

## MINISTRY OF ENVIRONMENT AND FORESTS

## NOTIFICATION

New Delhi, the 4th February, 2011

**S.O. 249(E).**— Whereas the draft rules, namely, the Plastics (Manufacture, Usage and Waste Management) Rules, 2009 were published by the Government of India in the Ministry of Environment and Forests vide number S.O. 2400(E), dated the 17<sup>th</sup> September, 2009 in the Gazette of India, Extraordinary of the same date inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of a period of sixty days from the date on which copies of the Gazette containing the said notification were made available to the public;

AND WHEREAS copies of the said Gazette were made available to the public on the 17<sup>th</sup> day of September, 2009;

AND WHEREAS the objections and suggestions received within the said period from the public in respect of the said draft rules have been duly considered by the Central Government.

NOW, THEREFORE, in exercise of the powers conferred by sections 3, 6, and 25 of the Environment (Protection) Act, 1986 (29 of 1986), and in supersession of the Recycled Plastics Manufacture and Usage Rules, 1999, except as respects things done or omitted to be done before such supersession, the Central Government hereby makes the following Rules, namely:-

**1. Short title and commencement .-**

- (1) These rules may be called the Plastic Waste (Management and Handling) Rules, 2011.
- (2) They shall come into force on the date of their publication in the Official Gazette.

**2. Application.-**

The provisions of rules 5 and 8 shall not apply to the manufacture of carry bags exclusively for export purposes, by export oriented manufacturing units, against an order for export received by the owner or occupier of the concerned manufacturing unit. This exemption does not apply to any surplus or rejects, left over and the like.

**3. Definitions.-** In these rules, unless the context otherwise requires :-

- (a) **"Act"** means the Environment (Protection) Act, 1986 (29 of 1986);
- (b) **"Carry bags"** mean all plastic bags used to carry commodities, including self carrying features;
- (c) **"Commodities"** mean articles; including but not limited to vegetables, fruits, pharmaceuticals, food grains and the like;
- (d) **"Compostable plastics"** mean plastic that undergoes degradation by biological processes during composting to yield CO<sub>2</sub>, water, inorganic compounds and biomass at a rate consistent with other known compostable materials and does not leave visible, distinguishable or toxic residue;
- (e) **"Consent"** means the consent to establish and operate from the concerned State Pollution Control Board or Pollution Control Committee granted under the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974), and the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981);
- (f) **"Disintegration"** means the physical breakdown of a material into very small fragments;
- (g) **"Extended producer's responsibility (EPR)"** means the responsibility of a producer or manufacturer of plastic carry bags and multilayered plastic pouches or packages for the environmentally sound management of the product until the end of its life. This responsibility also applies to all manufactures using such packaging;
- (h) **"Food-stuffs"** mean ready to eat food products, fast food, processed or cooked food in liquid, powder, solid or semi-solid form;
- (i) **"Manufacturer"** means any producer who manufactures plastic carry bags, multilayered packaging, pouches and the like or uses such materials in packaging of a product;

- (j) **"Municipal authority"** means Municipal Corporation, Municipality, Nagar Palika, Nagar Nigam, Nagar Panchayat, Municipal Council including notified area committee (NAC) or any other local body constituted under the relevant statutes and, where the management and handling of municipal solid waste is entrusted to such agency;
- (k) **"Multilayered plastics"** mean any material having a combination of more than one layer of packaging material such as paper, paper board, polymeric materials, metalised layers or aluminium foil, either in the form of a laminate or co-extruded structure;
- (l) **"Plastic"** means material which contains as an essential ingredient a high polymer and which at some stage in its processing into finished products can be shaped by flow;
- (m) **"Plastic waste"** means any plastic product such as carry bags, pouches or multilayered packaging, which have been discarded after use or after their intended life is over;
- (n) **"Registration"** means registration of units manufacturing or recycling carry bags made of virgin or recycled plastics with the concerned State Pollution Control Board or Pollution Control Committee, as the case may be;
- (o) **"Virgin plastic"** means plastic material which has not been subjected to use earlier and has also not been blended with scrap or waste;
- (p) **"Waste management"** means the scientific reduction, re-use, recovery, recycling, composting or disposal of plastic waste;
- (q) **"Waste pickers"** mean individuals or groups of individuals engaged in the collection of plastic waste.

#### 4. Prescribed Authority.-

The prescribed Authority means the Authority-

- (a) for enforcement of the provisions of these rules related to authorization, manufacture, recycling and disposal shall be State Pollution Control Board and Pollution Control Committee in respect of Union territory;

- (b) for enforcement of the provisions of these rules relating to the use, collection, segregation, transportation and disposal of post consumer plastic waste shall be the concerned municipal authority.

**5. Conditions.-** During the course of manufacture, stocking, distribution, sale and use of carry bags and sachets, the following conditions shall be fulfilled, namely:-

- (a) carry bags shall either be white or made using only those pigments and colourants which are in conformity with Indian Standard : IS 9833:1981 titled as List of pigments and colourants for use in plastics in contact with foodstuffs, pharmaceuticals and drinking water, as amended from time to time;
- (b) no person shall use carry bags made of recycled plastics or compostable plastics for storing, carrying, dispensing or packaging food stuffs;
- (c) no person shall manufacture, stock, distribute or sell any carry bag made of virgin or recycled or compostable plastic, which is less than 40 microns in thickness;
- (d) sachets using plastic material shall not be used for storing, packing or selling - gutkha, tobacco and pan masala;
- (e) recycled carry bags shall conform to the Indian Standard: IS 14534:1998 titled as Guidelines for Recycling of Plastics, as amended from time to time;
- (f) carry bags made from compostable plastics shall conform to the Indian Standard: IS/ISO 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time.

**6. Plastic Waste Management.-**

The plastic waste management shall be as under:-

- (a) recycling, recovery or disposal of plastic waste shall be carried out as per the rules, regulations and standards stipulated by the Central Government from time to time;
- (b) recycling of plastics shall be carried out in accordance with the Indian Standard : IS 14534:1998 titled as Guidelines for Recycling of Plastics, as amended from time to time;
- (c) the municipal authority shall be responsible for setting up, operationalisation and co-ordination of the waste management system and for performing the associated functions, namely:- (i) to ensure safe collection, storage, segregation, transportation, processing and disposal of plastic waste; (ii) to ensure that no damage is caused to

the environment during this process; (iii) to ensure setting up of collection centres for plastic waste involving manufacturers; (iv) to ensure its channelisation to recyclers; (v) to create awareness among all stakeholders about their responsibilities; (vi) to engage agencies or groups working in waste management including waste pickers, and (vii) to ensure that open burning of plastic waste is not permitted;

(d) for setting up plastic waste collection centres, the municipal authority may ask the manufacturers, either collectively or individually in line with the principle of Extended Producer's Responsibility (EPR) to provide the required finance to establish such collection centre;

(e) recyclers shall ensure that recycling facilities are in accordance with the Indian Standard: IS 14534:1998 titled as Guidelines for Recycling of Plastics and in compliance with the rules under the Environment (Protection) Act, 1986, as amended from time to time;

(f) the concerned municipal authority shall ensure that the residues generated from recycling processes are disposed of in compliance with Schedule II (Management of Municipal Solid Wastes) and Schedule III (Specifications for Landfill Sites) of the Municipal Solid Wastes (Management and Handling) Rules, 2000 made under the Environment (Protection) Act, 1986, as amended from time to time;

(g) the municipal authority shall incorporate the said rules in the Municipal bye laws of all the Urban Local Bodies;

(h) the municipal authority shall encourage the use of plastic waste by adopting suitable technology such as in road construction, co-incineration etc. The municipal authority or the operator intending to use such technology shall ensure the compliance with the prescribed standards including pollution norms prescribed by the competent authority in this regard.

**7. Protocols for Compostable Plastic Materials.** - Determination of the degree of degradability and degree of disintegration of plastic material shall be as per the protocols of the Indian Standards listed in the Annexure to these rules.

#### **8. Marking or Labelling.-**

(a) each plastic carry bag and multilayered packaging shall have the following information printed in English or in local language, namely:-

(i) name, registration number of the manufacturer and thickness in case of carry bag;

- (ii) name and registration number of the manufacturer in case of multilayered packaging.
- (b) each recycled carry bag shall bear a label or a mark “recycled” as shown below and shall conform to the Indian Standard: IS 14534: 1998 titled as Guidelines for Recycling of Plastics, as amended from time to time;



NOTE: PET-Polyethylene terephthalate, HDPE-High density polyethylene, V-Vinyl (PVC), LDPE- Low density polyethylene, PP-Polypropylene, PS-Polystyrene and Other means all other resins and multi-materials like ABS (Acrylonitrile butadiene styrene), PPO (Polyphenylene oxide), PC (Polycarbonate), PBT (Polybutylene terephthalate) etc.

- (c) each carry bag made from compostable plastics shall bear a label “compostable” and shall conform to the Indian Standard : IS/ISO 17088:2008 titled as Specifications for Compostable Plastics;
- (d) retailers shall ensure that plastic carry bags and multilayered packaging sold by them are properly labelled, as per stipulations under these rules.

#### 9. Registration of Manufacturers and Recyclers.-

- (a) any person manufacturing or proposing to manufacture carry bags and multilayered plastics shall apply to the State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) of the Union territory concerned for the grant of registration or for the renewal of registration for the manufacturing unit using Form 1 appended to these rules;
- (b) any person recycling or proposing to recycle carry bags or multilayered plastics or any plastic waste shall apply to the SPCB or PCC for grant of registration or renewal of registration for the recycling unit using Form 2 appended to these rules;
- (c) no person shall manufacture carry bags or recycle plastic bags or multilayered plastics unless without obtaining the registration certificate from the SPCB or PCC, as the case may be, prior to the commencement of production;

- (d) the SPCB and PCC shall not issue or renew a registration for manufacturing or recycling units unless the unit possesses a valid consent under the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) and certificate of registration issued by the District Industries Centre or any other government agency authorised in this regard;
- (e) every State Pollution Control Board or Pollution Control Committee shall take a decision on the grant of registration within ninety days of receipt of an application that is complete in all respects;
- (f) the registration granted under this rule shall be valid for a period of three years, unless revoked, suspended or cancelled; and registration shall not be revoked, suspended or cancelled without providing the manufacturer an opportunity for a hearing;
- (g) every application for renewal of registration shall be made at least ninety days before the expiry of the validity of the registration certificate.

#### 10. Explicit pricing of carry bags.-

No carry bags shall be made available free of cost by retailers to consumers. The concerned municipal authority may by notification determine the minimum price for carry bags depending upon their quality and size which covers their material and waste management costs in order to encourage their re-use so as to minimize plastic waste generation.

#### 11. State Level Advisory Body.-

- (1) There shall be a State Level Advisory Body to monitor the implementation of these Rules.
- (2) The State Level Advisory Body shall consist of the following persons, namely:-
  - (a) the Secretary, Department of Urban Development - Chairman
  - (b) one expert from State Department of Environment - Member
  - (c) one expert from State Pollution Control Board or Pollution Control Committee - Member
  - (d) one expert from Urban Local Body - Member
  - (e) one expert from Non-Governmental Organisation - Member
  - (f) one expert from the field of Industry - Member and
  - (g) one expert from the field of academic institution - Member
- (3) The State Level Advisory Body shall meet at least once in a year and may invite experts, if it considers necessary.

**12. Annual Reports.-**

- (1) each State Pollution Control Board or Pollution Control Committee shall prepare and submit the annual report to the Central Pollution Control Board on the implementation of these rules by the 30<sup>th</sup> day of September of each year;
- (2) the Central Pollution Control Board shall prepare a consolidated annual report on the use and management of plastic waste and forward it to the central government along with its recommendations before the 30<sup>th</sup> day of December each year.

[F. No. 17-2/2001-HSMD]

RAJIV GAUBA, Jt. Secy.

**ANNEXURE***[See rule 7]*

1.	IS/ISO 14851: 1999 Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium-Method by measuring the oxygen demand in a closed Respirometer
2.	IS/ISO 14852: 1999 Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium-Method by analysis of evolved carbon dioxide
3.	IS/ISO 14853: 2005 Plastics- Determination of the ultimate anaerobic biodegradation of plastic materials in an aqueous system-Method by measurement of biogas production
4.	IS/ISO 14855-1: 2005 Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions-Method by analysis of evolved carbon dioxide (Part-1 General method)
5.	IS/ISO 14855-2: 2007 Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions-Method by analysis of evolved carbon dioxide (Part-2: Gravimetric measurement of carbon dioxide evolved in a laboratory- scale test )
6.	IS/ISO 15985: 2004 Plastics- Determination of the ultimate anaerobic biodegradation and disintegration under high-solids anaerobic digestion conditions- Methods by analysis of released biogas
7.	IS/ISO 16929: 2002 Plastics- Determination of degree of disintegration of plastic materials under defined composting conditions in a pilot - scale test
8.	IS/ISO 17556: 2003 Plastics- Determination of ultimate aerobic biodegradability in soil by measuring the oxygen demand in a Respirometer or the amount of carbon dioxide evolved
9.	IS/ISO 20200:2004 Plastics- Determination of degree of disintegration of plastic materials under simulated composting conditions in a laboratory - scale test



**FORM - I**

[See rules 9]

**APPLICATION FOR REGISTRATION OF A UNIT FOR THE MANUFACTURE OF  
PLASTIC CARRY BAGS AND MULTILAYERED PLASTICS**

From: .....

.....

.....(Name and full address of the occupier)

To

The Member Secretary,

..... Pollution Control Board/Pollution Control Committee

.....

.....

Sir,

I/We hereby apply for registration under rule 9 of the Plastic Waste (Management and Handling) Rules, 2011

<b>PART - A GENERAL</b>		
1.(a)	Name and location of the unit	
(b)	Address of the unit	
(c)	Registration required for manufacturing of: (i) Carry bags: (ii) Multilayered plastics	
(d)	Manufacturing capacity	
(e)	In case of renewal, previous registration number and date of registration	
2.	Is the unit registered with the DIC/DCSSI of the State Government/Union territory? If yes, attach a copy.	
3.(a)	Total capital invested on the project	
(b)	Year of commencement of production	
4. (a)	List and quantum of products and by-products	
(b)	List and quantum of raw materials used	
5.	Furnish a flow diagram of manufacturing process showing input and output in terms of products and waste generated including for captive power generation and water.	

6.	Minimum sizes and thickness of carry bags to be manufactured	
7.	Status of compliance with these rules	
<b>PART – B</b>		
<b>PERTAINING TO LIQUID EFFLUENT AND GASEOUS EMISSIONS</b>		
8.	(a) Does the unit have a valid consent under the Water (Prevention and control of Pollution) Act, 1974 (6 of 1974)? If yes, attach a copy	
	(b) Does the unit have a valid consent under the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981)? If yes, attach a copy	
<b>PART – C</b>		
<b>PERTAINING TO WASTE</b>		
9.	Solid Wastes: (a) Total quantum of waste generated (b) Mode of storage within the plant (c) Provision made for disposal of wastes	
Name and Signature		
Designation		
Date :		
Place :		

**FORM - 2***[see rule 9]*

**APPLICATION FORM FOR REGISTRATION OF FACILITIES POSSESSING  
ENVIRONMENTALLY SOUND MANAGEMENT PRACTICES FOR RECYCLING  
PLASTIC WASTE**

1.	Name and Address of the unit	
2.	Contact person with designation, Tel./Fax /email	
3.	Date Commissioned	

4.	No. of workers (including contract labour)			
5.	Consents Validity	a. Water (Prevention & Control of Pollution) Act, 1974; Valid up to _____  b. Air (Prevention & Control of Pollution) Act, 1981; Valid up to _____		
6.	Authorization validity			
7.	Manufacturing Process	Please attach a flow diagram of the manufacturing process flow diagram for each product.		
8.	Products and installed capacity of production (MTA)	Products		Installed capacity
9.	Products manufactured during the last three years (as applicable)	Year	Product	Quantity
10.	Raw material consumed during the last three years (as applicable)	Year	Product	Quantity
11.	Water consumption	Industrial _____ m <sup>3</sup> /day Domestic _____ m <sup>3</sup> /day		
	Date until which water cess has been paid (if applicable)			
	Waste water generation as per consent _____ m <sup>3</sup> /day	Actual waste water generated (average of last 3 months) Industrial _____ m <sup>3</sup> /day Domestic _____ m <sup>3</sup> /day		
	Waste water treatment (provide flow diagram of the treatment scheme)	Industrial _____ Domestic _____		
	Waste water discharge	Quantity _____ m <sup>3</sup> /day Location _____ Analysis of treated waste water for pH, BOD, COD, SS, O&G, any other parameter stipulated by SPCB/PCC (attach details)		
12.	Air Pollution Control			
	a. Provide a flow diagram for emission control system(s) installed for each processing unit, utilities etc.			

	b. Details for facilities provided for control of fugitive emissions due to material handling, process, utilities etc.				
	c. Fuel consumption	Fuel	Qty per day/month		
		(i)			
		(ii)			
	d. Stack emission monitoring	Stack attached to	Emission (SPM, SO <sub>2</sub> , NO <sub>x</sub> , etc.) mg/Nm <sup>3</sup>		
		(i)			
		(ii)			
	e. Ambient air quality	Location Results µg/m <sup>3</sup>	Parameters SPM, SO <sub>2</sub> , NO <sub>x</sub> , etc.) µg/m <sup>3</sup>		
		(i)			
		(ii)			
13.	Waste Management:	S No	Type	Category	Qty.
	a. Waste generation in processing plastic-waste	(i)			
		(ii)			
		(iii)			
	b. Waste Collection and transportation (attach details)				
	c. Waste Disposal details	S No	Type	Category	Qty
		(i)			
		(ii)			
	d. Provide details of the disposal facility, whether the facility is authorized by SPCB/SPCC				
	e. Please attach analysis report of characterization of waste generated (including leachate test if applicable)				
14.	Details of plastic waste proposed to be acquired through sale, auction, contract or import, as the case may be, for use as raw material	(i) Name (ii) Quantity required /year			
15.	Occupational safety and health aspects	Please provide details of facilities			
16.	Remarks:				
	Whether the unit has adequate pollution control systems / equipment to meet the standards of emission / effluent.	If Yes, please furnish details			

	Whether unit is in compliance with conditions laid down in the said rules.	Yes/No
	Whether conditions exist or are likely to exist of the material being handled / processed posing adverse immediate or delayed impacts on the environment.	Yes/No
	Whether conditions exist (or are likely to exist) of the material being handled / processed by any means capable of yielding another material (e.g. leachate) which may possess eco-toxicity.	Yes/No
17.	Any other relevant information	
18.	List of enclosures as per rule	

Name and Signature

Designation

Date :

Place :