

1.0 INTRODUCTION

1.1 SCOPE

- 1.1.1 This specification contains the requirements for the purchase of card stock which is to be used in the manufacture of IBM Information Processing Cards.

1.2 AUTHORIZATION

- 1.2.1 This document is authorized by the Managers of Procurement, Product Engineering and Quality Assurance.

1.3 PRECEDENCE

- 1.3.1 IBM-IRD Purchase Orders will take precedence over this specification when there are conflicting requirements.

2.0 MATERIAL REQUIREMENTS

2.1 GENERAL REQUIREMENTS

- 2.1.1 Composition: The card stock shall be made from 100 percent chemical wood fiber and shall contain no ground wood.

- 2.1.2 Finish: The card stock shall have a smooth, uniform finish on both sides and shall be free of mottle.

- 2.1.3 Color: The color shall be as designated and shall conform to that of a standard sample supplied by IBM-IRD Quality Assurance. It shall be uniform on the two sides. The colors shall be natural, white, manila, red, salmon, yellow, green, blue and brown.

- 2.1.4 Workmanship: The card stock shall contain no abrasive materials and shall be free of fuzz, holes, wrinkles, brittle or translucent spots.

no new colors etc.
*yellow, salmon, red, green
blue, white*

IBM Quality Control

DETAILED REQUIREMENTS

2.2.1 Card Stock for General Purpose Cards: The physical and chemical properties of card stock for the manufacture of general purpose cards shall conform to the requirements listed in Table I.

TABLE I CHEMICAL AND PHYSICAL PROPERTIES
(Card Stock for General Purpose Cards)

PROPERTY	UNIT	VALUE		TEST METHOD
Basis Weight 24" x 36", 500 sheets	Pounds	99.0 ± 5.0		TAPPI T-410 IBM 9-01-0201
Thickness	Inch	.0070 ± .0004		TAPPI T-411 IBM 9-01-0202
Bursting Strength	Lbs./Sq. In.	Min.	Max.	TAPPI T-403 IBM 9-01-0203
		55		
Stiffness Machine Direction	Gram Centimeters	17.0		TAPPI T-489 IBM 9-01-0204
Cross Direction	Gram Centimeters	8.0		
Folding Endurance Machine Direction	MIT Double Folds	100		TAPPI T-423 (MIT Tester) IBM 9-01-0205
Cross Direction	MIT Double Folds	100		

(continued)

PROPERTY	UNIT	VALUE		TEST METHOD
		Min.	Max.	
Folding Endurance (After Aging) Machine Direction	Percent of Original	25		TAPPI T-453 IBM 9-01-0206
Tearing Resistance Machine Direction	Force in grams	125		TAPPI T-414 IBM 9-01-0207
Gross Direction	Force in grams	125		
Air Resistance	Seconds (Gurley)	*35 **35	140 160	TAPPI T-460 IBM 9-01-0208
Smoothness Felt Side	Sheffield Units		125	TAPPI RC-285 IBM 9-01-0209
Wire Side	Sheffield Units		125	
Ash Content	Percent		2.0 <i>before 3%</i>	TAPPI T-413 IBM 9-01-0211
Hydrogen Ion Concentration	pH	5.0		TAPPI T-435 IBM 9-01-0202

* Range for 95% of the test units
 ** Range for 100% of the test units

PROPERTY	UNIT	VALUE		TEST METHOD
		Min.	Max.	
Coefficient of Friction Static		30	45	IBM 9-01-0213
	Kinetic			
Grit (20% to 75% RH) Top to Bottom - Felt Top to Bottom - Wire End to End Diagonal	Inch	* Maximum 0.08	0.10	IBM 9-01-0214
	Inch	0.10	0.12	
	Inch	0.20	0.25	
	Inch	0.20	0.25	
Moisture Content	Percent of Original <i>CVG?</i>	Min.	Max.	TAPPE 1-412 IBM 9-01-0215
		4.5 <i>4.8</i>	6.5 <i>6.8</i>	
Expansion (20% to 75% RH) Machine Direction Cross Direction	Percent		0.25	IBM 9-01-0216
	Percent		0.70	
Contraction (75% to 20% RH) Machine Direction Cross Direction	Percent		0.25	
	Percent		0.70	
Permanent Shrinkage Machine Direction	Percent		0.08 <i>Proposed</i>	<i>not acc. to any mill spec</i> IBM 9-01-0216
Conductive Particles	Particles/100 lbs. of paper	<i>was 20 in 59 (or EM)</i>	10	IBM 9-01-0217

* Maximum for 95% of test units
 ** Maximum for 100% of test units

TABLE I (continued)

PROPERTY	UNIT	VALUE		TEST METHOD
		Min.	Max.	
Electrical Resistance	Megohms	40	200	IBM 9-01-0219
Resistance to Abrasion Felt Side	Mg loss/100 revolutions		50	IBM 9-01-0218
Wore Side	Mg loss/100 revolutions		50	
Writing Quality	The card stock shall be suitable for pen and ink writing.			IBM 9-01-0210

2.2.2 Card Stock for Special Application Cards: The physical and chemical properties of card stock for the manufacture of special application cards shall conform to the requirements listed in Table I with the exceptions noted in Table II.

2.2.3 Test Unit: Normally, all specimens of a test unit whether sampled by IBM or by a customer of IBM, would come from a single 3.25 inch wide reel of card stock.

2.2.4 Test Conditions: Unless otherwise specified in the test method, samples of card stock for test shall be conditioned and tested at the temperature and relative humidity specified by TAPPI standard T-402. These conditions are $73^{\circ} \pm 3.5^{\circ}\text{F}$ and $50\% \pm 2\%$ relative humidity.

2.2.5 Test Procedures: TAPPI standards of the issue in effect at the time of testing shall be followed where TAPPI procedures are specified. Where IBM-IRD Test Procedures are specified, those in effect at the time of testing shall be followed.