



**CERTIFICATE TO MANUFACTURER FOR MARKETING AND SELLING
OF COMPOSTABLE CARRY BAGS/PRODUCTS**

Certificate No.-B-17011/7/PWM(COMP)/2020(APP)

Dated: 04.05.2020

To,

**M/s. Aashirwad Poly Print,
1, Vakil Industrial Estate, Walbhat Road,
Goregaon East, Mumbai,
Maharashtra-400063**

With reference to the application no. Nil, dated 11.02.2020, this is to certify that **M/s. Aashirwad Poly Print**, plant located at Plot No. H-8, OIIC Industrial Area, Ringanwada, Daman-396210 is fulfilling the criteria as per revised Standard Operating Procedure (SOP) for issuing certificate as per the provisions '4(h)' & '11(c)' of Plastic Waste Management Rules, 2018, for marketing and selling of compostable carry bags/products such as in Indian Market as '**MANUFACTURER**'.

Central Pollution Control Board, hereby, grant the permission to **M/s. Aashirwad Poly Print**, plant located at Plot No. H-8, OIIC Industrial Area, Ringanwada, Daman-396210 as '**MANUFACTURER**' for Marketing and Selling of compostable carrybags/products in Indian Market.

**THE CERTIFICATE SHALL BE VALID FOR THE PERIOD OF THREE (3) YEARS
FROM THE DATE OF ISSUE OF LETTER
(i.e. from 04.05.2020 to 04.05.2023).**

- The Certified Manufacturer, **M/s. Aashirwad Poly Print**, shall comply with the provisions of '**4(h)**' & '**11(c)**' of the PWM Rules, 2018, notified under the Environmental (Protection) Act, 1986.
- An application for the renewal of a certificate shall be made at least **90 days** prior to expiry of validity, along with the test report of the product (not more than one-year-old from the date of renewal application) as per Indian Standard IS/ISO:17088 (as amended time to time) from CIPET or any other laboratory, recognized by CPCB for this purpose.

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'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

Parivesh Bhawan, East Arjun Nagar, Delhi-110032

दूरभाष/Tel : 43102030, 22305792, वेबसाइट/Website : www.cpcb.nic.in

- iii. The certified Manufacturer, **M/s. Aashirwad Poly Print**, shall comply with conditions for compliance as per any Guidelines issued from time to time by the Ministry of Environment, Forest & Climate Change or Central Pollution Control Board.
- iv. If the certified Manufacturer, **M/s. Aashirwad Poly Print**, is found non-complying with the provisions of the PWM Rules, 2018, the Certificate shall stand cancelled.
- v. The Manufacture **M/s. Aashirwad Poly Print**, shall provide quarterly report giving details of raw material procurement and product sale to CPCB.
- vi. Each carrybag made from compostable material or plastic shall bear a label "**COMPOSTABLE**" IS/ISO:17088 titled as Specifications for "Compostable Plastic" in **English & regional language**. Each carrybag shall also have printed **M/s. Aashirwad Poly Print, code:APP** and Certificate Number of "**Manufacturer**".
- vii. **This certificate is issued with the condition that the manufacturer shall manufacture/sell the compostable carrybags/products only after they obtain a valid Registration for manufacturing of Compostable carrybags/products from concerned SPCB/PCC. This Registration should be submitted to CPCB upon its receipt from concerned SPCB/PCC.**

AUTHORIZED SIGNATORY
(with designation and seal)

Copy to:

✓ **Member Secretary,**
Daman Diu & DNH Pollution Control
Committee,
Fort Area, Court Compound,
Moti Daman, Daman-396220

: With a request to confirm the detail provided by the applicant in Form -A (enclosed) within 30 days of receipt of the certificate.


(Divya Sinha)
Scientist "E"
नियंत्रण बोर्ड
Central Pollution Control Board
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
Ministry of Env't, Forest & Climate Change, Govt. of India
परिवेश भवन, पूर्वी अर्जुन नगर
Parivesh Bhawan, East Arjun Nagar
दिल्ली/Delhi-110032

सिपेट : इंस्टिट्यूट ऑफ प्लास्टिक्स

(रसायन एवं उर्वरक मंत्रालय, भारत सरकार)

गिण्टी, चेन्नै - 600 032.

फोन : 91-44-2225 4701-6 फ़ैक्स : 91-44-222

ई-मेल : chennai@cipet.gov.in वेबसाइट : www.cipet.gov.in



CIPET सिपेट
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CIPET : INSTITUTE OF PLASTICS TECHNOLOGY

(Ministry of Chemicals & Fertilizers, Govt. of India)

Guindy, Chennai - 600 032.

Tel : 91-44-2225 4701-6 Fax : 91 - 44 - 22254707

E-mail : chennai@cipet.gov.in Website : www.cipet.gov.in

परीक्षण रिपोर्ट
TEST REPORT

को जारी / Issued to :

M/s. Aashirwad Poly Print,

1, Vakil Industrial Estate,

Walbhat Road, Goregaon (East),

Mumbai - 400 063.

क्र.सं / SI. No. 23542

रिपोर्ट सं / REPORT NO. : 60615

Pages.....Nos. Part A,B,C & D

दिनांक / Date :

05.02.2020

संदर्भ / Ref. : Dated: 16.05.2019

परीक्षण मानक स्तर के अनुसार परीक्षण रिपोर्ट / TEST REPORT AS PER TEST STANDARD : Refer Part C

भाग - क / PART - A

प्रस्तुत सैपिल का विवरण / PARTICULARS OF SAMPLE SUBMITTED

- अ) सैपिल का नाम / a) Name of the Sample : Biodegradable & Compostable Carry Bags
-as stated by the party
- आ) सैपिल प्राप्त होने की तारीख / b) Date of Receipt of sample : 20.05.2019
- इ) ग्रेड/प्रकार/आकार/वर्ग / c) Grade / variety / type / size / class : Not applicable
- ई) घोषित मूल्य / d) Declared value, If any : Not applicable
- उ) कोड सं. / e) Code No. : Not applicable
- ऊ) बैच सं. एवं निर्माण तारीख / f) Batch No. and Date of Manufacture: Not applicable
- ऋ) मात्रा / g) Quantity : 02 Kg
- ए) पैकिंग की रीति / h) Mode of Packing : Packed in carton pack
- ऐ) मोहर बंद या नहीं / i) Sealed or not : Not Sealed
- ओ) कोई अन्य सूचना / j) Any other information : --

भाग - ख / PART - B

अनुपूरक सूचनाएँ / SUPPLEMENTARY INFORMATIONS

- अ) सैपिलिंग कार्यवाहियों हेतु संदर्भ / a) Reference to sampling procedure : Sampling not done by this lab
- आ) माप करने हेतु लिए गए सहायक दस्तावेज एवं प्राप्त परिणाम
b) Supporting documents for the measurement taken and result derived : As given in Part C
- इ) संबंधित कार्य अनुदेशों में निर्धारित के अनुसार परीक्षण रीति से कोई परिवर्तन
c) Deviation from the test method as prescribed in relevant work instructions, if any : No deviation from the standard

सिपेट : इंस्टिट्यूट ऑफ प्लास्टिक्स

(रसायन एवं उर्वरक मंत्रालय, भारत सरकार)

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परीक्षण रिपोर्ट
TEST REPORT

रिपोर्ट सं / REPORT NO. : 60615

क्र.सं / Sl. No. 23642

दिनांक / Date : 05.02.2020

भाग - ग / PART - C

परीक्षण परिणाम / TEST RESULTS

Test Duration: 20.05.2019 to 05.02.2020

Sl. No.	Property	Standard	Unit	Results obtained	Specified Requirements
1.	Material Identification by FTIR	--	--	Blend of Poly Lactic Acid (PLA) and Poly Butylene Adipate co-terephthalate (PBAT)	--
2.	Disintegration (Dry mass passing through 2mm sieve after 84 days)	ISO-17088 / IS-17088	%	92.7	Greater than 90
3.	Ultimate Aerobic Biodegradation (with reference to 100% degradation of positive reference)	ISO-17088 / IS-17088	%	90.11	Greater than 90
4.	Plant Growth study c) Rice % Seed emergence	ISO-17088 / IS-17088	%	92	Greater than 90
	d) Tomato % Seed Emergence		%	91	Greater than 90

(Contd...)



TEST RESULTS

Report No:

60615

Date:

05.02.2020

Sl. No.	Property	Standard	Unit	Results obtained	Specified Requirements (In India Maximum)*
5.	Heavy metals concentration	ISO-17088 / IS-17088	ppm		
	Arsenic (As)			0.063	20
	Copper (Cu)			1.596	500
	Nickel (Ni)			0.712	100
	Zinc (Zn)			2.896	2500
	Cobalt (Co)			0.238	--
	Chromium (Cr)			1.459	300
	Molybdenum (Mo)			0.408	--
	Mercury (Hg)			BDL (DL: 0.001)	10
	Cadmium (Cd)			0.018	20
	Lead (Pb)			0.214	500
	Selenium (Se)			0.009	--

Note: BDL – Below Detection Limit, DL – Detection Limit

*-Based on Municipal waste (Management and Handling) Rules, 1999 notified on 27th September, 1999 by Ministry of Environment and Forests, Government of India. Note that concentration of metals like cobalt, molybdenum and selenium is not mentioned in the notification.

PART - D

REMARKS - Nil

NOTE:

1. The results related only to the items tested as supplied by the party.
2. The test certificate shall not be reproduced in full except without the written approval of the laboratory.


AUTHORISED SIGNATORY



TR. NO. 60615

BIODEGRADABILITY TEST AS PER IS/ISO 17088

1. Sample detail: (as declared by the party): Compostable and Biodegradable carry bags

2. Material Identification by FTIR: Blend of Poly Lactic Acid (PLA) & Poly Butylene Adipate Co Terephthalate (PBAT)

3. Observation

(1) Conditions of reaction mixtures

Origin of compost: Livestock excrement, municipal and vegetable waste
Reaction Temperature : 58⁰C (± 2⁰C)
Dry Solid (%) : 54.5
Volatile content (%) : 14.2
CO₂ evolved during first 10 days in blank vessels: 63.4 mg/g of volatile content of compost
Test duration (day) : 123 days
Reference material : Cellulose
Volume of reaction vessel : 3000 ml

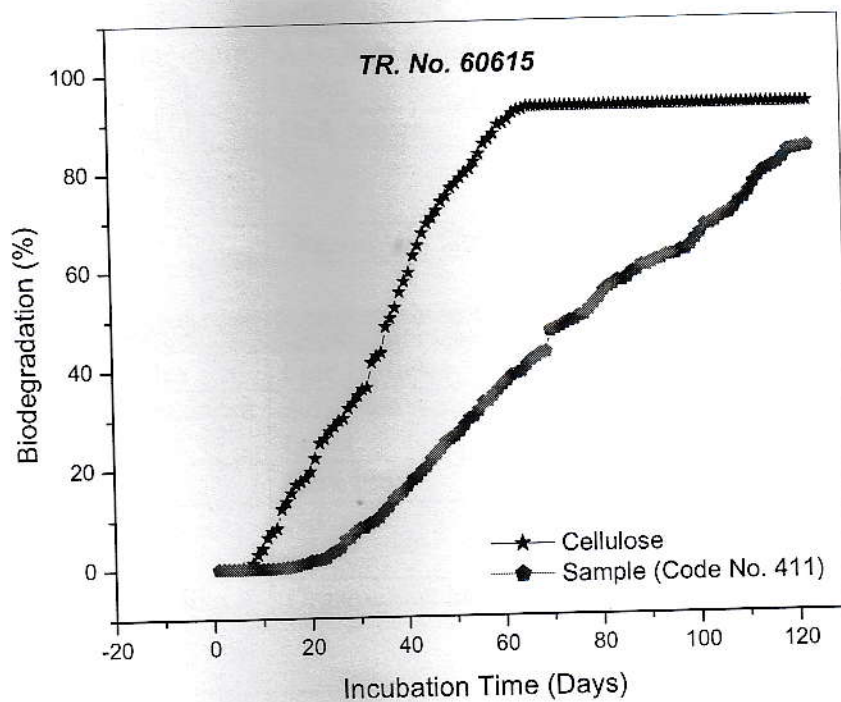
(2) pH of test medium

S.No.	Composting Vessel (Material with test medium)	pH (before)	pH (after)
1	Sample 1	7.7	7.3
2	Sample 2	7.5	7.2
3	Sample 3	7.6	7.3
4	Blank	7.5	7.5
5	Cellulose 1	7.6	7.3
6	Cellulose 2	7.5	7.4
7	Cellulose 3	7.6	7.1
8	Negative	7.5	7.2

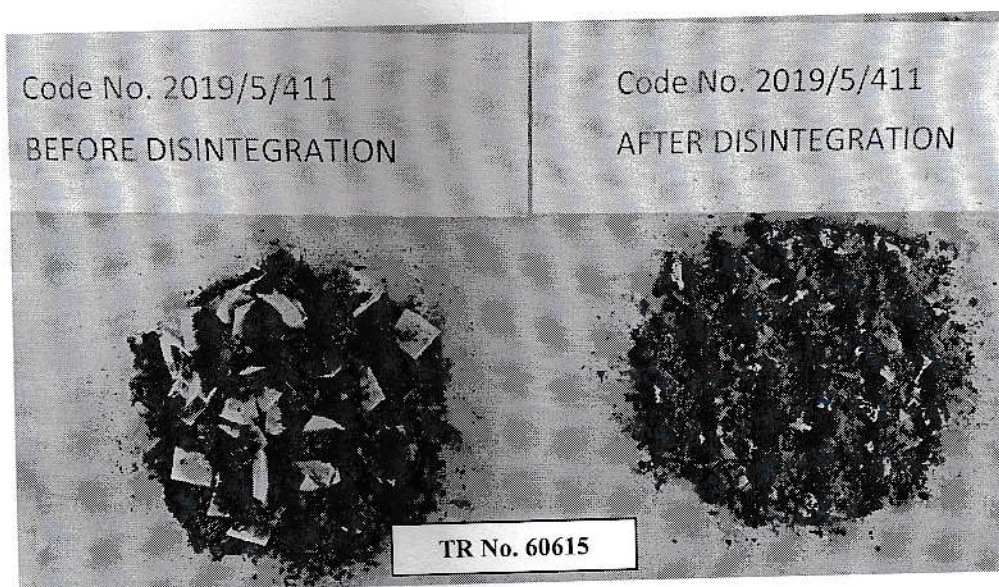




4. Result: Percentage biodegradation relative to positive reference
Sample : 90.11% at the end of 123 days
Positive reference cellulose : ~ 100 %



5. Disintegration- After 12 weeks





6. Visual Observation

Description	Week 1/2	Week 3/4	Week 5/6	Week 7/8
Structure	Fine Particles	Fine Particles	Fine Particles	Fine Particles
Moisture	Adequate moisture Level	Adequate moisture Level	Adequate moisture Level	Adequate moisture Level
Colour	Dark brown	Dark brown	Dark brown	Dark brown
Fungal Development	Nil	Nil	Nil	Nil
Smell	Organic/dirt like	Organic/dirt like	Organic/dirt like	Organic/dirt like

Description	Week 9/10	Week 11/12	Week 13/14	Week 15/16/17
Structure	Fine Particles	Fine Particles	Fine Particles	Fine Particles
Moisture	Adequate moisture Level	Adequate moisture Level	Adequate moisture Level	Adequate moisture Level
Colour	Dark brown	Dark brown	Dark brown	Dark brown
Fungal Development	Nil	Nil	Nil	Nil
Smell	Organic/dirt like	Organic/dirt like	Organic/dirt like	Organic/dirt like

7. Plant Growth Study

Paddy growth in sample degraded compost



Paddy growth in control compost



Tomato growth in sample degraded compost



Tomato growth in control compost



[Handwritten Signature]
 Authorized Signatory