



# Rajasthan State Pollution Control Board

Headquarter, 4, Institutional Area, JhalanaDoongri, Jaipur-302004

Phone :0141-27168049,2716800 e-mail : [member-secretary@rpcb.nic.in](mailto:member-secretary@rpcb.nic.in)

HelpLineNo. : 0141-2716877



F.05 (Gen-83)RPCB/Tex/

Date

## Office Order

### Guidelines for estimation of waste water generation and production from small scale textile industries located in clusters of Pali, Balotra, Jodhpur and Jaipur

Textile industries of Rajasthan are mainly located in Jaipur, Bhilwara, Pali, Jodhpur and Barmer. Around 2500 industries are presently operating in these clusters which are engaged in spinning, preprocessing, dyeing and printing of cloth. The State Board has issued thumb rule vide office order dated 16/06/2020 to estimate trade effluent generation by textile units located in clusters of Pali, Balotra, Jodhpur and Jaipur.

The State Board has received various representations from industrial association requesting reviewing of thumb rule. Besides, the prevailing thumb rule requires updation as effluent discharge is not linked with production capacity and other variations affecting the operations, water consumption and waste water generation.

As per the directions the present consumption of water and trade effluent generation was studied and guidelines for estimation of waste water generation and production from small scale textile industries were developed.

In supersession to all earlier office orders related to this matter, the State Board hereby issues the "*Guidelines for estimation of waste water generation and production from small scale textile industries located in clusters of Pali, Balotra, Jodhpur and Jaipur*" annexed herewith.

All estimation of water consumption and trade effluent generation for small scale textile industries located in clusters of Pali, Balotra, Jodhpur and Jaipur shall be made based on this guideline. It will become effective on consent applications received from date of issuance of this office order.

This bears approval of the competent authority.

Encl : Guidelines

(Vijai N.)

Member Secretary

Date 31.07.2023

No. F.05 (Gen-83)RPCB/Tex/1219-1278

Copy to following for information and necessary action

1. P.S. to Chairperson, RSPCB, Jaipur.
2. Sr. P.A. to Member Secretary, RSPCB, Jaipur.
3. District Collector, Jaipur.
4. District Collector & Chairman, District Monitoring Committee, Jodhpur.
5. District Collector & Chairman, District Monitoring Committee Pali.
6. District Collector & Chairman, District Monitoring Committee Barmer.
7. Chief Environmental Engineer, RSPCB, Jaipur.
8. Chief Scientific Officer, RSPCB, Jaipur.
9. Group In-charge HSW/ Mines,SCMG & DS/ HBC/ PDF & CD /Textile/ Liquid Waste/ OGM/ Planning/PCV & VTR/ MUID/ CPP/ / Project, Training & IEC/ ECC, Plastic/ BMW/MSW / E-Waste /Battery, RSPCB, Jaipur.
10. Regional Officer, Regional Office, RSPCB, Alwar/ Balotra/ Banswara/ Bhartpur/ Bhilwara / Bhiwadi/Bikaner/ Bundi/ Chittorgarh/ Hanumangarh/ Jaipur (North)/



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Jaipur (South)/ Jaisalmer / Jhalawar/ Jhunjhunu /Jodhpur/ Kishangarh/ Kota/ Nagaur/  
Pali/ Rajsamand/ Sikar/ Sirohi/ Sawai Madhopur/ Udaipur.

11. Chairman, Balotra Water Pollution Control Treatment & Research Foundation Trust, Balotra.
12. Chairman, Jaipur Integrated Texcraft Park Pvt. Ltd., Bagru.
13. Chairman, Balotra Water Pollution Control Treatment & Research Foundation Trust, (CETP Bithuja), Balotra.
14. Chairman, Jasol Water Pollution Control Treatment & Research Foundation Trust, Jasol.
15. Managing Trustee, Jodhpur Pradushan Niwaran Trust, Jodhpur.
16. Chairman, CETP Foundation, Pali.
17. Director, Next Gen Textile Park, Pali .
18. Chairman, Sanganer Enviro Project Development, Sanganer .
19. Group In-charge (IT), with request to upload on board website.

  
Member Secretary o/c

Annexure 1

**Guidelines for estimation of waste water generation and production from small scale textile industries**

**A. Estimation of water consumption**

**a) Pre Treatment Process (including washing of cloth)**

S.No	Type of cloth	Pre Treatment Process/steps				Total (Liter/kg of cloth)
		Desizing include Desize washing (liters per kg of cloth)	Mercerizing (liters per kg of cloth)	Kiering (liters per kg of cloth)	Scouring (liters per kg of cloth)	
1	Cotton	6.0	16.0	2.5		24.5
2	Polyester (Synthetic)	-	-	-	6.5	6.5
3	Blended	6.0	-	-	6.5	12.5

**b) Dyeing (including washing of cloth)**

S.No.	Type of cloth	Water consumption (liters/kg)
1	Cotton	16.0
2	Polyester (Synthetic)	15.0
3	Blended	31.0
4	Knitted/hosiery	10.0

**c) Printing (including washing of cloth)**

S.No.	Type of cloth	Cloth Washing Waste Water (liters/sq. meter)	Machine Operations Waste Water (liters per sq. meter)	Total water consumption (liters/sq. meter)
1	Cotton	2.0	X	(2.0 + X)
2	Polyester (Synthetic)	1.5	X	(1.5 + X)
3	Blended	2.0	X	(2.0 + X)

Where,

X = 4 liter/sq. meter for printing table,

X = 0.5 liter/sq. meter for Flat Bed Printing Machine,

X = 0.25 liter/sq. meter for Rotary Printing Machine

\* Wherever the proponent is engaged in pigment printing, the cloth washing component may not be counted.

*Key*

**B. Estimation of waste water generation**

**a) Pre Treatment Process (including washing of cloth)**

S.No	Type of cloth	Pre Treatment Process/steps				Total (Liter/kg of cloth)
		Desizing include Desize washing (liters per kg of cloth)	Mercerizing (liters per kg of cloth)	Kiering (liters per kg of cloth)	Scouring (liters per kg of cloth)	
1	Cotton	4.5	15.0	2.0		21.5
2	Polyester (Synthetic)	-	-	-	6.0	6.0
3	Blended	4.5	-	-	6.0	10.5

**b) Dyeing (including washing of cloth)**

S.No.	Type of cloth	Waste water generation (liters/kg)
1	Cotton	15.0
2	Polyester (Synthetic)	14.0
3	Blended	29.0
4	Knitted/hosiery	9.0

**c) Printing (including washing of cloth)**

S.No.	Type of cloth	Cloth Washing Waste Water (liters/sq. meter)	Machine Operations Waste Water (liters per sq. meter)	Total waste water generation (liters/sq. meter)
1	Cotton	1.8	X	(1.8 + X)
2	Polyester (Synthetic)	1.4	X	(1.4 + X)
3	Blended	1.8	X	(1.8 + X)

Where,

X = 4 liter/sq. meter for printing table,

X = 0.5 liter/sq. meter for Flat Bed Printing Machine,

X = 0.25 liter/sq. meter for Rotary Printing Machine

\*wherever the proponent is engaged in pigment printing, the cloth washing component may not be counted.

*Blue*

C. Process wise machine with production capacities

a) Pre Treatment Process (including washing of cloth)

S.No	Name of Machine	Production capacity (Kg/day)	Effluent generation (liters per kg)	Effluent generation per day (KLD)
1	Desizing Padding	2100 kg	4.5	9.5
2	Mercerizing Machine	2100 kg	15.0	31.5
3	Kier	2100 kg	2.0	4.2
4	J.T.10	2000 kg (02 batch of 1000 kg each)	5.8	11.6

b) Dyeing Process (including washing of cloth)

S.No	Name of Machine	Capacity of machine (kg)	No. of batch in a day (12 hr operation) Kg/day	Production capacity per day	Effluent generation (liters per kg)	Effluent generation (KL per batch)	Effluent generation per day (KLD)
1	Jigger (up to 400 kg)	X	2	2X	15.0	15X/1000	30X/1000
2	Jigger (More than 400 kg)	X	1	X	15.0	15X/1000	15X/1000
3	Jet Dyeing Machine (up to 400 kg)	X	6	6X	14.0	14X/1000	84X/1000
4	Jet Dyeing Machine (more than 400 kg)	X	5	5X	14.0	14X/1000	70X/1000
5	Winch	X	2	2X	9.0	9X/1000	18X/1000
6	Soft Flow	X	2	2X	14.0	14X/1000	28X/1000

\*Industry shall submit list of machinery with capacity (in kg) with consent application.

*Buy*

c) Printing (including washing of cloth)

S.No.	Type of cloth	Machinery	Production per day (sq. meters of cloth/12 hour)	Effluent generation per day (KLD)
1	Cotton	Printing Table	250	1.45
		Flat Bed Printing Machine	7000	16.1
		Rotary	20000	41.0
2	Polyester (Synthetic)	Printing Table	250	1.35
		Flat Bed Printing Machine	7000	13.3
		Rotary	20000	33.0
3	Blended	Printing Table	250	1.45
		Flat Bed Printing Machine	7000	16.1
		Rotary	20000	41.0

Note:

- The study has been carried out assuming 12 hours operation in a day.
- Primarily water consumption and waste water generation will be based on production of cloth (section A and section B).
- The total production as well as waste water generation be co-related with machinery installed (section C).
- The washing shall be considered as an integral part of the process i.e. pre-processing or dyeing or printing and washing be allowed to be carried out within the factory premises only, where the said operations are held individually or in combination.
- In case unit's submitted data are not in conformation with the guideline, in such cases, the industry may be asked to support its claim with technical details and after due examination on case basis the decision on such claim may be taken by the State Board.
- At time of renewal /fresh consent the examination shall be based on this guideline.
- Consent will be issued in kg of cloth for pre-processing and dyeing whereas for printing unit it will be in sq. meters.

  
Member Secretary