameters of the product need to be demonstrated through product testing as per the specified standards.
- 3. Raw Materials:** The Certification demands for efforts to bring down the use of virgin materials through recycling and elimination of toxic and hazardous content in the input materials for product manufacturing.

4. **Manufacturing Process:** The green product Certification recognizes the efforts taken by the product manufacturer to reduce the resource consumption during the manufacturing process
5. **Waste Management:** The Certification calls for efforts to minimize the wastes or safer disposal of the wastes generated during manufacturing process **Life Cycle Approach:** The Certification encourages the product manufacturer to carry out Life cycle analysis for the products and implement measures based on the impact analysis.
6. **Product Stewardship:** The Certification recognizes the measures implemented by the product manufacturers to reduce environmental and health impacts in product transportation, use and recycling / product disposal
7. **Innovation:** The Certification recognizes the innovative measures implemented by the product manufacturers which had resulted in substantial reduction in environment impact exceeding the threshold level specified in the Certification standard.

The approach and the Credit Modules for evaluation of products remain by and large the same for all the product categories. However, the credits as part of the individual Credit Modules and the weightage will vary depending upon the product categories and their significance.

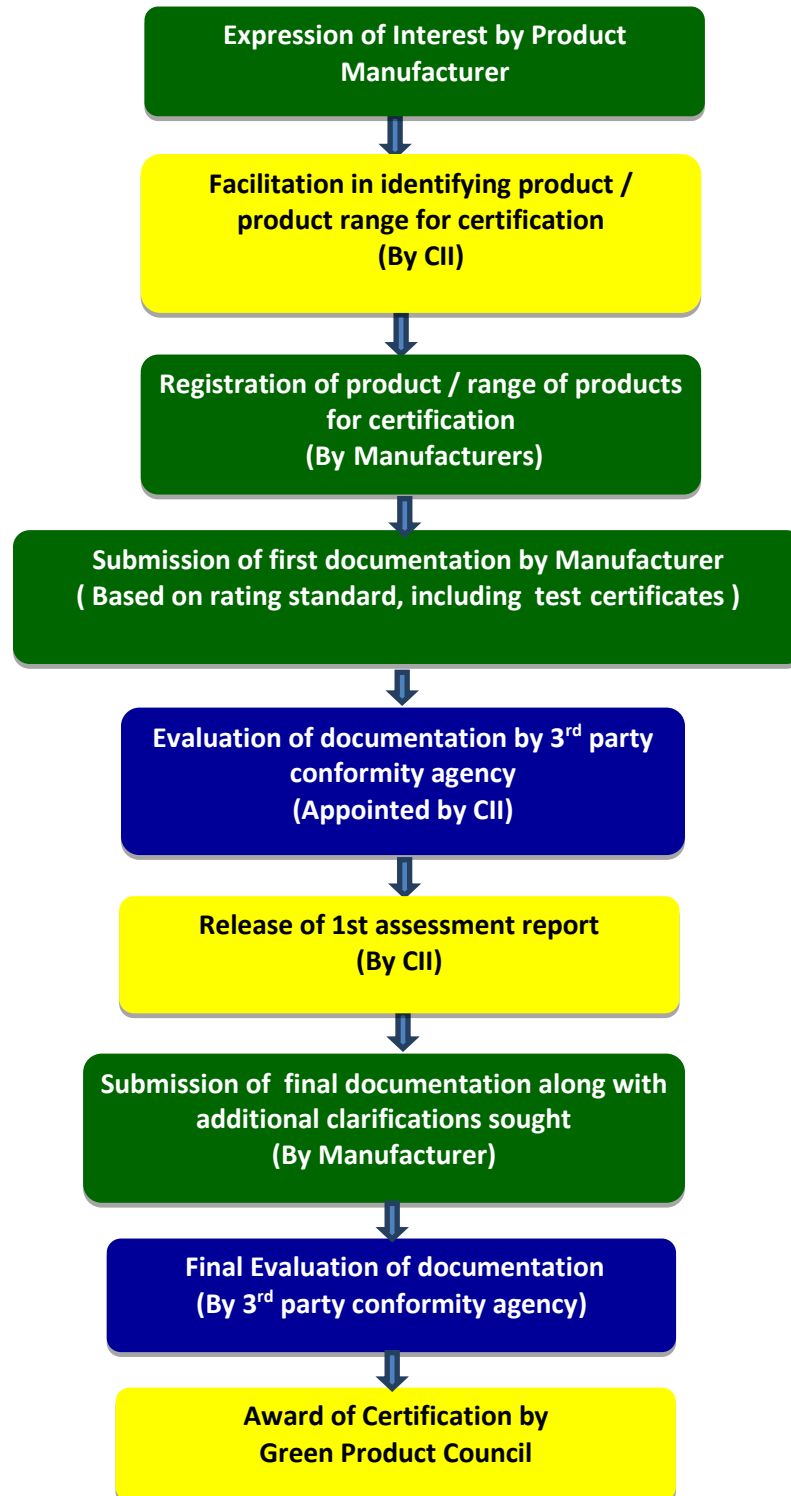
**A Product needs to comply with certain specified mandatory requirements. The mandatory requirements will vary depending upon the product category.**

The threshold limit of all the credits is 100. The product manufacturers can apply for the Credits depending upon the applicability and gain credit points for the Certification.



## 6. Methodology of Certification

The step by step methodology for the Certification is mentioned below.



## 6.1 Product testing

The Green Product Certification calls for testing of select product parameters for the award of Certification. The product parameters will vary depending upon product categories. Wherever testing of the products is specified, the Certification system also specifies the testing standards and the requirements.

The product manufacturers can carry out the product testing in any of the Laboratories accredited by the **National Accreditation Board for Testing and Calibration Laboratories (NABL)** according to the specified standards and produce the test certificates with the test results for further evaluation.

If the product testing has been already carried out in an NABL accredited laboratory owned by the product manufacturer, the product manufacturer has to submit the details of the test procedures & methodology for verification.

If the product testing needs to be carried out outside the country, the laboratory should have been accredited by the accrediting agency recognized by the Government of the respective country or an accrediting agency which is a member of international bodies such as International Laboratory Accreditation Co-operation (ILAC), Asia Pacific Laboratory Accreditation Co-operation (APLAC) etc.

## 6.1 Evaluation by 3rd party Conformity Agency

The document submitted by the product manufacturer will be evaluated by a 3<sup>rd</sup> party conformity agency appointed by CII-Godrej GBC.

Conformity agency is a competent 3<sup>rd</sup> party agency for carrying out product conformity assessment for various products which would involve Product testing, inspection, factory audits and documentary review.

## ***7. Green product Certification***

A product will be certified depending upon the number of credit points achieved based on the evaluation of 3<sup>rd</sup> party conformity agency.

**The maximum achievable credit points are 100. A product will be certified as 'Green Product' if it achieves 50 or more credit points in the evaluation.**

## ***8. Validity of the Certification***

GreenPro Certification is valid for 2 years from the date of award of the Certification for the product / product range.

At the end of the validity period, the product manufacturer needs to apply for the renewal of the Green product Certification.

Before the end of the validity period, the product manufacturer can attempt for higher level of Certification after implementing sufficient measures for gaining credit points. However, the attempt can be made only after a year from the date of award of the product Certification.

## ***9. Fee for Green product Certification***

The fee details are available on website [www.greenbusinesscentre.com](http://www.greenbusinesscentre.com). The fee details can also be obtained through the contact details mentioned in the manual.

## ***10. Updation of the Standard***

GreenPro Certification Standard for Cleaning Chemicals is the result of Green Product and Services council's efforts towards facilitating market transformation in Green Building Products. The council's endeavor is to periodically update the standard and raise the bar.

The updating of the standard will be taken up with the support of the product committee on consensus basis. Updates or addenda will be incorporated and formally communicated to the applicants.

## ***11. Upgradation of Certification***

The intent of the GreenPro certification is to distinguish and recognize green products as per the green performance. As for Green Cleaning Chemicals, the assessment will be initially confined to reporting the credits for the product and if the credit score is above 50, the product will be given the Green Pro certificate. After two years of operation of this scheme, GreenPro products will be rated as Platinum, Gold, Silver and Bronze based on their GreenPro credit scores. (or it can be number of stars based for easy appreciation by the consumer)

## *Summary of Credits & Points Distribution*

<b>GreenPro - Green Product Certification</b>		
<b>SCOPE: Cleaning Chemicals for Floor, wall, glass, sink &amp; toilet cleaning</b>		
<b>Credits</b>	<b>Criteria</b>	<b>Credit Points</b>
<b>1</b>	<b>Product Design</b>	
<b>Credit 1.1</b>	<i>Eco - Vision</i>	1
	<i>Strategies adopted, resource allocation, stake holder engagement, Implemented measures &amp; Impacts</i>	
	<i>- At design stage of the product</i>	2
	<i>- At manufacturing stage of the product</i>	2
<i>Sub Total</i>		<b>5</b>
<b>2</b>	<b>Product Performance</b>	
<b>Mandatory Requirement*</b>	<i>Demonstrate the cleaning ability of the product as per standard methods (for example, A-3 to A-6 of IS standard IS 7983 or Annex-A of IS 14364)</i>	
<b>Credit 2.1</b>	<i>Volatile organic compound</i>	5
<b>Credit 2.2</b>	<i>Flammability</i>	5
<b>Credit 2.3</b>	<i>Elimination of environmental Pollutants</i>	35
	<i>Effect on Effluents</i>	5
	<i>Toxicity</i>	10
	<i>Heavy Metals</i>	10
	<i>Eutrophication</i>	5
	<i>Others</i>	5
<i>Sub Total</i>		<b>45</b>
<b>3</b>	<b>Raw Material</b>	
<b>Credit 3.1</b>	<i>Prohibited Substances</i>	10
<i>Sub Total</i>		<b>10</b>

<b>4</b>	<b>Manufacturing Process</b>	
<b>Credit 4.1</b>	<b>Energy Efficiency</b>	<b>3</b>
	<i>Reduction in specific energy consumption <math>\geq</math> 5%</i>	1
	<i>Reduction in specific energy consumption <math>\geq</math> 10%</i>	2
	<i>Reduction in specific energy consumption <math>\geq</math> 15%</i>	3
<b>Credit 4.2</b>	<b>Water Efficiency</b>	<b>3</b>
	<b>Reduction in specific water consumption</b>	
	<i>Reduction in specific water consumption <math>\geq</math> 5%</i>	1
	<i>Reduction in specific water consumption <math>\geq</math> 10%</i>	2
	<i>Rain water Harvesting - Harvest 95% rainwater run-off from Roof &amp; Non Roof areas</i>	1
<b>Credit 4.3</b>	<b>Renewable Energy</b>	<b>4</b>
	<i>On-site renewable energy generation (Both electrical &amp; thermal)</i>	
	<i><math>\geq</math>2.5% <math>\leq</math> 5% substitution</i>	2
	<i>&gt; 5% substitution</i>	4
<i>Sub Total</i>		<b>10</b>
<b>5</b>	<b>Waste Management</b>	
<b>Mandatory Requirement*</b>	<i>Solid, Liquid and Gaseous Wastes : Compliance to local regulations</i>	
<b>Credit 5.1</b>	<i>Waste Utilization &amp; Disposal</i>	
	<b>Non Hazardous waste</b>	
	<i>10% reduction in disposal of waste per unit of production</i>	1
	<i>15% reduction in disposal of waste per unit of production</i>	2
	<b>Hazardous Waste</b>	
	<i>&gt; 5%reduction in waste going to landfill</i>	1
	<i>&gt; 10%reduction in waste going to landfill</i>	2
	<i>&gt; 15%reduction in waste going to landfill</i>	3
<i>Sub Total</i>		<b>5</b>
<b>6</b>	<b>Life Cycle Approach</b>	
<b>Credit 6.1</b>	<i>Life Cycle Analysis</i>	4
	<i>Measures taken &amp; Quantification of benefits achieved</i>	
	<i>- Implementation of at least one initiative</i>	1

	- 2% impact reduction	2
	- 4% impact reduction	3
	- 6% impact reduction	4
	- 8% impact reduction	5
	- 10% impact reduction	6
<i>Sub Total</i>		<b>10</b>
<b>7</b>	<b>Product Stewardship</b>	
<b>Credit 7.1</b>	<i>Education</i>	3
<b>Credit 7.2</b>	<i>Extended Producer Responsibility</i>	3
<b>Credit 7.3</b>	<i>Product Packaging</i>	4
<i>Sub Total</i>		<b>10</b>
<b>8</b>	<b>Innovation</b>	
<b>Credit 8.1</b>	<i>Innovations</i>	4
<b>Credit 8.2</b>	<i>Other Credentials, Awards and Accolades</i>	1
<i>Sub Total</i>		<b>5</b>
<b>Total Points</b>		<b>100</b>

**GREENPRO CERTIFICATION STANDARD FOR  
FLOOR, WALL, TILE, SINK CLEANING CHEMICALS**



## **Mandatory Requirement**

For a product to be taken up for greenpro certification, the manufacturer shall comply with the applicable acts & rules related to environment and health & safety (demonstrated, for example, by providing copies of:

- (a) Valid consent to operate under the water (Prevention & Control of pollution) Act & Air (Prevention & Control of pollution) Act
- (b) Valid authorization under the hazardous waste (management, handling & transboundary movement) rules
- (c) Factory licence under the Factories Act
- (d) Valid licences under the Petroleum Act, gas cylinder rules, static & mobile pressure vessels rules, explosives Act
- (e) providing data to demonstrate continued compliance with the requirements of (a) to (d)

## 1.0 Product Design

### Eco-Vision

**Points: 5**

#### Intent:

To design the product holistically considering all the environmental attributes, so as to minimize associated impacts

#### Award of points:

Provide the details of the Eco Vision to action as per the following for achieving excellence in design of the products that would result in environmental, health & wellbeing benefits.

- ❖ Eco-Vision statement
- ❖ Strategies adopted, resource allocation, stake holder engagement, Implemented measures & Impacts
  - At design stage
  - At manufacturing

Credits	Criteria	Credit Points
	<b>Product Design</b>	
<b>Credit 1.1</b>	<i>Eco - Vision statement</i>	1
	<i>Strategies adopted, resource allocation, stake holder engagement, Implemented measures &amp; Impacts</i>	
	<i>- At design stage of the product</i>	2
	<i>- At manufacturing stage of the product</i>	2

#### Exemplary Performance:

This credit is not eligible for exemplary performance under Innovation Credit.

#### Documentation Required:

1. Eco Vision statement
2. Strategies adopted at design & manufacturing stage to achieve eco vision

For Eg:

- a. Resource allocation for improving the design of the product & manufacturing of the product
  - b. Employees and stakeholders engaged
3. Details of measures implemented at design stage and manufacturing stage of product with quantification of benefits

## 1.0 Product Performance

### Mandatory requirement

Demonstration of the cleaning ability of the cleaning chemical is a mandatory requirement.

Test the cleaning ability of the product as per *A-3 to A-6 of IS standard IS 7983 or Annex-A of IS 14364* in a NABL accredited laboratory and produce the test results.

**Credit 2.1: Volatile Organic Compound****Points: 5****Intent:**

Reduce exposure to volatile organic compounds, which evaporate during use and cause severe impact on health of the occupants and improve building indoor environment quality.

**Mandatory requirement**

VOC should not be more than 0.9 % in a concentrate or 0.5 % in the ready to use cleaning chemical

**Award of points:**

Reduce the VOC content in the Cleaning Chemicals and comply with the following criteria.

<b>Credits</b>	<b>Criteria</b>	<b>Credit Points</b>
<b>2</b>	<b>Product Performance</b>	
<b>Credit 2.1</b>	<b><i>Volatile Organic Compound (VOC)</i></b>	<b>5</b>
	<i>- Concentrate: Should be less than 0.9 % (mass/mass) of the product (0.9-0.7 % : 1 point; 0.69 – 0.5 %: 2 points; 0.49 -0.3 %: 3 points; 0.29 – 0.1 %: 4 points; 0.1 – 0%: 5 points)</i>	
	<i>- For ready to use product (Diluted) – less than 0.5% (mass/mass) (0.5-0.4 % : 1 point; 0.39 – 0.3 %: 2 points; 0.29 -0.2 %: 3 points; 0.19 – 0.1 %: 4 points; 0.09 – 0%: 5 points)</i>	

**Exemplary Performance:**

This credit is not eligible for exemplary performance

**Documentation Required:**

- Test certificate of products tested as per specified standards ASTM D- 6886 or US EPA Method 24 (We recognize that these methods are meant for water based

paints; we recommend that these methods are used to test the VOC in the Cleaning Chemical)

**Credit 2.2: Flammability****Points: 5****Intent:**

To ensure that the cleaning chemicals do not catch fire / explode and lead to fire accident during storage or use

**Award of points:**

Test the flash point of the product as per standards ASTM D92 (or) ASTM D93 (or) any other equivalent method and produce test results

Credits	Criteria	Credit Points
<b>Product Performance</b>		
<b>Credit 2.2</b>	<b>Flammability</b>	<b>5</b>
	<i>Concentrate/Ready to use : flash point of the product tested as per IS Standard IS 1448 (P:69) should not be less than 65.5 °C (150 °F)</i>	

**Exemplary Performance:**

This credit is not eligible for exemplary performance

**Documentation Required:**

- Test certificate for flash point of the products as per specified standards

**Credit 2.3: Elimination of environmental Pollutants****Points: 35****Intent:**

To minimize the environmental impact in specific water pollution due to the effluent arising out of the use of cleaning chemicals.

**Award of points:**

Test the effluent arising out of use of cleaning chemical as per Central Pollution Control Board guidelines

The environment pollutants given below shall not exceed the prescribed limits.

2	Product Performance	
Credit 2.3	<b>Elimination of environmental Pollutants</b>	30
	<p><b>Effect on Effluents</b>  <i>Test Methods as prescribed by the current "Guide Manual: Water and Waste Water Analysis" by CPCB, India, Or APHA – "Standard methods for the examination of water and waste water", shall be followed for each of the parameters</i>  <i>Samples for analysis shall be prepared as follows:</i></p> <p><b>a)</b> Concentrate: Dilute the concentrate by 1000 times (mass by mass) with double distilled water</p> <p><b>b)</b> Ready to use: Dilute the product by 50 times (mass by mass) with double distilled water for carrying out tests for the following parameters</p>	5
	1) Suspended Solids (mg/l) < 100	
	2) Bio-chemical oxygen demand (BOD, 3 days at 27°C) (mg/l) < 30	
	3) Chemical Oxygen Demand (mg/l) < 250	
	4) Phenolic compounds (mg/l) < 1	
	5) pH - 5.5-9.0	
	<b>Toxicity</b>	10
	1) Total residual chlorine (mg/l) < 0.1	
	2) Arsenic (mg/l) < 0.2	
	3) Selenium (mg/l) < 0.05	
	4) Cyanide (mg/l) < 0.2	



	5) Bio-Assay test - > 90 % survival after 96 hours	
	<b>Heavy Metals</b>	10
	1) Mercury (mg/l) < 0.01	
	2) Lead (mg/l) < 0.1	
	3) Cadmium (mg/l) < 2	
	4) Chromium (VI) (mg/l) < 0.1	
	5) Total Chromium (mg/l) < 2	
	6) Copper (mg/l) < 3	
	7) Zinc (mg/l) < 5	
	8) Nickel (mg/l) < 3	
	9) Manganese (mg/l) < 2	
	10) Iron (mg/l) < 3	
	11) Vanadium (mg/l) < 0.2	
	<b>Eutrophication</b>	5
	1) Ammoniacal Nitrogen (as N) (mg/l) < 50	
	2) Total Kjeldahl Nitrogen (as NH <sub>3</sub> ) (mg/l) < 100	
	3) Free Ammonia (as NH <sub>3</sub> ) (mg/l) < 5	
	4) Phosphates (mg/l) < 5	
	<b>Others</b>	5
	1) Fluoride (mg/l) < 2	
	2) Sulphide (mg/l) < 2	
	3) Nitrate (mg/l) < 10	

**Exemplary Performance:**

This credit is not eligible for exemplary performance

**Documentation Required:**

- Test certificate of products, as per methods prescribed, conforming to the limits prescribed

## 2.0 Raw Materials

### Credit 3.1: Prohibited Substances

**Points: 10**

#### Intent:

Eliminate exposure to prohibited substances that can lead to long term health effects either through respiration / direct contact.

#### Mandatory Requirement

Manufacturer to provide Material Safety Data Sheet (MSDS) for the products. The MSDS should have the following details:

1. Chemical Identify
2. Manufacturer's information
3. Hazardous ingredients / Identify information
4. Physical, Chemical characteristics
5. Fire and explosion hazard data
6. Reactivity data
7. Health hazard data
8. Precautions of safe handling and use
9. Control measures
10. Emergency and first air procedures

#### Award of points:

The final product shall not contain the following prohibited ingredients.  
(being mandatory, the presence of even one such prohibited substance will bring down the credit to 0)

Credits	Criteria	Credit Points
<b>3</b>	<b>Raw Material</b>	
<b>Credit 3.1</b>	<b>Prohibited Substances</b>	10
	1) 2-butoxyethanol	
	2) Alkylphenol ethoxylates (APEO) or APEO derivatives	
	3) Phthalates (e.g. dibutylphthalate)	
	4) Ozone depleting Substances (e.g. CFCs)	
	5) Optical brighteners	

	<i>6) Chlorinated organic compounds</i>	
	<i>7) Quarternary ammonium compounds that are not readily degradable</i>	
	<i>8) EDTA (ethylenediamine tetraacetic acid) and its salts</i>	
	<i>9) DTPA (diethylene triamine penta acetic acid) and its salts</i>	
	<i>10) LAS (Linear alkyl benzene sulphonates)</i>	
	<i>11) Perfluorinated substances &amp; polyfluorinated alkyl substances (PFAS)</i>	
	<i>12) Methyldibromo glutaronitrile (MDBGN)</i>	
	<i>13) Nitro-musks and polycyclic musks</i>	
	<i>14) Substances that are Endocrine disrupters</i>	
	<i>15) Substances that are PBT (persistent, bioaccumulative and toxic) and vPvBT (Very persistent and very bioaccumulative and toxic)</i>	
	<i>16) Substances that have been classified as of “Very High Concern” (ref: REACH)</i>	
	<i>17) Proven and suspected Carcinogens</i>	
	<i>18) Proven and suspected Mutagens</i>	
	<i>19) Proven and suspected Reproductive Toxins (teratogens)</i>	
	<i>20) Reactive Chloro compounds such as NaOCl (sodium hypochlorite)</i>	
	<i>21) Heavy metals including Lead, Chromium (VI), Cadmium, Mercury and Selenium</i>	
	<i>22) Phosphorus</i>	
	<i>23) Nano materials and nano particles</i>	

#### **Exemplary Performance:**

This credit is not eligible for exemplary performance

#### **Documentation Required:**

- Material safety data sheet for the products as per prescribed format; a declaration by the manufacturer on the presence or absence of the identified chemical substances in the final product

### 3.0 Manufacturing Process

#### Credit 4.1: Energy Efficiency

**Points: 3**

**Intent:**

Enhance energy efficiency in the manufacturing process of the product, to reduce environmental impacts.

**Award of points:**

Establish specific consumption of the plant and monitor on a continuous basis

Implement energy efficiency improvement projects or technologies for reducing the energy consumption.

Credits	Criteria	Credit Points
<b>4</b>	<b>Manufacturing Process</b>	
<b>Credit 4.1</b>	<b>Energy Efficiency</b>	<b>3</b>
	<i>Reduction in specific energy consumption <math>\geq</math> 5%</i>	1
	<i>Reduction in specific energy consumption <math>\geq</math> 10%</i>	2
	<i>Reduction in specific energy consumption <math>\geq</math> 15%</i>	3

**Exemplary Performance:**

This credit is eligible for exemplary performance under Innovation Credit, provided, the measures implemented for reducing the energy consumption are innovative and resulted in significant reduction in energy consumption

**Documentation Required:**

1. Details of annual production, energy consumption & specific energy consumption for the preceding 3 years
2. Details of National Benchmark & International Benchmark data with comparisons
3. Details of implementation of energy efficiency improvement measures with actual benefits achieved

**Note:**

Manufacturing units which are in operation for less than 2 years need to demonstrate a system in place for specific energy consumption monitoring and provide the Benchmarking details as highlighted in point no: 2.

**Credit 4.2: Water Efficiency****Points: 3****Intent:**

Incorporate water efficiency measures in the manufacturing process to reduce potable water consumption and implement measures to benefit the society at large.

**Award of points:**

Implement water efficient measures & technologies and recycle\* waste water generated from the plant to reduce the fresh water consumption.

Harvest or Capture minimum of 95% of rain water runoff from roof & non roof areas of the manufacturing facility

Implement measures for improving the availability of portable water beyond the fence for the benefit of the local community

<b>Credits</b>	<b>Criteria</b>	<b>Credit Points</b>
	<b>Manufacturing Process</b>	
<b>Credit 4.2</b>	<b>Water Efficiency</b>	
	<b>Reduction in specific water consumption</b>	
	<i>Reduction in specific water consumption <math>\geq</math> 5%</i>	1
	<i>Reduction in specific water consumption <math>\geq</math> 10%</i>	2
	<i>Rain water Harvesting - Harvest 95% rainwater run-off from Roof &amp; Non Roof areas</i>	1

\*- Recycling of water can be factored into the reduction in specific water consumption

**Exemplary Performance:**

This credit is eligible for exemplary performance under Innovation, if the facility achieves the status of “Zero effluent Discharge”

(OR)

The measures taken exceed the threshold mentioned in the compliance options.

**Documentation Required:**

1. Details of annual water consumption & Specific water consumption for 3 years
2. Details of National Benchmark & International Benchmark data with comparisons
3. Rain water harvesting system installed and quantity of water harvested annually

#### 4. Details of the beyond the fence initiatives and the benefits

**Note:**

Manufacturing units which are in operation for less than 2 years need to demonstrate a system in place for specific water consumption monitoring and provide the Benchmarking details as highlighted in point no: 2.

**Credit 4.3: Renewable Energy****Points: 4****Intent:**

Encourage the use of on-site & off site renewable energy sources to reduce the dependence on fossil fuels and their associated environmental impacts.

**Award of points:**

Install on-site & off-site renewable energy system to reduce dependence on fossil fuels.

<b>Credits</b>	<b>Criteria</b>	<b>Credit Points</b>
	<b>Manufacturing Process</b>	
<b>Credit 4.3</b>	<b>Renewable Energy</b>	
	<i>On-site renewable energy generation (Both electrical &amp; thermal)</i>	
	$\geq 2.5\% \leq 5\%$ substitution	2
	$> 5\%$ substitution	4

A company is eligible for claiming the allotted points to the threshold level of 5 Credits if they have done exceedingly in either on-site or Off site renewable energy generation.

**Exemplary Performance:**

This credit is eligible for exemplary performance under Innovation Credit, if the contribution from the renewable energy sources is more than 40% of the annual energy requirement of the manufacturing facility

**Documentation Required:**

1. Details of installation of onsite and offsite renewable power generation. Certification sources including the technology, installed capacity and location with photographs of installations.
2. Details of total power consumption in the manufacturing facility and renewable power produced in kWh

## **4.0 Waste Management**

### **Mandatory requirements**

Compliance to local regulations on solid, liquid and gaseous wastes discharged from the manufacturing location.

### **Intent**

To ensure that the solid, liquid & gaseous wastes discharged from the plant complies with all local regulations.

### **Compliance options**

A copy of the Environmental Statement submitted to the State Pollution Control Board for the previous financial year (with the seal of receipt by the Board)



**Credit 5.1: Waste Utilization & Disposal****Points: 8****Intent:**

Encourage appropriate handling and disposal of waste during manufacturing, thereby reducing environmental impacts and enhance health & wellbeing of the society.

**Award of points:**

Minimize wastes through 'reduce, reuse and recycle' techniques. Reduce waste disposal to landfill

<b>Credits</b>	<b>Criteria</b>	<b>Credit Points</b>
	<b>Waste Management</b>	
<b>Credit 5.1</b>	<i>Waste Utilization &amp; Disposal</i>	
	<b>Non Hazardous waste</b>	
	<i>10% reduction in disposal of waste per unit of production</i>	1
	<i>15% reduction in disposal of waste per unit of production</i>	2
	<i>20% reduction in disposal of waste per unit of production</i>	3
	<i>25% reduction in disposal of waste per unit of production</i>	4
	<b>Hazardous Waste</b>	
	<i>&gt; 5%reduction in waste going to landfill</i>	1
	<i>&gt; 10%reduction in waste going to landfill</i>	2
	<i>&gt; 15%reduction in waste going to landfill</i>	3
	<i>&gt; 20% reduction in waste going to landfill</i>	4

**Exemplary Performance:**

This credit is eligible for exemplary performance under Innovation Credit, if 100% of the waste generated is utilized through innovative ways and means with higher value addition.

**Documentation Required:**

Details of the following for the preceding 1 year:

1. Details of waste Generated and their quantity by weight or volume
2. Details of Utilization of the wastes and the process of utilization
3. Details of the wastes handed over to Approved Common Hazardous Wastes Treatment Storage and Disposal Facility (TSDF) for past 3 years

## 5.0 Life Cycle Approach

### Credit 6.1 Life Cycle Analysis

**Points: 10**

#### Intent:

Identify environmental impact at every stage of the life cycle of the product and initiate measures to reduce such impacts

#### Award of points:

Carry out Life cycle analysis of the product for the boundary conditions of Cradle to Cradle. i.e. From the raw material sourcing to recycling / disposal of the manufactured products.

The product manufacturer can carry out the life cycle analysis with the support of external service provider or with internal expertise using a LCA software tool.

Based on the Life Cycle impact analysis, implement measures for reducing the environmental impacts.

Credits	Criteria	Credit Points
	<b>Life Cycle Approach</b>	
<b>Credit 6.1</b>	<i>Life Cycle Analysis</i>	4
	<i>Measures taken &amp; Quantification of benefits achieved</i>	
	- <i>Implementation of at least one initiative</i>	1
	- <i>2% impact reduction</i>	2
	- <i>4% impact reduction</i>	3
	- <i>6% impact reduction</i>	4
	- <i>8% impact reduction</i>	5
	- <i>10% impact reduction</i>	6

#### Exemplary Performance:

This credit is eligible for exemplary performance if the implemented measure is innovative and addresses any of the measure that has not been covered as part of the Certification system

**Documentation Required:**

1. LCA study report with the details of the study conducted and impact analysis
2. Details of the measures implemented based on the impact analysis of LCA study and the benefits achieved

## 6.0 Product Stewardship

Product stewardship advocates that all those involved in the Life Cycle of product share responsibility for reducing its health and environmental impacts with producers bearing the primary responsibility.

In the Green Product Certification, Product Stewardship credit focuses on the following:

1. Education for the Stake holders on Green Products for reaping the intended benefits fully
2. Extended producer responsibility increasing the recycling or safer disposal of products
3. Packaging materials

The credit points are allotted for the focus areas as applicable for the individual product categories.

**Credit 7.1: Education****Points: 3****Intent:**

Educate those involved in handling the product at every stage post-despatch, so as to reap the intended environmental benefits.

**Award of Points:**

Companies to comply with the following options:

<b>Credits</b>	<b>Criteria</b>	<b>Credit Points</b>
<b>7</b>	<b>Product Stewardship</b>	
<b>Credit 7.1</b>	<i>Education</i>	
	<i>1) Instruction for the safe and efficient use of the cleaner i) dilution instructions, (ii) use instructions (that include information on incompatible surfaces) and (iii) disposal instructions</i>	2
	<i>2) Label shall carry symbols and information as required by the existing laws of the country</i>	1

**Exemplary Performance:**

This credit is not eligible for exemplary performance under innovation criteria.

**Documentation Required:**

- Details of initiatives taken by the plant team for educating all the stake holders including distributors and end users.

## 7.2 Extended Producer Responsibility

**Points: 3**

### Intent

To encourage manufacturers to institute a mechanism for product take-back in case of product rejection / end of shelf life of the products for recycling or safe disposal.

### Award of Points:

7	Product Stewardship	
<b>Credit 7.3</b>	<i>Extended Producer Responsibility</i>	3
	Product take back programme and system in place for collection, treatment of collected products for reuse or recycling (or) dispose off in an environment friendly method	

### Exemplary Performance:

This credit is not eligible for exemplary performance under innovation criteria.

### Documentation Required:

- Details of the mechanism in place for product take back

### 7.3 Product Packaging

**Points: 3**

#### Intent

To encourage manufacturers to utilize environment friendly packaging materials and implement measures to reduce the overall environment impact due to product packaging.

#### Award of Points:

The manufacturers are encouraged to adopt the following in product packaging:

1. Packaging shall not contain PVC or Chlorinated polymers
2. Primary packaging shall be made of recyclable material
3. Primary packaging shall contain post-consumer materials
4. Aerosol packaging shall be recyclable
5. No phthalates, heavy metals like lead, mercury, cadmium, chromium IV in the packaging materials
6. Secondary packaging shall be used only for concentrates
7. All plastic containers and lids shall be marked for polymer identification as appropriate

7	Product Stewardship	
<b>Credit 7.3</b>	<i>Product Packaging</i>	4
	Utilization of environment friendly packaging materials and measures to implemented to minimize overall environment impact due to packaging	

#### Exemplary Performance:

This credit is not eligible for exemplary performance under innovation criteria.

#### Documentation Required:

- Details to demonstrate adoption of environment friendly packaging and details of measures implemented



## 7.0 Innovation

### Credit 8.1 Product Innovation

**Points: 5**

#### Intent:

Recognize initiatives that are not addressed in this Certification system but have a profound impact in protecting the environment.

#### Compliance options:

1. As part of the credit, the product manufacturer can apply for four innovative measures. If the implemented measures meet any one of the following criteria mentioned below can be considered as an innovative measure.
  - Any environmental measure not covered in the Certification but addressed by the manufacturer
  - Any measure surpassing the credit threshold of any of the credits included as part of this Certification
2. Receipt of Eco labels, Awards & accolades

The points for innovative measures are as follows:

Credits	Criteria	Credit Points
<b>8</b>	<b>Innovation</b>	
<b>Credit 8.1</b>	<i>Innovation : Each innovative measure implemented at any stage of Life cycle will gain 1 Credit Point</i>	4
	<i>Other Credentials, Awards and Accolades</i>	1

#### Documentation Required:

1. Details of the innovative measures highlighting the Intent and the measured Impacts
2. Copy of the certificates for the details of Eco-labels, Awards & accolades obtained