GOST	23367-78
Title	UPHOLSTERY VINYL-COATED ARTIFICIAL LEATHER - T SPECIFICATIONS
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USSR STATE STANDARD

Upholstery Vinyl-coated Artificial Leather - T. Specifications
Valid upto 01.01.1985

GOST 23367-78
This supersedes GOST 11598-65; and GOST 15899-70

The present standard relates to upholstery grade vinyl-coated artificial leather - T, a fabric with polyvinylchloride coating with fillers and plasticizers applied on one side.

Vinyl-coated artificial leather - T (artificial leather) is used as upholstery and lining material for interior finishing in the automobile, machine-building and radio industries.

1. TECHNICAL REQUIREMENTS

1.1. Artificial leather must be manufactured in accordance with the requirements of the present standard and to technical documentation approved in the established manner.

1.2. Three varieties of artificial leather are produced for different purposes.

BO-1 (VO-1) - artificial leather with continuous or partial nonporous pvc coating; intended as soft upholstery for seats in various forms of transport ; available in ordinary execution;

BO-2 (VO-2) - artificial leather with porous pvc coating; used as upholstery and lining material for finishing in automobile, machine-building, radio and other industries; available in ordinary execution;

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BO-3 (VO-3), artificial leather with porous-monolithic pvc coating; intended as soft upholstery for seats in various forms of transport; available in ordinary, fire-resistant and tropicalized fire-resistant executions.

1.3. Unbleached, plain dyed fabrics such as shoemaking linen conforming to GOST 19196-73, moleskin and shoemaking linen conforming to approved standards and technical documentation must be used for making artificial leather of the VO-1 variety with continuous or partial coating.

Bleached and plain dyed fabrics of the moleskin type conforming to GOST 21790-76 and shoemaking linen conforming to GOST 19196-73 must be used for making VO-2 variety of artificial leather.

Viscose staple fabric conforming to approved standards and technical documentation must be used for making the VO-3 variety of artifical leather.

Visoose staple fabric impregnated with fire-resistant and tropicalizing compounds must be used for making the fire-resistant and tropicalized execution of the VO-3 variety of artificial leather.

Other types of fabrics capable of ensuring conformity of the quality of artificial leather with the requirements of the present standard may be used with the customer's concurrence.

1.4. Artificial leather must be made available in dull or lustrous finish, in different colours or with embossed, single-tone or printed patterns or with fine surface finish.

Extrnal appearance and finish of artificial leather must be settled by mutual consent between manufacturer and customer.

1.5. The pvc coating on artifical leather must cover the weaving of the fabric base; it must be uniformly dyed and embossed and must be free from mechanical inclusions.

Artificial leather in tropical execution must be resistant to the action of saprophytic fungus.

The pvc coating may be stuck to the fabric by means of high frequency current.

1.6. Width of artificial leather may be fixed depending on the width of the fabric used and allowing for technological shrinkage at 6% with the customer's concurrence.

Permissible deviations in width must conform to GOST 9295-75.

Width of artificial leather is reckoned ignoring the defective edge.

1.7. Artistic and aesthetic quality parameters of artificial leather are evaluated in accordance with Table 1.

Artificial leather must have an index of 38 if it has been awarded the state quality mark.

Table 1

Parameter	Maximum evaluation for artificial leather of	
	highest quality category	first quality category
Over all evaluation	40 to 38	37 to 32
Modern colour get - up	10	9 to 8
Modern nature of pattern, embossing or print	10	9 to
Harmonious blending of pvc colour with that of base	10 to 9	9 to 7
Extent to which the material meets customer's requirements	10 to 9	10 to 9

1.8. Artificial leather must conform to the requirements and norms set out in Table 2 in respect of physical and mechanical parameters.

1.9. Artificial leather is subdivided into first and second sorts, depending on the presence of defects in external appearance.

1.10. If there are no defects on the face, the material is considered to be of the first sort.

1.11. If a 3 m long stretch of the material contains not more than two of the following defects (or not more than three if the material is more than 1.05 m wide), it is considered to be of the second sort.

Peeling off at not more than two places over an area not exceeding 2 cm^2 each;

scratches or indentations at not more than two places over a length not exceeding 10 cm each;

difference in shade, indistinct embossing or print (in a roll) provided it is not too pronounced;

fault in the partial pattern of the coating, not too pronounced as compared to the specimen approved by the customer.

1.12. Defects in the external appearance of the face of artificial leather resulting from defects in the fabric permitted in the standards and technical documentation relating to the fabric used do not impair gradation of artificial leather.

1.13. Artificial leather must be formed into rolls of length 25 to 40 m for width upto 1 m and 20 to 30 m for width over 1 m.

Each 20 m stretch of the material may be made up of not more

than two cutpieces i.e. it may contain one conventional cut. The shortest piece must not be less than 4 m in length. Cutpieces of the material from 1 to 4 m long are formed into separate rolls and supplied with customer's concurrence. Cutpieces of size 0.30 to 0.95 m are considered to be remnants and may be supplied if the customer agrees to accept them. Page 6

1.14. Artistic and aesthetic parameters of artificial leather must conform to specimens (masters) approved in accordance with GOST 15.602-73.

1.15. Artificial leather must not give off harmful chemical substances or exert harmful influence on the human organism in the course of production and use.

Parameter	Norm for different varieties of artificial leather					
	VO-1 based on fabrics of the type			VO-2 based on fabrics of the type		VO-3 based based on febrics of the type
	moleskin	light shoe-making linen	shoe-making linen	moleskin	shoe-making linen	viscose staple
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Weight per sq.m. kg (g), not more than	0.75 (750)	0.83 (830)	1.00 (1000)	0.70 (700)	0.80 (800)	0.85 (850)
2. Load at rupture, N(kgf), not more than :						
along warp	280(28)	400(40)	440(44)	190(19)	300(30)	300(30)
along weft	330(33)	350(35)	370(37)	220(22)	250(25)	250(25)
3. Elongation at rupture,%, not less than :						
along warp	6	10	13	-	-	10
along weft	12	12	12	-	-	16
4. Resistance to tearing, N(kfg), not less than :						
along warp	18(1.8)	30(3.0)	40(4.0)	13(1.3)	25(2.5)	18(1.8)
along weft	30(3.0)	30(3.0)	40(4.0)	25(2.5)	25(2.5)	20(2.0)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
5. Rigidity along warp, N(gf), not more than	18	25	28	16	20	20
6. Resistance to multiple bending, kilocycles, not less than	200	200	200	200	200	200
7. Resistance of the colouring of the pvc coating to dry and wet friction, index, not lower than	4	4	4	4	4	4
8. Resistance of the colouring of pvc coating to light and heat, index, not lower than	4	4	4	4	4	4
9. Vapour penetration, $kg/m^2.s$, ($mg/cm^2.h$), not less than	1.10^{-5} (3.5)	1.10^{-5} (3.5)	1.10^{-5} (3.5)	$0.15.10^{-5}$ (0.6)	$0.15.10^{-5}$ (0.6)	-
	(for partial coating)					
10. Air penetration, $m^3/m^2/s$ (cm/cm.S),	0.0035 (0.35)	0.0035 (0.35)	0.0035 (0.35)	-	-	-
	(for partial coating)					

(1)	(2)	(3)	(4)	(5)	(6)	(7)
11. Heat accumulation, MPa (kgf/cm^2), not more than	0.1 (1.0)	0.1 (1.0)	0.1 (1.0)	-	-	-
12. Resistance to cold, °C, not less than						
for ordinary execution	-40	-40	-40	-30	-30	-40
for fire-resistant and tropicalized version	-	-	-	-	-	-20
13. Fungus-resistance, index, not more than, for fire-resistant and tropicalized version	-	-	-	-	-	3
14. Inflamability for fire-resistant and tropicalized and fire-resistant executions	-	-	-	-	-	Non inflammable
15. Resistance to kerosene, benezine and oil, hours, not less than, (with whole covering)	1.5	1.5	1.5	1.5	1.5	1.5

Note:- The parameter "heat accumulation" is not applicable to artificial leather with fine finish coating.

2. ACCEPTANCE RULES

2.1. Artificial leather is accepted in batches. Any number of rolls of artificial leather manufactured from fabric of a single type, finished to one colour, with a single pattern embossed or printed and registered in a single document attesting their quality ds considered a batch.

2.2. The document attesting quality must contain the following:

manufacturer's name ;

material nomenclature ;

batch number ;

date of manufacture ;

width ;

results of tests for physical and mechanical parameters as envisaged in the present standard ;

designation of the present standard.

The quality certificate for the VO-3 variety of artificial leather in fire resistant execution must carry the stamp " Nonimflammable ".

2.3. Artificial leather must be subjected to acceptance, periodic and type tests.

2.4. Acceptance Tests

2.4.1. Every batch of artificial leather must be subjected to acceptance tests.

2.5. Every roll of a batch of artificial leather must be checked for external appearance.

2.6. One percent of the rolls of a batch, subject to a minumum of three rolls are selected for checking physical and mechanical

paramoters of artificial leather.

2.6.1. Acceptance tests on artificial leather consist of checks for conformity with the norms for the following parameters: weight per sq.m, load at rupture, resistance to tearing, rigidity, resistance of the colouring at the pvc coating to dry and wet friction, vapour penetration and air penetration.

2.6.2. If unsatisfactory test result are obtained against even a single parameter, the particular test is repeated on twice the number of samples from the same batch. Results of the repeat tests are applicable to the whole batch. Page 7

2.7. Periodic Tests

2.7.1. Periodic tests are conducted at least once a quarter for conformity with the norms against the following parameters: Resistance of the colouring of the pvc coating to light and heat (item 7 of Table 2), resistance of the material to multiple bending (item 6) its heat accumulation (item 11) resistance to cold (item 12) fungus resistance (item 13), inflammability (item 14) and resistance to kerosene, benzine and oil (item 15).

2.7.2. If unsatisfactory test results are obtained against even one of the parameters, the particular test is repeated on twice the number of samples. If unsatisfactory test results are obtained in the repeated tests, the particular parameters are to be checked by the acceptance testing procedure.

2.8. Type Tests

2.8.1. Type tests are conducted when there has been a change in the technology.

3. METHODS OF TESTING

3.1. External appearance of artificial leather is checked in vertically reflected light by inspecting the face of the material at the rework bench. Roll width and length are also measured at the same time in accordance with GOST 3811-72 using a nonfolding type ruler conforming to GOST 427-75.

3.2. A piece of artificial leather free from defects, not less than 0.30 m long and as wide as the roll, is cut from each selected roll. Specimens are cut out of this piece for testing against physical and mechanical parameters.

3.3. GOST 17316-71 defines preparation of specimens for physical and mechanical tests and the tests themselves.

3.4. Weight per square metre is determined as in GOST 17073-71.

3.5. Load and elongation at rupture are determined as in GOST 17316-71 on 100 mm long 20 mm wide specimens.

3.6. Resistance to tearing is determined in accordance with GOST 17074-71.

3.7. Rigidity is determined as in GOST 8977-74 with the followin addition: Specimens 95 ± 0.25 mm long and 20 ± 0.25 mm wide are cut out along the warp from each piece of artificial leather. The weight of the balls used should be (0.88 ± 0.02) x 10^{-3} kg.

3.8. Resistance to bending is determined as per GOST 8978-75 on an МИРП (MIRTs) type instrument except that specimens of length 180 ± 1 mm and width 140 ± 1 mm are cut from each piece and are stretched by 5 % in the machine.

3.9. Resistance of colouring of the pvc coating to dry and wet friction is determined as per GOST 9733-61 by determining the degree of colouring of white calico.

3.10. Stability of the colouring of the pvc coating on exposure to light and heat is determined in accordance with GOST 9780-78. Specimens are tested under a ПРК - 4 (PRK-4) type lamp without light filter for 6 hours at a temperature of 70 ± 3°C.

Test results are evaluated as in GOST 9733-61.

3.11. Vapour penetration is determined under isothermal conditions as described in GOST 22900-78.

3.12. Air penetration is determined as in GOST 8973-77.

3.13. Heat accumulation is determined as in GOST 17318-71.

3.14. Resistance to cold is determined as in GOST 15162-69, section 5 or GOST 8984-75 except that the specimens are cut along the warp.

3.15. Fungus resistance is determined as in GOST 9.049-75, method A.

3.16. Determination of Inflammability

3.16.1. Four specimens of size 360 x 100 mm and thickness not more than 15 mm are cut in the longitudinal direction and four in the transverse direction. Specimens are tested by applying a gas burner flame (40 mm high) to the face and reverse sides. The flame is shut out 30 seconds after introducing the specimen into the burning zone or after a 40 mm long portion has caught fire.

3.16.2. The linear rate of burning is taken as the test result. Specimens burning at a rate less than 1.7 mm/second (100 mm/min) is considered inflamable. Nonimflammability is evaluated by

comparing all the test results and judging by the worst result.

3.17. Resistance to kerosene, benzine and oil is determined on two specimens of artificial leather 150 ± 1.0 mm long and 150 ± 1.0 mm wide put together in the form of a " wallet " with the face inside. Thirty cc of benzine, kerosene or oil is poured into the " wallet " and the time taken for dark patches to appear on the fabric base side is noted. This should be not less than 1.5 hours.

4. MARKING, PACKING, TRANSPORT AND STORAGE

4.1. Artificial leather of a single grade, colour and pattern embossed or printed, manufactured from a single grade of fabric is wound into a roll using roller-rods or bushes, with the face inside.

A defective portion need not be cut out and may be stamped " conventional cut" if the customer agrees.

A defective portion marked as a conventional cut must not exceed 0.7 m and must be considered as a remnant for purposes of weight.

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4.2. The manufacturer's seal is stamped at the start and end of each length at a distance of not more than 2 cm from the end on the fabric.

4.3. Artificial leather rolls are tied at both ends with technical twine conforming to GOST 16266-70 and GOST 17308-71 or with tape or other binding material. A tag indicating the following particulars is fastened to each roll :

Manufacturer's name ;

product nomenclature ;

type of artificial leather ;

nomenclature and grade of fabric base ;

sort ;

colour ;

embossed or printed pattern ;

length ;

width ;

number of conventional cuts ;

number of cut pieces ;

batch number ;

roll number ;

quality control inspector's number ;

designation of the present standard ;

date of manufacture.

4.4. Transport containers are marked as in GOST 14192-77.

4.5. Artificial leather rolls must be wrapped in packing cloth to GOST 10452-72 or in synthetic film.

4.6. Artificial leather may be carried by all kinds of transport in closed and clean vehicles or by containers.

Subject to customer's consent, artificial leather may be carried by open transport.

Artificial leather may be transported by container without packing.

4.7. Artificial leather is stored in closed stores premises at temperatures not lower than minus 10°C and not higher that plus 35°C at a distance of not less than 1 m away from heating devices, in stacks of not more than 10 rows for VO-1 variety and