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BRANCH STANDARD

PYROXYLINE CELLULOSE SHEET  
TECHNICAL SPECIFICATION

OST D 84-807-83

(Extract regarding technical requirements)

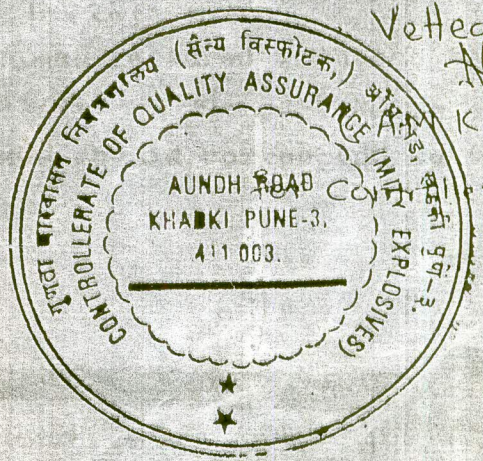
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UNIVERSAL DECIMAL  
CLASSIFICATION

GROUP: 016

PYROXYLINE-CELLULOSE SHEET  
TECHNICAL SPECIFICATION

OST B-84-807-83

NON-OBSERVANCE OF THE STANDARD IS PROHIBITED BY LAW.

This standard pertains to pyroxyline cellulose sheet\* and establishes technical requirements for manufacturing, acceptance, testings, packing, marking, transportation and storage.

The sheet is meant for manufacturing cartridges with combustible body, combustible cylinders and elements of charges for tank gun 9, -81.

Conventional designation while placing an order is POS as per OST D-84-807-83.

\* Hereinafter referred to as "Sheet".

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I. TECHNICAL REQUIREMENTS.

I.1. The Sheet should be manufactured in correspondance with the requirements of this standard as per technological documentation, approved in the established order.

## I.2. Requirements for raw materials:

I.2.1. The following materials should be used while manufacturing PCS:

Unbleached sulphate wood (Coniferous) pulp as per GOST 11208-82 of grade HC-1. It is permitted to use pulp as per GOST 11208-82 of grade HC-2 with the degree of delignification as 21, 5-34,0, with punching resistance of not less than 460KK-Pascal ( $4.7 \text{ Kgf/Cm}^2$ ) and ash content of not more than 1%;

Pyroxyline of grade 2H as per GOST B-16784-71, Manufactured out of cotton pulp as per GOST 595-79.

I.2.2. For manufacturing of one batch of the sheet use not more than two batches of pulp and one batch of pyroxyline.

I.2.3. It is necessary to bring all materials into production in presence of documents of manufacturing plant certifying their conformity with the standards or technical specifications, as well as asper the results of incoming inspection.

I.2.3. The sheet should be manufactured in the form of rolls. The weight of the roll should be not more than 80 kg diameter not more than 600 MM.

Rolls should be coiled tightly and uniformly along entire width of the sheet. Roll end faces should be uniform.

I.4. The width of the sheet is <sup>set</sup> as per agreement between the manufacture and the consumer.

The limit deviation as per the width of the sheet should not exceed  $\pm 7 \text{ MM}$ . from the preset value.

I.5. The sheet should be manufactured with the thickness of ( 0.52-0.56 ) MM and ( 0.29 - 0.34 ) MM.

I.6. Sheet quality indexes should correspond to the standards, shown in table I.

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TABLE : I

PHYSICO-CHEMICAL AND MECHANICAL INDICES OF THE SHEET

Index Nomenclature	Standard for the sheet with thickness, in MM		Testing Method.
	P C S		
	0.52-0.56	0.29-0.34	
1. Composition for dry mass - %;			3.7
✓ Pulp	49-52	52-55	
Pyroxyline 2 n	48-51	45-48	
2. Total Mass fraction on moisture content, %	3.6	3.6	3.8
3. Volumetric concentra- tion of nitric oxide, ml/gram.	91-103	87-95	3.9
4. Ash content, %, not more than.	0.7	0.7	3.10
5. Chemical stability at (122.0±0.4)°C, ml of NO for one gram, not more than.	0.5	0.5	3.11
6. Density gm/cm <sup>3</sup>	0.51-0.54	0.51-0.54	3.12
7. Trinitrotoluene penetrability:			3.14

Contd...Table.

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Continuation of table : I

Index Nomenclature	Standard for the sheet with thickness, in MM		Testing Method.
	P.C.S.		
	0.52-0.56	0.29-0.34	
3.7 Duration of appearance of first spot. Seconds, not more than	2.5	1.2	
Duration of full improp- gnation, seconds not more than	10	5	
3.8 8. Water capillary rise, MM, not less than.	40	40	3.15
3.9 9. Breaking length (Average value out of two directions), M, not less than.	1900	2000	3.16
3.10 10. Number of double bends (average value out of two directions), not less than	200	200	3.17

NOTE : Content of pyroxyline in separate rolls of PCS with  
thickness of 0.52-0.56 mm is permitted to be not less  
than 47% and with thickness of 0.29-0.34 MM not less than 44%.

1.7 In ready-made sheet the following is not permitted  
Foreign matters, non-typical of cellulose, and conta-  
minations (Mineral inclusions, papers pieces, chips,  
Oil spots, rubber);

Table.

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Wrinkles and folds of machine and cross directions;  
More than three breakages and two tears along the edge  
of the sheet in each roll (sheet ends at places of breakage  
are not glued together)

1.8. Estimated moisture for determination of mass of  
batch of the sheet should be 6%.

#### 6. ACCEPTANCE RULES :

2.1. For inspection of quality and acceptance of batch  
of the sheet acceptance are established <sup>which include</sup> the following <sup>Types</sup>  
tests and inspection :

Technical inspection;

Physico-chemical and mechanical tests.

2.2. Testing of the sheet is carried out by Q.I.D. and  
and customer's representative as per this standard.

2.3. Batch of the sheet should be manufactured with  
the weight from 2 to 22 tons. Depending upon the order the  
size of batch may vary from the specified one.

A batch is considered to be the quantity of homogenous  
quality sheet, manufactured for <sup>a</sup> limit period of time as per  
same technological documentation, simultaneously presented for  
testing (acceptance), <sup>and</sup> during the evaluation of the quality of  
which one general decision is taken.

2.4. Presentation procedure of sheet for acceptance  
inspection to Q.I.D.

2.4.1. Presentation of the sheet to the representative  
QID for technical inspection is done by manufacturing section  
in the process of production.

In the process of technical inspection the QID selects  
the samples for physico-chemical and mechanical tests of the  
sheet. The manufacturing section presents the batch of the sheet  
to the representative of QID with notification (Appendix I),  
accompanying by log-book of production inspection of the sheet  
(Appendix II) and data about the materials.

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The notification should be signed by the Shift in charge or chief of the Section.

2.4.2. During acceptance testing of the sheet the representative of QID should carryout tests in scope, specified in table-2.

TABLE 2

LIST OF INDICES UNDER INSPECTION

Index Nomenclature	Number of Point		Sample size not less than	
	Technical requirement	Testing Method.	QID	Customer's Representative
I. Technical Inspection				
I.I. External view and accuracy of packing, Quality of marking, Presence and correctness of entering in the labels.	4.1-4.5	3.1	10%, but not less than 10 Rolls.	3% but not less than 3 Rolls.
2.I. Weight of the roll.	3.1	3.2	5% but not less than 5 rolls	3%, but not less than 3 rolls.
1.3. External view of the sheet.	1.7	3.3	--do--	--do--
1.4 Width of the sheet	1.4	3.4	--do--	--do--
2. Physico-chemical and mechanical indices.	1.6	3.7-3.17	3%, but not less than 3 rolls.	--do--

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2.4.3. The results of tests are entered in the protocol (Appendix-3), which is signed by QID representatives who have carried out the tests (inspection):

On the basis of test protocol QID draws a conclusion about the conformity of the sheet with the requirements of this standard, which is entered in the Notification.

2.4.4. If technical tests have failed to meet the requirements of this standard: as per indices of table:2 (Point N1: I.I, 1.2, 1.3, 1.4) repeated tests should be carried out on the doubled sample from presented portion.

First sample is subjected to rectification or replacement.

2.4.5. If the repeated technical tests are unsatisfactory the QID returns sheet rolls to the manufacturing section for revealing the causes of defects and then elimination, repeated check and subsequent presentation.

If it is impossible (Unsuitable) to eliminate the defects then the manufactured batch of the sheet is rejected finally or as per the decision of Chief Engineer and Chief of QID it is sorted for the types of reject.

2.4.6. The manufacturing section carried out second presentation of the sheet to QID with notification, marked "For Second Acceptance", signed by the Foreman of the section. The notification should be accompanied by analysis and defect elimination report (Appendix 4) and by a list of actions carried out.

2.4.7. If the tests for one or several physico-chemical and mechanical indexes specified in point 2 of table : 2 (except chemical stability) are unsatisfactory, repeated tests are to be carried out or doubled the quantity of samples, selected from the same rolls, for indices, having proved to be a failure.

If the tests for chemical stability are unsatisfactory the batch of the sheet is rejected.

2.4.8. If the repeated technical inspection or repeated tests for physico-chemical and mechanical indices are unsatisfactory, the sheet is rejected finally or upon the decision of Chief Engineer and the Chief of QID it is sorted for the types of reject.

