



# **GreenPro Certification Standard for**

# **Construction Chemicals**

# Version 2.0

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# Acknowledgement

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We express our gratitude to all the members who had contributed to the development of this Standard. Our special thanks are due to the Chairman and Members, Technical Committee on Construction chemicals:

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# 1. Green Products Rating - 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



# 2. Benefits

The Green product rating benefits both the product manufacturers and the users. The benefits are both tangible and intangible.

#### For Product Manufacturers

Some of the benefits of the Green product rating for the product manufacturers are highlighted below:

- 1. Green product rating 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 Rating 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 green product is saved
- 2. The user is assured of the performance of the product and equipment
- 3. Ensures Toxic and Carcinogen free products which in turn increases health benefits & wellbeing 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 rating for the buildings

# 4. National Priorities addressed in Rating

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

# 5. Development of Rating 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 the 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 chaired by an expert who is also an unbiased specifier.

## 5.1 Features of Green Product Rating

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

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

- **1. Product Design:** The rating necessitates manufacturer to demonstrate its top management commitment towards environment 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 rating 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 rating recognises the efforts taken by the product manufacturer to reduce the resource consumption during the manufacturing process

- **5. Waste Management:** The rating calls for efforts to minimize the wastes or safer disposal of the wastes generated during manufacturing process other than the materials used for product manufacturing.
- 6. Life Cycle Approach: The rating encourages the product manufacturer to carryout Life cycle analysis for the products and implement measures based on the impact analysis.
- **7. Product Stewardship:** The rating recognizes the measures implemented by the product manufacturers to reduce environmental impact in product transportation and recycling / product disposal
- **8. Innovation:** The rating recognises the innovative measures implemented by the product manufacturers which had resulted in substantial reduction in environment impact exceeding the threshold level specified in the rating standard.

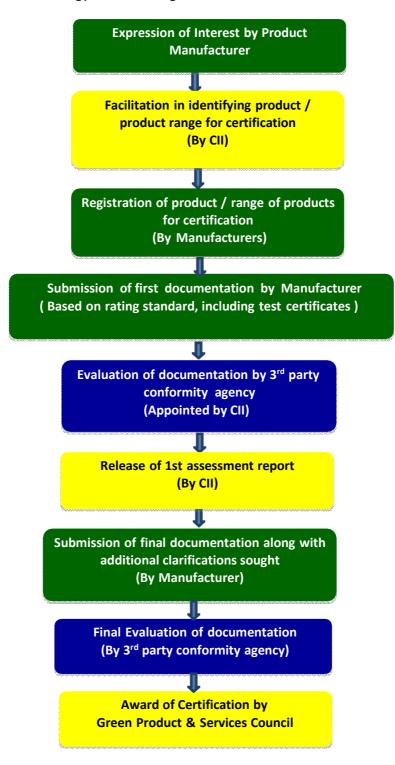
The approach and the Credit Modules for evaluation of products remain by and large the same for all the product categories. However, the credits as part of the individual Credit Modules and the weightage will vary depending upon the product categories and their significance.

A Product needs to comply with certain specified mandatory requirements and compliance to mandatory requirements is a pre-requisite. 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 rating.

# 6. Methodology of Rating

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



## 6.1 Product testing

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

The product manufacturers can carry out product testing in any of the Laboratories accredited by **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 must 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 member of international bodies such International Laboratory Accreditation Co-operation (ILAC) or Asia Pacific Laboratory Accreditation Co-operation (APLAC).

#### 6.2 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 rating

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 Rating

The Green product rating is valid for 2 years from the date of award of the rating 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 rating.

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

# 9. Upgradation of rating

This Green product rating for Furniture is Green Product and Services council's initial efforts towards facilitating market transformation in Green Building Products. The council's endeavor is to periodically upgrade the standards and raise the bar.

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

#### **GreenPro Certification - Construction Chemicals** Scope: Admixtures, Adhesives & sealants, Grouts, Protective coatings, water proofing coatings Credit Criteria Credits **Points Product Design** Credit 1.1 Eco - Vision 1 Strategies adopted, resource allocation, stake holder engagement, Implemented measures & Impacts - At design stage of the product 2 2 - At manufacturing stage of the product Sub Total 5 **Product Performance** VOC testing from NABL accredited laboratory Mandatory Requirement\* Flammability testing from NABL accredited laboratory Credit 2.1 **Volatile Organic Compound** 20 Credit 2.2 **Flammability** 5 25 Sub Total **Raw Material and Green Supply Chain Management** Mandatory 15 **Prohibited Substances.** Requirement\* Credit 3.1 Recycled Content 10 Credit 3.2 **Regional Material** 5 *30* Sub Total

	Manufacturing Process	
Credit 4.1	Energy Efficiency	3
	Reduction in specific energy consumption ≥ 5%	1
	Reduction in specific energy consumption ≥ 10%	2
	Reduction in specific energy consumption ≥ 15%	3
Credit 4.2	Water Efficiency	6
	Reduction in specific water consumption	
	Reduction in specific water consumption > 5%	2
	Reduction in specific water consumption ≥ 10%	4
	Rain water Harvesting - Harvest 95% rainwater run-off from Roof & Non Roof areas	1
	Beyond the fence initiatives	1
Credit 4.3	Renewable Energy	4
	On-site renewable energy generation (Both electrical & thermal)	
	≥2.5% ≤ 5% substitution	2
	> 5% substitution	4
	Sub Total	13
5		
Mandatory	Solid, Liquid and Gaseous Wastes: Compliance to local	
reconcement"	requiations	
Requirement* Credit 5.1	regulations  Waste Utilization & Disposal	
Credit 5.1	Waste Utilization & Disposal Non-Hazardous waste	
•	Waste Utilization & Disposal Non-Hazardous waste	1
•	Waste Utilization & Disposal	1 2
•	Waste Utilization & Disposal Non-Hazardous waste  10% reduction in disposal of waste per unit of production	
Credit 5.1	Waste Utilization & Disposal  Non-Hazardous waste  10% reduction in disposal of waste per unit of production  15% reduction in disposal of waste per unit of production	
Credit 5.1	Waste Utilization & Disposal  Non-Hazardous waste  10% reduction in disposal of waste per unit of production 15% reduction in disposal of waste per unit of production  Hazardous waste  > 5% reduction in waste going to landfill	2
Credit 5.1	Waste Utilization & Disposal  Non-Hazardous waste  10% reduction in disposal of waste per unit of production 15% reduction in disposal of waste per unit of production  Hazardous waste	1
Credit 5.1	Waste Utilization & Disposal  Non-Hazardous waste  10% reduction in disposal of waste per unit of production 15% reduction in disposal of waste per unit of production  Hazardous waste  > 5% reduction in waste going to landfill  > 10% reduction in waste going to landfill	1 2
Credit 5.1	Waste Utilization & Disposal  Non-Hazardous waste  10% reduction in disposal of waste per unit of production 15% reduction in disposal of waste per unit of production  Hazardous waste  > 5% reduction in waste going to landfill  > 10% reduction in waste going to landfill  > 15% reduction in waste going to landfill  Sub Total	1 2 3
Credit 5.1  Credit 5.2	Waste Utilization & Disposal  Non-Hazardous waste  10% reduction in disposal of waste per unit of production 15% reduction in disposal of waste per unit of production  Hazardous waste  > 5% reduction in waste going to landfill  > 10% reduction in waste going to landfill  > 15% reduction in waste going to landfill  Sub Total	1 2 3
Credit 5.1  Credit 5.2	Waste Utilization & Disposal  Non-Hazardous waste  10% reduction in disposal of waste per unit of production 15% reduction in disposal of waste per unit of production  Hazardous waste  > 5% reduction in waste going to landfill  > 10% reduction in waste going to landfill  > 15% reduction in waste going to landfill  Sub Total  Life Cycle Approach	1 2 3

		1.
- 2% impo	act reduction	2
- 4% impo	act reduction	3
- 6% impo	act reduction	4
- 8% impo	act reduction	5
- 10% imp	pact reduction	6
·	Sub Total	10

7	Product Stewardship	
Credit 7.1	Education/ Community Outreach and Engagement	
	> 10% of people involved in handling the product after	1
	dispatch and users	
	> 20% of people involved in handling the product after	2
	dispatch and users	
Credit 7.2	Extended Producer Responsibility	
	System for product take-back for recycling or safe	2
	disposal	
Credit 7.3	System for packaging materials take back for reuse or	3
	recycling	
	Sub Total	7
8	Innovation	
Credit 8.1	Innovations	4
	Other Credentials, Awards and Accolades	1
	Sub Total	5
	Total Points	100

# GREEN PRODUCTS RATING STANDARD FOR CONSTRUCTION CHEMICALS

# **Mandatory Requirements**

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. This may be 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 & Trans boundary Movement) Rules
- (c) Factory license under the Factories Act
- (d) Valid licenses under the Petroleum Act, Gas Cylinder Rules, Static & Mobile Pressure Vessels Rules, Explosives Act, Boilers Act and 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 & well-being benefits.

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

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

#### **Exemplary Performance:**

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

- 1. Eco Vision statement
- 2. Strategies adopted at design & manufacturing stage to achieve eco vision
  - a. Proof for resource allocation for improving the design of the product & manufacturing of the product
  - b. Details of employees and stakeholders engaged
- 3. Details of measures taken at design stage and manufacturing stage of product with quantification of benefits.

Points: 20

# 2.0 Product Performance

# **Credit 2.1: Volatile Organic Compound**

#### Intent:

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

# **Mandatory requirement:**

VOC testing from NABL accredited laboratory

# Award of points:

Reduce the VOC content in the Construction chemicals and comply with the following criteria.

No.	Adhesive	VOC g/L	
(I) Architectural Applications			
1	Carpet pad adhesives	50	
2	Ceramic tile adhesives	65	
3	Dry wall and panel adhesives	50	
4	Multi-purpose construction adhesives	70	
5	Rubber flooring adhesives	60	
6	Structural glazing adhesives	100	
7	Subfloor adhesives	50	
8	VCT and asphalt tile adhesives	50	
9	Indoor carpet adhesives	50	
10	Wood flooring adhesives	100	
(II) Adhesiv	ve Substrate Specific Applications	<u>.</u>	
1	Adhesives for fibreglass	80	
2	Adhesives for metal	30	
3	Adhesives for plastic foams	50	
4	Adhesives for porous material	50	
5	Adhesives for wood	30	
6	PVC wielding	510	
7	Top & trim adhesive	250	
8	Special purpose contact adhesive	250	
9	Contact Adhesives	250	

(III) Sealants		
1	Architectural	250
2	Non membrane roof	300
3	Roadway	250
4	Other	420

If the product achieves the above emission limits, the credit points will be awarded as below.

	Product Performance	Points
IVIannatory	1) Product testing for minimum performance as per ASTM 6886 standards	
Credit 2.1	Volatile Organic Compound	
	5% reduction over baseline value	5
	10% reduction over baseline value	10
	15% reduction over baseline value	15
	20% reduction over baseline value	20

# **Exemplary Performance:**

This credit is not eligible for exemplary performance

- 1. Test certificates as per the specified standards.
- 2. Test certificate from NABL lab not older than 6 months only will be accepted

# **Credit 2.1 Flammability**

#### Intent:

To ensure that the construction 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 IS 1448 - 69 (2013) or any other equivalent method and produce test results

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

# **Exemplary Performance:**

This credit is not eligible for exemplary performance

- Test certificate for flash point of the products as per specified standards
- Test certificate from NABL lab not older than 6 months only will be accepted

## 3.0 Raw Materials

Mandatory Requirement: Prohibited Substances Points: 15

#### Intent:

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

#### **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.

No	Parameter (unit of measurement)	Limit value	Remark with respect to parameters given in US and EU documents
1	Arsenic (mg/l)	0.2	Toxicity
2	Mercury (mg/l)	0.01	Heavy metal
3	Lead (mg/l)	0.1	Heavy metal
4	Cadmium (mg/I)	2.0	Heavy metal
5	Chromium (mg/l)	2.0	Heavy metal

#### **Exemplary Performance:**

This credit is eligible for exemplary performance under Innovation Credit.

- Test certificate from NABL lab not older than 6 months only will be accepted
- 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.

Points: 10

## **Credit 3.1: Recycled Content**

#### Intent:

Encourage the use of industrial waste in the manufacturing process to avoid dumping of waste in landfills, thereby reducing environmental impacts.

## **Award of points**

Utilization of recycled content in manufacturing of construction chemicals for more than 20% by weight will gain credit points as mentioned below.

	Raw Materials	
Credit 3.1	Recycled Content	
	Recycled content of 20%	2
	Recycled content > 20%≤ 25%	4
	Recycled content > 25%≤ 30%	6
	Recycled content > 30%≤ 35%	8
	Recycled content > 35%	10

#### **Exemplary Performance:**

This credit is eligible for exemplary performance under Innovation Credit, if the recycled content in manufacturing exceeds 40% by weight.

Credit points will be awarded in proportion to the increase in % of recycled content utilization.

- 1. Declaration by the manufacturer highlighting the % of recycled content by weight in the product / product range applied for Certification
- 2. Details of Annual production, quantity of purchased materials for recycling and raw materials purchased.

Points: 5

# **Credit 3.2: Regional Materials**

#### Intent:

Encourage the use raw materials that are extracted or manufactured locally to reduce fossil fuels for transportation, thereby reducing associated environmental impacts.

#### **Award of points**

Source the raw materials regionally within 250 kms from the place of manufacturing.

Credit points will be awarded for any additional sourcing of raw materials over and above 40% by weight which is a mandatory requirement.

Threshold limits for the award of credit points for sourcing of regional materials are as below.

Credit 3.2	Raw Material	Points
	Regional Materials	
	Regional material content >40%≤ 50%	1
	Regional material content >50%≤ 60%	2
	Regional material content >60%≤ 70%	3
	Regional material content >70%≤ 80%	4
	Regional material content >80%	5

#### **Exemplary Performance:**

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

- 1. Declaration by the manufacturer, highlighting the % of raw materials by weight sourced regionally
- 2. Details of the sources of the raw materials and the distance from the manufacturing facility.

# 4.0 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	<b>Credit Points</b>
	Manufacturing Process	
Credit 4.1	Energy Efficiency	
	Reduction in specific energy consumption ≥ 5%	1
	Reduction in specific energy consumption ≥ 10%	2
	Reduction in specific energy consumption ≥ 15%	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: 6

#### 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

Credits	Criteria	<b>Credit Points</b>
	Manufacturing Process	
Credit 4.2	Water Efficiency	
	Reduction in specific water consumption	
	Reduction in specific water consumption ≥ 5%	2
	Reduction in specific water consumption ≥ 10%	4
	Rain water Harvesting - Harvest 95% rainwater run-off from Roof & Non Roof areas	1
	Beyond the fence initiatives	1

<sup>\*-</sup> 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.

Credits	Criteria	Credit Points
	Manufacturing Process	
Credit 4.3	Renewable Energy	
	On-site renewable energy generation (Both electrical & thermal)	
	≥2.5% ≤ 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

- 1. Details of installation of onsite and offsite renewable power generating 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

# 5.0 Waste Management

# **Mandatory requirements**

Compliance with local regulations on solid, liquid and gaseous wastes discharged from themanufacturing location.

#### Intent

To ensure that the solid, liquid & gaseous waste 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)

Points: 5

# **Credit 5.1: Waste Utilization & Disposal**

#### Intent:

Encourage appropriate handling, create wealth out of waste or proper disposal of wastes generated 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 / incineration (HWTSDF)

	Waste Management	
Credit 5.1	Non Hazardous waste	
	10% reduction in disposal of waste per unit of production	1
	15% reduction in disposal of waste per unit of production	2
Credit 5.2	Hazardous waste	
	> 5% reduction in waste going to landfill/incineration (HWTSDF)	1
	> 10% reduction in waste going to landfill/incineration (HWTSDF)	2
	> 15% reduction in waste going to landfill/incineration (HWTSDF)	3

#### **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 3 years:

- 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

Points: 10

# 6.0 Life Cycle Approach

# **Credit 6.1 Life Cycle Analysis**

#### 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 Grave/Cradle. i.e. from design to end-of-life of the product, through procurement, manufacturing, use and disposal of the manufactured products.

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

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

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

#### **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.

- 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.

# 7.0 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 Rating, Product Stewardship credit focuses on the following:

- 1. Education for the Stakeholders 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: 2

#### Intent:

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

# **Compliance options:**

Companies to comply with the following options:

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

# **Exemplary Performance:**

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

#### **Documentation Required:**

1. Details of the stakeholder's specific awareness or information dissemination programs about the Green Products, their features and their roles to reap the intended benefits

# **Credit 7.2: Extended Producer Responsibility**

Points: 2

#### 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:**

Credits	Criteria	<b>Credit Points</b>
7	Product Stewardship	
Credit 7.2	Extended Producer Responsibility	2
	Product take back programme and system in place for collection	2

# **Exemplary Performance:**

This credit is not eligible for exemplary performance under innovation criteria

## **Documentation Required:**

1. Details of the mechanism in place for product take back.

#### **Credit 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, including printed labels
- 6. Secondary packaging shall be used only for concentrates
- 7. All plastic containers and lids shall be marked for polymer identification as appropriate

Credits	Criteria	<b>Credit Points</b>
7	Product Stewardship	
Credit 7.3	Product Packaging	3
	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:**

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

Points: 5

# 8.0 Innovation

#### **Credit 8.1 Product Innovation**

#### Intent:

Recognize initiatives that are not addressed in this rating 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 rating but addressed by the manufacturer
  - Any measure surpassing the credit threshold of any of the credits included as part of this rating.
- 2. Receipt of Eco labels, Awards & accolades.

The points for innovative measures are as follows:

Credits	Criteria	<b>Credit Points</b>
8	Innovation	
Credit 8.1	Innovation : Each innovative measure implemented at any stage of Life cycle will gain 1 Credit Point	4
	Other Credentials, Awards and Accolades	1
Sub-total		5

- 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