Contents

Plain sealing tapes from kraftpaper

1. Scope

This standard covers the specification and use of "plain gummed tapes from kraftpaper, unbleached or bleached".
The purpose of this standard is:

- the assessment of minimum requirements for quality and delivery specifications of gummed tapes;
- standardization of application equipment;
- reduction of stockkeeping;
- optimum conditions

2. Terms

2.1 Plain gummed tape

Paper tape, from kraftpaper, not reinforced and coated with an adhesive layer which can be reactivated by water.

2.2 Kraftpaper

Paper predominantly made from kraft pulp to which recycled kraft papers can be added.

2.3 Gummed coil

Marketing form for gummed tapes.

3. Requirements

The requirements according to table 1 and 2 must be fulfilled by the arithmetic means of the test results of all samples.
The requirements according to the section 4.5 and 5.1 must be fulfilled by 90% of all tested samples.

Table 1: Plain gummed tapes, unbleached

Range of basis weights	Recommended average basis weight	Tensile strength (gummed) kN/m (min)	
g/m^2	g/m^2	MD	CMD
50 - 55	50	5,3	2,7
56 - 65	60	6,5	3,2
66 - 80	75	7,9	3,9
81 - 100	90	9,0	4,7
101- 130	120	13,3	5,0

Table 2: Plain gummed tapes, bleached

Range of basis weights	Recommended average basis weight	Tensile strength (gummed) kN/m (min)	
g/m^2	g/m^2	MD	CMD
50 - 55	50	4,0	2,1
56 - 65	60	4,7	2,5
66 - 80	75	5,3	3,5
81 - 100	90	6,8	4,5

3.1 Gumming adhesives

There is no special recommendation for the type of adhesive used. The adhesive must not have an offensive odour and must be non-toxic. After a short setting time the evenly moistened adhesive film must give a strong and permanent joint on clean and unprepared board surfaces. (Prepared board surfaces are those which are waxed or coated with plastic material).

Commercially available moistening devices must evenly moisten the adhesive film of gummed tapes with a water temperature between 10 and 35^{o}C.

4. Test

4.1 Sampling and number of samples

The number of samples, which have to be taken, are listed in table 3. The tests must be carried out with each sample.

Table 3

Scope of delivery (gummed coils)	Number of samples to be tested (gummed coils)
800	5
801 - 1300	7
1301 - 3200	10
3201 - 8000	15
8001 and above	20

4.2 Conditioning

Before testing, the samples have to be conditioned according to ISO 187 (1977) in a test eliminate which has to be arranged. Recommended test eliminate is *23 ^{o}C, 50% R. H.*

4.3 Tensile strength

The tensile strength has to be determined according to ISO 1924 (1976). The width of the tested samples is 15 mm. The free clamping length is 180 mm in MD and 25 mm in CD. The results are presented in kN/m.

4.4 Basis weight of the kraftpaper

The adhesive layer must be removed by extraction with water (temperature 60 - 70 ^{o}C).
After drying and reconditioning the basis weight (grammage) of the paper is determined according to ISO 536 (1976).

4.5 Minimum adhesion strength

The minimum adhesion strength is determined according to Fipago test method (3. draft 1982).

Testing conditions

Real open time	3.0 s
Closed time	3.0 s
Water amount for moistening	18 - 20 g/m^2
Pressure roller	500 g
Test climate	23 ^{o}C, 50% R.H.
Test surface liner	standard Fipago testing
Minimum adhesion strength:	400 mJ (40 mm Kp)

5. Gummed coils

5. 1 Dimensions

Traditionally, the roll widths used throughout the world by the paper manufacturing and processing industry have led to three different dimensional systems:

A: Germany + Northern Europe
Sub-division by 10 mm steps
50/60/70/80 etc.

B: France + Southern Europe
Sub-division by 12 mm steps
48/60/72/84 etc.

C: Anglo-Saxon countries and Asia
Sub-division by inches
2"/2.5"/3"/3.5" etc.

The use of recommended widths is intended to prevent the manufacture of intermediate widths. The widths category (A, B or C) to be manufactured should be agreed at the time of ordering.

Table 4: Dimensions

Recommended width mm ±1					Inner diameter (min) mm	Length ±2%
Series	A	B	C			
	40	36	1.5"	(38)		
	50	48	2"	(51)	20	free
	60	60	2.5"	(64)	with or	conditions
	70	72	3"	(76)	without cores	
	80	84	3.5"	(89)		

5.2 Performance - general requirements

The tape must be evenly and tightly wound up with the *gummed side out.* The tape in each roll must consist of one continuous strip. The width of the hole in the inner center must not be less than 20 mm. If cores are used, they should have sufficient rigidity to prevent distortion of the roll under normal conditions of transportation and use. The end of the outer leaf of the tape must be attached securely to the next layer to prevent unwinding.

5.3 Workmanship

The tape should be free from any apparent defects that may affect its serviceability (clean, free from folds, sharp creases, tears, cuts, holes and without nicks or ragged edges). The adhesive should form a uniform coating layer covering the entire area of the side of the tape to which it is applied; when wetted with water it shall cause the tape to adhere immediately and firmly to clean, dry surfaces without wrinkling, curling, breaking or lifting.

5.4 Packing and storage

The tape must be packed in accordance with normal commercial practice to assure acceptance by a common carrier and to provide product protection against loss and damage during multiple shipments, handling and storage. The exterior of the package should be provided with a proper product identification.

The packing should protect the gummed coils against humidity. The packing material should be waterproof (waxed or bituminized papers, plastic coated papers or foils). The packing should be made in such a manner that easy taking out is possible.

The tape should be stored in the original package in a dry and cool location, not directly on the floor or near wet outer walls. It should not be stored in close proximity to steam pipes, radiators or other sources of heat or high humidity. The tape may not be exposed to direct sun radiation.