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Group E36

USSR STATE STANDARD

TEFLON INSULATION TUBES 4D and 4DM

Technical Specifications

OKP 22 4731

GOST 22056-76

Valid upto 01.07.1987

The present standard relates to 4D and 4D M grade teflon electrical insulating tubes, operating in the temperature range minus 196 to plus 250°C and used for electrical insulation of conductors in different climatic donditions.

The present standard defines unified requirements of tubes made for the national economy and for export.

These tubes possess high chemical resistance to different chemical media.

These tubes belong to type 3, group 32 as defined in GOST 17675-80.

1. DIMENSIONS

1.1. Dimensions of tubes must conform to those shown in Table 1.

1.2. Mandatory annexure 3 lists the OKP codes (All-Union Catalogue of Industrial and Agricultural Products) for each sort and standard size of tubes.

1.3. Teflon tubes must be made in minimum lengths of one metre. With the customer's concurrence, 4D and 4D M grade teflon tubes may be made with a minimum length of 0.1 m.

1.4. Mandatory annexure 1 lists sectional area and weight of tubes.

Inside diameter, mm — Wall thickness — Table 1

Диаметр внутренний, мм		Толщина стенки	
Nominal Номин.	Lim. dev. Пред. откл.	Nominal, mm Номин., мм	Lim. dev., % Пред. откл., %
0,3 0,4 0,5 0,6 0,7 0,8	±0,1	0,2	
1,0		0,2; 0,3	
1,2 1,4 1,5 1,6 1,8 2,0	±0,15	0,3	+30 −10
2,1 2,2 2,4 2,5 2,6 2,8 3,0		0,4	
3,5 3,8		0,6	
4,0		0,6; 1,0	
4,2 4,5		0,6	
5,0		0,6; 1,0	+15 − 5
5,5	+0,30	1,0	
6,0		1,5; 1,5	
7,0		1,0	
8,0		1,5; 2,0	
9,0		1,5	
10,0			+30 −10
0,9	±0,15	0,2	

Note: Electrical insulation tubes using 4D and 4D M grade teflon may, with the customer's concurrence, be made to other dimensions (inside diameter and wall thickness) not shown in Table 1; the inside diameter should, however, not exceed 10 mm.

EXAMPLE OF CONVENTIONAL DESIGNATION of the highest sort, made out of 4D M teflon, diameter 0.3 m, wall thickness 0.2 mm, coloured blue and additionally heat reated:

Tube Ф-4D M, 3x0.2, Тф highest sort, blue, GOST 22056-76.
(Ф) (Д)

-Do- of tube of first sort, made out of 4D grade teflon, grade (Э) E, diameter 1.2 mm, wall thickness 0.3 mm without colouring, without heat treatment.

Tube 4D E 1.2x0.3 sort 1, GOST 22056-76.
(Д, Э)

2. TECHNICAL REQUIREMENTS

2.1. Tubes must conform to GOST 17675-80 and to the requirements of the present standard.

2.2. Tubes are made as highest sort and first sort, using 4D teflon of grade E to GOST 14906-77 or teflon of grade 4D M conforming to standards and technical documentation.

Tubes may also be made out of 4АШ (4D Sh) and 4АЛ (4DL) grade teflon to GOST 14906-77.

2.3. The external and internal surfaces of tubes must conform to GOST 17675-80. Unevenness in the external surface is acceptable.

The internal diameter of the tubes must be concentric with the external diameter within the limit deviations shown in Table 1.

2.4. Tubes may be made plain or coloured. The colour must be specified in the order. Mandatory annexure 2 lists the pigments for various colours.

2.5. Tubes must conform to the requirements and norms shown in Table 2.

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Table 2

Parameter	Norm for tubes of		Method of testing
	Highest sort	First sort	
1. Colour of plain tubes	White	White to cream	As per clause 4.2
2. Ultimate tensile stress, MPa (kgf/cm^2), not less than:			As per GOST 11262-80 and clause 4.5 of the present standard
a) without additional heat treatment			
for tubes of diameter:			
0.3 to 7.0 mm	32(302)	31(310)	
over 7.0 upto 10.0 mm	27(270)	26(260)	
b) with additional heat treatment	35(350)	33(330)	

Table 2 Contd.

Parameter	Norm for tubes of		Method of testing
	Highest sort	First sort	
3. Relative elongation at rupture, %, not less than			As per GOST 11262-80 and clause 4.5 of the present standard
a) without additional heat treatment			
for tubes od diameter:			
0.3 to 7.0 mm	250	250	
over 7.0 upto 10.0 mm	250	230	
b) with additional heat treatment	200	200	

2.6. Volume resistivity, dielectric permeability, dissipation factor and dielectric strength of tubes must not be lower than the values specified in GOST 14906-77, but are not checked.

3. RULES OF ACCEPTANCE

3.1. Acceptance tests have been established for checking conformity of the tubes with the requirements of the present standard.

3.2. Tubes are accepted in batches. A batch must consist of tubes of a single standard size manufactured from a single batch of raw materials.

The weight of a batch must not exceed 150 kg.

3.3. Five specimens of length not less than 200 mm are drawn from the different units of a batch for each of the tests.

3.4. If unsatisfactory test results are obtained against even a single parameter, the particular test is repeated on twice the number of specimens, selected from the same units of the batch. Results of the repeated tests are applicable to the whole batch.

4. METHODS OF TESTING

4.1. Before testing, the tube specimens are conditioned at a temperature of 23 ± 2°C and a relative humidity of 45 to 75% for 6 hours. The tests are carried out at a temperature of 23 ± 2°C.

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4.2. External appearance and colour of tubes of diameter 1 to 10 mm are checked visually. The manufacturer does not check tubes of diameter 0.3 to 1 mm. Tubes of diameter 1 to 5 mm inclusive with additional heat treatment may be checked on the semiautomatic inspection machine "paod" ("Паод") in which, the defective portions having low dielectric strength are automatically cut off.

4.3. The inside diameter of tube is determined by means of metallic GO-NOGO gauges to GOST 17675-80. The length of the operating part of the gauge must be not less than 10 mm for tubes of diameter upto 3 mm and not less than 15 mm for tubes of diameter over 3 mm. The NOGO gauge must not enter the hole of the tube.

Gauges of a different design may be used for determining the inside diameter of tubes upto 3.0 mm inclusive.

4.4. Wall thickness is determined in accordance with GOST 17675-80.

4.5. Ultimate tensile strength and relative elongation at rupture are determined on tubes of length 120 ± 5 mm with the base of the specimen 25 ± 1 mm and with the load increasing steadily upto rupture with a rate of displacement of the lower clamp of the machine 100 ± 10 mm/min.

Ultimate tensile strength at rupture (σ_r), MPa, is calculated using the formula

$$\sigma_r = \frac{P_r}{3.14 \cdot s \cdot (d+s)},$$

where P_r - is the load at rupture, N;

d - is the internal diameter of the tube, m;

s - is the wall thickness of the tube, m.

5. PACKING, MARKING, TRANSPORT AND STORAGE

5.1. GOST 17675-80 defines packing, marking, transport and storage. Tubes may be packed into boxes conforming to GOST 13511-79 and in drums to GOST 17065-77.

5.2. When the tubes are formed into packets in containers, 5% of the tubes may be less than 300 mm long in the highest sort and less than 100 mm in the first sort.

5.3. The weight of a batch supplied without checking external appearance and colour is increased by 1.5%.

5.4. DELETED, REV, NO. 1

5.5. A facsimile of the state quality mark in accordance with GOST 1.9-67 is roproduced on all documents connected with product, if it has been awarded the state quality mark.

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6. MANUFACTURER'S GUARANTEE

6.1. The manufacturer must guarantee conformity of all the tubes produced by him with the requirements of the present standards, provided the customer observes the transport and storage conditions laid down by this standard.

6.2. Guarantee shelf life of tubes is 12.5 years from the date of manufacturer.

After the expiry of the guaranteed shelf life and before use, the tubes must be checked for conformity with requirements of the present standard.

7. SAFETY REQUIREMENTS

7.1. Tubes made out of 4D and 4D M teflon are non-inflammable.

When the tubes are heated beyond 250°C they give off volatile products of thermal oxidation destruction, the maximum permissible concentrations of which in the air in the working zone of the premises must not exceed;

0.5 mg/m^3 - for hydrogen fluoride;

0.5 mg/m^3 - for fluoro-and difluoro-phosgene;

20 mg/m^3 - for oxides of carbon;

10 mg/m^3 - for aerosol of 4D grade teflon.

7.2. Operations, connected with heating of the tubes, must be carried out in premises equipped with plenum-exhaust ventilation which ensures complete removal of harmful substances from the air in the working zone and monitors the condition of the atmosphere.

CROSS SECTIONAL AREA AND WEIGHT OF TUBES

ANNEXURE 1
ПРИЛОЖЕНИЕ 1
Обязательное
MANDATORY

ПЛОЩАДЬ СЕЧЕНИЯ И МАССА ТРУБОК

Internal diameter, mm Внутренний диаметр, мм	Wall thickness mm Толщина стенки, мм	Calculated sectional area, mm^2, Расчетная площадь сечения, $мм^2$	Calculated weight per metre of length, g Расчетная масса 1 м длины, г
0,3	0,2	0,31	0,68
0,4		0,37	0,81
0,5		0,44	0,97
0,6		0,50	1,10
0,7		0,56	1,23
0,8		0,62	1,36
1,0		0,75	1,65
1,0	0,3	1,22	2,68
1,2		1,40	3,08
1,4		1,59	3,50
1,5		1,68	3,70
1,6		1,78	3,91
1,8		1,95	4,30
2,0		2,15	4,73
2,1	0,4	3,12	6,86
2,2		3,24	7,13
2,4		3,57	7,85
2,5		3,62	7,96
2,6		3,77	8,30
2,8		4,02	8,81
3,0		4,24	9,33
3,5	0,6	7,66	16,90
3,8		8,23	18,10
4,0		8,64	18,90
4,0	1,0	12,10	26,60
4,2	0,6	8,97	19,70
4,5		9,53	20,96
5,0		10,51	23,10
5,0	1,0	18,72	41,20
5,5		20,20	44,40
6,0		21,84	48,50
6,0	1,5	35,10	77,22
7,0	1,0	24,90	54,80
8,0	1,5	44,50	97,90
8,0	2,0	62,40	137,30
9,0	1,5	49,10	108,00
10,0		53,8	118,10
0,9	0,2	0,69	1,52

Note: Cross sectional area of tubes is determined on basis of nominal inside diameter and wall thickness without allowing for deviations.

ANNEXURE 2 MANDATORY

LIST OF PIGMENT FOR COLOURING TUBES MADE OUT OF 4D and 4D M TEFLON

Colour of tubes	Name of pigment	S.T.D. relating to pigment
1. White	Titanium dioxide grade F-02 (R-02)	GOST 9808-75
2. Red	Light red cadmium	-
3. Orange	Orange cadmium	-
4. Yellow	Light yellow cadmium	-
5. Green	Dark green cobalt	-
6. Blue	Ultramarine blue grade YKK (UKhK)	-
7. Black	Carbon black ДГ-10 (DG-100)	GOST 7885-77

ANNEXURE 3

MANDATORY

ПРИЛОЖЕНИЕ 3
Обязательное

Наименование и размеры, мм Nomenclature and dimensions, mm	Код ОКП OKP Code	Кч KCh
Трубки электроизоляционные из фторопласта 4Д неокрашенные (внутренний диаметр × толщина стенки) Electrical insulation tubes made out of plain (undyed) 4D grade teflon (inside diameter X wall thickness		
Высший сорт Highest sort		
0,3×0,2	22 4731 0201	05
0,4×0,2	22 4731 0202	04
0,5×0,2	22 4731 0203	03
0,6×0,2	22 4731 0204	02
0,7×0,2	22 4731 0205	01
0,8×0,2	22 4731 0206	00
0,9×0,2	22 4731 0207	10
1,0×0,2	22 4731 0208	09
1,0×0,3	22 4731 0209	08
1,2×0,3	22 4731 0210	04
1,4×0,3	22 4731 0211	03
1,5×0,3	22 4731 0212	02
1,6×0,3	22 4731 0213	01
1,8×0,3	22 4731 0214	00
2,0×0,3	22 4731 0215	10
2,1×0,4	22 4731 0216	09
2,2×0,4	22 4731 0217	08
2,4×0,4	22 4731 0218	07
2,5×0,4	22 4731 0219	06
2,6×0,4	22 4731 0220	02
2,8×0,4	22 4731 0221	01
3,0×0,4	22 4731 0222	00
3,5×0,6	22 4731 0223	10
3,8×0,6	22 4731 0224	09
4,0×0,6	22 4731 0225	08
4,0×1,0	22 4731 0226	07
4,2×0,6	22 4731 0227	06
4,5×0,6	22 4731 0228	05
5,0×0,6	22 4731 0229	04
5,0×1,0	22 4731 0230	00
5,5×1,0	22 4731 0231	10
6,0×1,0	22 4731 0232	09
6,0×1,5	22 4731 0233	08
7,0×1,0	22 4731 0234	07
8,0×1,5	22 4731 0235	06
8,0×2,0	22 4731 0236	05
9,0×1,5	22 4731 0237	04
10,0×1,5	22 4731 0238	03

ANNEXURE 3 Contd.

Продолжение приложения 3

Наименование и размеры, мм Nomenclature and dimensions, mm	Код ОКП OKP Code	Кч KCh
Первый сорт First sort		
0,3×0,2	22 4731 0301	02
0,4×0,2	22 4731 0302	01
0,5×0,2	22 4731 0303	00
0,6×0,2	22 4731 0304	10
0,7×0,2	22 4731 0305	09
0,8×0,2	22 4731 0306	08
0,9×0,2	22 4731 0307	07
1,0×0,2	22 4731 0308	06
1,0×0,3	22 4731 0309	05
1,2×0,3	22 4731 0310	01
1,4×0,3	22 4731 0311	00
1,5×0,3	22 4731 0312	10
1,6×0,3	22 4731 0313	09
1,8×0,3	22 4731 0314	08
2,0×0,3	22 4731 0315	07
2,1×0,4	22 4731 0316	06
2,2×0,4	22 4731 0317	05
2,4×0,4	22 4731 0318	04
2,5×0,4	22 4731 0319	03
2,6×0,4	22 4731 0320	10
2,8×0,4	22 4731 0321	09
3,0×0,4	22 4731 0322	08
3,5×0,6	22 4731 0323	07
3,8×0,6	22 4731 0324	06
4,0×0,6	22 4731 0325	05
4,0×1,0	22 4731 0326	04
4,2×0,6	22 4731 0327	03
4,5×0,6	22 4731 0328	02
5,0×0,6	22 4731 0329	01
5,0×1,0	22 4731 0330	08
5,5×1,0	22 4731 0331	07
6,0×1,0	22 4731 0332	06
6,0×1,5	22 4731 0333	05
7,0×1,0	22 4731 0334	04
8,0×1,5	22 4731 0335	03
8,0×2,0	22 4731 0336	02
9,0×1,5	22 4731 0337	01
10,0×1,5	22 4731 0338	00
Трубки электроизоляционные из фторопласта 4ДМ неокрашенные (внутренний диаметр × толщина стенки) Electrical insulation tubes made out of plain (undyed) 4DM grade teflon (inside diameter X wall thickness		
Высший сорт Highest sort		
0,3×0,2	22 4731 0501	07
0,4×0,2	22 4731 0502	06
0,5×0,2	22 4731 0503	05
0,6×0,2	22 4731 0504	04
0,7×0,2	22 4731 0505	03
0,8×0,2	22 4731 0506	02
0,9×0,2	22 4731 0507	01

ANNEXURE 3 Contd. *Продолжение приложения 3*

Nomenclature and dimensions, mm / Наименование и размеры, мм	OKP Code / Код ОКП	KCh / КЧ
1,0×0,2	22 4731 0508	00
1,0×0,3	22 4731 0509	10
1,2×0,3	22 4731 0510	06
1,4×0,3	22 4731 0511	05
1,5×0,3	22 4731 0512	04
1,6×0,3	22 4731 0513	03
1,8×0,3	22 4731 0514	02
2,0×0,3	22 4731 0515	01
2,1×0,4	22 4731 0516	00
2,2×0,4	22 4731 0517	10
2,4×0,4	22 4731 0518	09
2,5×0,4	22 4731 0519	08
2,6×0,4	22 4731 0520	04
2,8×0,4	22 4731 0521	03
3,0×0,4	22 4731 0522	02
3,5×0,6	22 4731 0523	01
3,8×0,6	22 4731 0524	00
4,0×0,6	22 4731 0525	10
4,0×1,0	22 4731 0526	09
4,2×0,6	22 4731 0527	08
4,5×0,6	22 4731 0528	07
5,0×0,6	22 4731 0529	06
5,0×1,0	22 4731 0530	02
5,5×1,0	22 4731 0531	01
6,0×1,0	22 4731 0532	09
6,0×1,5	22 4731 0533	10
7,0×1,0	22 4731 0534	00
8,0×1,5	22 4731 0535	08
8,0×2,0	22 4731 0536	07
9,0×1,5	22 4731 0537	06
10,0×1,5	22 4731 0538	05

Первый сорт

First sort

0,3×0,2	22 4731 0601	04
0,4×0,2	22 4731 0602	03
0,5×0,2	22 4731 0603	02
0,6×0,2	22 4731 0604	01
0,7×0,2	22 4731 0605	00
0,8×0,2	22 4731 0606	10
0,9×0,2	22 4731 0607	09
1,0×0,2	22 4731 0608	08
1,0×0,3	22 4731 0609	07
1,2×0,3	22 4731 0610	03
1,4×0,3	22 4731 0611	02
1,5×0,3	22 4731 0612	01
1,6×0,3	22 4731 0613	00
1,8×0,3	22 4731 0614	10
2,0×0,3	22 4731 0615	09
2,1×0,4	22 4731 0616	08
2,2×0,4	22 4731 0617	07

ANNEXURE 3 Contd.

 Продолжение приложения 3

Nomenclature and dimensions. mm / Наименование и размеры, мм	OKP Code / Код ОКП	KCh / КЧ
2,4×0,4	22 4731 0618	06
2,5×0,4	22 4731 0619	05
2,6×0,4	22 4731 0620	01
2,8×0,4	22 4731 0621	00
3,0×0,4	22 4731 0622	10
3,5×0,6	22 4731 0623	09
3,8×0,6	22 4731 0624	08
4,0×0,6	22 4731 0625	07
4,0×1,0	22 4731 0626	03
4,2×0,6	22 4731 0627	05
4,5×0,6	22 4731 0628	04
5,0×0,6	22 4731 0629	03
5,0×1,0	22 4731 0630	10
5,5×1,0	22 4731 0631	09
6,0×1,0	22 4731 0632	08
6,0×1,5	22 4731 0633	07
7,0×1,0	22 4731 0634	06
8,0×1,5	22 4731 0635	05
8,0×2,0	22 4731 0636	04
9,0×1,5	22 4731 0637	03
10,0×1,5	22 4731 0638	02

Трубки электроизоляционные из фторопласта 4Д окрашенные (внутренний диаметр × толщина стенки)

Electrical insulation tubes made out of coloured 4D grade teflon (inside diameter x wall thickness).

Высший сорт

Highest sort

0,3×0,2	22 4731 0701	01
0,4×0,2	22 4731 0702	00
0,5×0,2	22 4731 0703	10
0,6×0,2	22 4731 0704	09
0,7×0,2	22 4731 0705	08
0,8×0,2	22 4731 0706	07
0,9×0,2	22 4731 0707	06
1,0×0,2	22 4731 0708	05
1,0×0,3	22 4731 0709	04
1,2×0,3	22 4731 0710	00
1,4×0,3	22 4731 0711	10
1,5×0,3	22 4731 0712	09
1,6×0,3	22 4731 0713	08
1,8×0,3	22 4731 0714	07
2,0×0,3	22 4731 0715	06
2,1×0,4	22 4731 0716	05
2,2×0,4	22 4731 0717	04
2,4×0,4	22 4731 0718	03
2,5×0,4	22 4731 0719	02
2,6×0,4	22 4731 0720	09
2,8×0,4	22 4731 0721	08
3,0×0,4	22 4731 0722	07
3,5×0,6	22 4731 0723	06
3,8×0,6	22 4731 0724	05

ANNEXURE 3 Contd. *Продолжение приложения 3*

Nomenclature and dimensions, mm / Наименование и размеры, мм	OKP Code / Код ОКП	KCh / КЧ
4,0×0,6	22 4731 0725	04
4,0×1,0	22 4731 0726	03
4,2×0,6	22 4731 0727	02
4,5×0,6	22 4731 0728	01
5,0×0,6	22 4731 0729	00
5,0×1,0	22 4731 0730	07
5,5×1,0	22 4731 0731	06
6,0×1,0	22 4731 0732	05
6,0×1,5	22 4731 0733	04
7,0×1,0	22 4731 0734	03
8,0×1,5	22 4731 0735	02
8,0×2,0	22 4731 0736	01
9,0×1,5	22 4731 0737	00
10,0×1,5	22 4731 0738	10
Первый сорт		
First sort		
0,3×0,2	22 4731 0801	09
0,4×0,2	22 4731 0802	08
0,5×0,2	22 4731 0803	07
0,6×0,2	22 4731 0804	06
0,7×0,2	22 4731 0805	05
0,8×0,2	22 4731 0806	04
0,9×0,2	22 4731 0807	03
1,0×0,2	22 4731 0808	02
1,0×0,3	22 4731 0809	01
1,2×0,3	22 4731 0810	00
1,4×0,3	22 4731 0811	07
1,5×0,3	22 4731 0812	06
1,6×0,3	22 4731 0813	05
1,8×0,3	22 4731 0814	04
2,0×0,3	22 4731 0815	03
2,1×0,4	22 4731 0816	02
2,2×0,4	22 4731 0817	01
2,4×0,4	22 4731 0818	00
2,5×0,4	22 4731 0819	10
2,6×0,4	22 4731 0820	06
2,8×0,4	22 4731 0821	05
3,0×0,4	22 4731 0822	04
3,5×0,6	22 4731 0823	03
3,8×0,6	22 4731 0824	02
4,0×0,6	22 4731 0825	01
4,0×1,0	22 4731 0826	00
4,2×0,6	22 4731 0827	10
4,5×0,6	22 4731 0828	09
5,0×0,6	22 4731 0829	08
5,0×1,0	22 4731 0830	04
5,5×1,0	22 4731 0831	03
6,0×1,0	22 4731 0832	02
6,0×1,5	22 4731 0833	01
7,0×1,0	22 4731 0834	00
8,0×1,5	22 4731 0835	10

ANNEXURE 3 Contd. *Продолжение приложения 3*

Nomenclature and dimensions, mm / Наименование и размеры, мм	OKP Code / Код ОКП	KCh / КЧ
8,0×2,0	22 4731 0836	09
9,0×2,0	22 4731 0837	08
10,0×1,5	22 4731 0838	07
Трубки электроизоляционные из фторопласта 4ДМ окрашенные (внутренний диаметр × толщина стенки)		
Высший сорт		
Highest sort		
0,3×0,2	22 4731 0901	05
0,4×0,2	22 4731 0902	05
0,5×0,2	22 4731 0903	04
0,6×0,2	22 4731 0904	03
0,7×0,2	22 4731 0905	02
0,8×0,2	22 4731 0906	01
0,9×0,2	22 4731 0907	00
1,0×0,2	22 4731 0908	10
1,0×0,3	22 4731 0909	09
1,2×0,3	22 4731 0910	05
1,4×0,3	22 4731 0911	04
1,5×0,3	22 4731 0912	03
1,6×0,3	22 4731 0913	02
1,8×0,3	22 4731 0914	01
2,0×0,3	22 4731 0915	00
2,1×0,4	22 4731 0916	10
2,2×0,4	22 4731 0917	09
2,4×0,4	22 4731 0918	08
2,5×0,4	22 4731 0919	07
2,6×0,4	22 4731 0920	03
2,8×0,4	22 4731 0921	02
3,0×0,4	22 4731 0922	01
3,5×0,6	22 4731 0923	00
3,8×0,6	22 4731 0924	10
4,0×0,6	22 4731 0925	09
4,0×1,0	22 4731 0926	08
4,2×0,6	22 4731 0927	07
4,5×0,6	22 4731 0928	06
5,0×0,6	22 4731 0929	05
5,0×1,0	22 4731 0930	01
5,5×1,0	22 4731 0931	00
6,0×1,0	22 4731 0932	10
6,0×1,5	22 4731 0933	09
7,0×1,0	22 4731 0934	08
8,0×1,5	22 4731 0935	07
8,0×2,0	22 4731 0936	06
9,0×1,5	22 4731 0937	05
10,0×1,5	22 4731 0938	04
Electrical insulation tubes made out of coloured 4D M grade teflon (inside diameter X wall thickness		
Первый сорт		
First sort		
0,3×0,2	22 4731 1001	07
0,4×0,2	22 4731 1002	06
0,5×0,2	22 4731 1003	05

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ANNEXURE 3 Contd.

Номенклатура и размеры, мм Nomenclature and dimensions, mm	Код ОКП OKP Code	КЧ KCh
0,6×0,2	22 4731 1004	04
0,7×0,2	22 4731 1005	03
0,8×0,2	22 4731 1006	02
0,9×0,2	22 4731 1007	01
1,0×0,2	22 4731 1008	00
1,0×0,3	22 4731 1009	10
1,2×0,3	22 4731 1010	06
1,4×0,3	22 4731 1011	05
1,5×0,3	22 4731 1012	04
1,6×0,3	22 4731 1013	03
1,8×0,3	22 4731 1014	02
2,0×0,3	22 4731 1015	01
2,1×0,4	22 4731 1016	00
2,2×0,4	22 4731 1017	10
2,4×0,4	22 4731 1018	09
2,5×0,4	22 4731 1019	08
2,6×0,4	22 4731 1020	04
2,8×0,4	22 4731 1021	03
3,0×0,4	22 4731 1022	02
3,5×0,6	22 4731 1023	01
3,8×0,6	22 4731 1024	00
4,0×0,6	22 4731 1025	10
4,0×1,0	22 4731 1026	09
4,2×0,6	22 4731 1027	08
4,5×0,6	22 4731 1028	07
5,0×0,6	22 4731 1029	06
5,0×1,0	22 4731 1030	02
5,5×1,0	22 4731 1031	01
6,0×1,0	22 4731 1032	00
6,0×1,5	22 4731 1033	10
7,0×1,0	22 4731 1034	09
8,0×1,5	22 4731 1035	08
8,0×2,0	22 4731 1036	07
9,0×1,5	22 4731 1037	06
10,0×1,5	22 4731 1038	05

DERIVED SI UNITS WITH PROPRIETORY NAMES

Quantity	Unit		Expression for derived unit	
	Name	Symbol	using other units	using base SI units
Frequency	hertz	Hz	-	s^{-1}
Force	newton	N	-	$m, kg. s^{-2}$
Pressure	pascal	Pa	N/m^2	$m^{-1}, kg. s^{-2}$
Energy, work, heat	joule	J	N.m	$m^{2}, kg. s^{-2}$
Power, energy, flow	watt	W	J/c	$m^{2}, kg. s^{-3}$
Quantity of electricity, electric charge	coulomb	C	A.s	s.A
Electric potential	volt	V	W/A	$m^{2}, kg. s^{-3}.A^{-1}$
Electric capacitance	farad	F	c/V	$m^{-2}, kg^{-1} s^{4} A^{2}$
Electric resistance	ohm	Ω	V/A	$m^{2}, kg. s^{-3}.A^{-2}$
Conductance	siemens	S	A/V	$m^{-2}, kg^{-1} s^{3} A^{2}$
Magnetic flux	weber	Wb	V.s	$m^{2}, kg. s^{-2}.A^{-1}$
Magnetic induction	tesla	T	Wb/m^2	$kg. s^{-2}.A^{-1}$
Inductance	henry	H	Wb/A	$m^{2}, kg. s^{-2}.A^{-2}$
Luminous flux	lumen	lm	-	cd.sr. *
Illumination	lux	lx	-	m^{-2}.cd.sr.*
Nucleid activity	beckerel	bk	-	s^{-1}
Radiation dosage	grey	gr	-	$m^{2} s^{-2}$

* The supplementary unit steradian figures along with base SI units in these two expressions.

BASE SI UNITS

Quantity	Unit		
	Name	Russian symbol	International symbol
Length	metre	м	m
Weight (Mass)	Kilogram	кг	kg
Time	second	с	s
Current	ampere	А	A
Thermodynamic temperature	kelvin	К	K
Amount of substance	mole	моль	mol
Intensity of light	candela	кд	cd

SUPPLEMENTARY SI UNITS

Plane angle	radian	рад	rad
Solid angle	steradian	ср	sr