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TEXTILE FABRIC
PRINTING
AP-42 Section 4.11
Reference Number
6

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OPERATIONS ANALYSIS DIVISION

MEMORANDUM

March 12, 1981

TO: Textile Fabric Printing AP-42 File
FROM: S. B. York, III
SUBJECT: Calculation of terry towel printing emission factor

<u>Terry Towel Printer</u>	<u>Annual Production (thousand dozen)</u>	<u>Annual Organic Solvent Consumption (thousand pounds)</u>	<u>Pounds Organic Solvent per dozen</u>	<u>Weight</u>	<u>Weighted Emission Factor</u>
Fieldcrest	892	201*	.23	.78	.18
Burlington	246	231.2	.94	.22	.21
					<u>.39 lb. organic solvent dozen towels (.18 kg organic solvent/doz.)</u>

* Calculation of Fieldcrest organic solvent consumption attached.

Calculation of Fieldcrest Annual Organic Solvent Consumption

	<u>Production (dozen)</u>	<u>% of total (weight)</u>	<u>Wet pickup (lb. print paste/ lb. fabric)</u>	<u>Weighted avg. wet pickup</u>
Bath towels	298,000	.33	.25	.08
Hand towels	241,000	.27	.22	.06
Wash cloths	339,000	.38	.15	.06
Beach towels	12,000	.01	.24	---
Miscellaneous	2,000	---		---
	<u>892,000</u>			<u>.20 lb of print paste/lb of fabric</u>

First quarter 1977 production of terry towels and washcloths (MQ-23X (77)-5) = 16,674 thousand dozen

Weight of 1977 production of toweling washcloth, and dishcloth fabric [MC-22T (Supplement)] = 81,812 thousand pounds

Average weight of terry towels and washcloths = 4.91 pounds/dozen

Convert Fieldcrest production to pounds:

$$892,000 \text{ doz.} \times 4.91 \text{ pounds/doz} = 4,380 \text{ thousand pounds}$$

Calculate print paste consumption:

$$4,380 \text{ thousand lbs fabric} \times \frac{.20 \text{ lb print paste}}{1 \text{ lb fabric}} = 876 \text{ thousand lbs of print paste}$$

Calculate organic solvent consumption:

$$876 \text{ thousand lbs of print paste} \times \frac{.23 \text{ lb organic solvent}}{1 \text{ lb of print paste}} = 201 \text{ thousand lbs of organic solvent}$$

Check against reported Varsol consumption of 60,814 gallons including that used for clean up (Letter of January 23, 1981 from T. E. Boyce to Stephen B. York, III).

Approximately 50% of Varsol goes to cleanup (Telecon of 4/24/80, Steve York to Tom Boyce):

$$30,407 \text{ gallons of Varsol in print paste} @ 6.7 \text{ lb/gallon} = 204 \text{ thousand lbs of organic solvent}$$