GOST : 481-80

Title : PARONITE AND PARONITE GASKETS
TECHNICAL CONDITIONS

Translated and Edited by : K.A. Parthasarathy
K.A. PARTHASARATHY
EVR Associates.

Date : MAY 1984

Note:

1. Title Паронит : Tradename Paronite for "compressed asbestos fibre sheets"
2. P.2 col.5 line 2 " Смазка " flat (not clear)
3. Page 4 col. 2 BTK - VPS not clear.
4. Guide to Soviet Steel grade designation
   Page 9, clause 2.7
   30ХГСА - 30 ХГСЯ
   А - heat treatment
5. Guide to Soviet designation of nonferrous metals/alloys
   Page 9 clause 2.7
   М - Magnesium
   Бр - Brass
   Д - Duralumin

UDC 678.067.42-762:006.354 Group A65 (L65)

USSR STATE STANDARD

PARONITE AND PARONITE GASKETS TECHNICAL CONDITIONS

GOST 481-80
This supercedes
GOST 481-74

OKP 25 7500

By order no.1394 of the USSR State Committee on standards
Dated 27th MARCH 1980, This standard is valid

From 01.01.1981
To 01.01.1986

The present standard relates to paronite in sheet form and paronite gaskets used at plane joints in equipment operating under different media.

1. GRADES AND DIMENSIONS

1.1 Seven grades of paronite (Table 1) are available for different applications.

Table 1

Designation & Nomenclature of grade	Working medium	Limiting pressure, MPa (kgf/cm^2)	Limiting temperature °C	Application areas
General purpose paronite PON (PON)	Superheated fresh water	6.4 (64)	250	For stationary joints of the type "flat" with pressure of operating medium not more than 4 MPa (40 kgf/cm^2), "tenon and mortise joints", "hill and valley" joint in vessels and devices, pumps, fittings, pipelines, compressors, I.C. engines and other equipment.
	Saturated and superheated steam	6.4 (64)	450	
	Air	1.0 (10)	-50 to +100	
	Dry neutral and inert gases	6.4 (64)	-50 to +450	
	Salt solutions in water	2.5 (25)	-50 to +100	
	Liquid and gaseous ammonia	2.5 (25)	-40 to +150	
	Alcohols	1.6 (16)	150	
	Heavy petroleum products (solar oil, diesel fuel furnace oil, parafin, tar, asphalt, bitumen)	6.4 (64)	200	
	Light petroleum products (gas oil, reflux, benzene, kerosene)	2.5 (25)	150	
	Liquid oxygen	0.25 (2.5)	-182	
PON-1 (PON-1)	Superheated fresh water	4.5 (45)	250	- do -
	Saturated and superheated steam	4.5 (45)	450	
	Liquid and gaseous ammonia	2.5 (25)	-40 to +150	
	Heavy petroleum products (solar oil, diesel fuel furnace oil, parafin, tar, asphalt, bitumen)	2.3 (23)	120	
	Light petroleum products (gas oil, reflux, benzene, kerosene)	1.2 (12)	175	
	Liquid oxygen	2.5 (25)	-192	
	Salt solutions in water	2.5 (25)	-15 to +100	

Table 1 contd.

Designation & Nomenclature of grade	Working medium	Limiting pressure MPa (kgf/cm^2)	Limiting temperature °C	Application areas
Oil and benzene resistant ПМБ (РМВ)	Sea water	4.0 (40)	50	For stationary joints of the type "flat" with pressure of operating medium not more than 4 MPa (40 kgf/cm^2) "tenon and mortise joint", "hill and valley" joint in vessels and devices, pumps, fittings, pipelines, compressors, I.C. engines and other equipment.
	Brine	10.0 (100)	-90 to +50	
	Liquid and gaseous ammonia	2.5 (25)	-40 to +150	
	Coke oven gas	6.4 (64)	490	
	Air	1.6 (16)	-50 to +200	
	Liquid oxygen and nitrogen	0.25(25)	-182	
	Gaseous oxygen and nitrogen	5.0 (50)	150	
	Liquified and gaseous hydrocarbons C_1 to C_5	1.6 (16)	-40 to +60	
	Molten wax	1.0 (10)	150	
	Heavy petroleum products (solar oil, diesel fuel furnace oil, parafin, tar, asphait, bitumen)	2.0 (20)	300	
	Light petroleum products (gas oil, reflux, benzene, kerosene)	2.5 (25)	200	
	Oil fractions (diesel, automobiles, aviation, industrial, turbines and transformer oils)	2.5 (25)	150	
ПМБ - 1 (РМВ-1)	Saturated and superheated steam	4.0 (40)	250	For stationary joints of the type "flat" with pressure of operating medium not more than 2.5 MPa (25 kgf/cm^2), "tenon and mortise" joints and "hill and valley joints with operating pressure of medium not more than 10 MPa (100 kgf/cm^2), vessels and devices, pumps, fittings, pipelines, compressors, IC engines and other equipment.
	Sweet water	10.0 (100)	100	
	Sea water	10.0 (100)	-2 to +50	
	Heavy petroleum products (solar oil, diesel fuel furnace oil, parafin, tar, asphalt, bitumen)	16.0 (160)	-40 to +250	

Table 1 contd.

Designation & Nomenclature of grade	Working medium	Limiting pressure MPa (kgf/cm^2)	Limiting temperature °C	Application areas
	Light petroleum products (gas oil, reflux, benzene, kerosene)	16.0 (160)	-40 to +250	
	Oil fractions (diesel, automobiles, aviation, industrial, turbines and transformer oils)	16.0 (160)	-40 to +250	
	VPS liquid	16.0 (160)	-4 to +80	
	Refrigerants 12,22,114V-2	2.5 (25)	-50 to 150	
Acid-resistant paronite PK (PK)	Mineral acids (sulphuric, nitric, hydrochloric)	2.5 (25)	200	For stationary joints of the type "flat", "tenon and mortise", "hill and valley" with pressure of operating medium not more than 2.5 MPa (25 kgf/cm^2), vessels and devices, pumps, fittings, pipelines, compressor I.C. engines and other equipment. As a soft filler in helically-wound gaskets.
	Air	2.5 (25)	200	
	Organic solvents (turpentine, dichlorethane, benzol, toluol, xylol)	1.0 (10)	150	
	Acids, alkalis, oxidising agents and other aggressive media	2.5 (25)	250	
Mesh armoured paronite MA (PA)	Superheated fresh water	10.0 (100)	250	For stationary joints of the type "flat" with pressure of working medium not more than 4 MPa (40 kgf/cm^2), "tenon and mortise" and "hill and valley" joints vessels, devices, pumps, fittings, pipelines, compressors I.C. engines and other equipment
	Saturated and superheated steam	10.0 (100)	450	
	Neutral, inert dry gases, air	7.5 (75)	250	
	Heavy petroleum products (solar oil, diesel fuel furnace oil, parafin, tar, asphalt, bitumen)	7.5 (75)	400	
	Light petroleum products (gas oil, reflux, benzene, kerosene)	7.5 (75)	200	

Table 1 contd.

Designation & Nomenclature of grade	Working medium	Limiting pressure MPa (kgf/cm^2)	Limiting temperature °C	Application areas
	Oil fractions (diesel, automobile, aviation, industrial turbine and transformer oils)	7.5 (75)	200	
Electrolyser grade paronite ПЭ	Alkalis of concentration 300 to 400 g/l. hydrogen, oxygen	2.5 (25)	180	For packing cells being assembled into a battery in electrolysers and for electrically isolating the cells from one another. Minimum pressure required for sealing the joints is 10 MPa (100 kgf/cm^2) for electrolysers operating at a pressure of 0.02 MPa (300 kgf/cm^2) and 30 MPa (300 kgf/cm^2) for electrolysers operating at a pressure of 1 MPa (10 kgf/cm^2).
	Liquid and gaseous ammonia Nitrosa gases Nitric acid, 10% solution	2.5 (25) 0.6 (6) 2.5 (25)	-15 to +150 200 100	For stationary joints of vessels and devices, pumps, fittings and pipelines.

Note: Correlation of new designations of paronite with superceded ones.

ПОН-1 - paronite "10"

ПМБ-1 - МБП-5

ПК - КП-2

GOST 481-80 page 5

Table 2

mm

Grade	OKP code	Width		Grade	OKP code	Width	
		Nominal	Tolerance			Nominal	Tolerance
Abbreviated name	Key OKP		Upper dev.	Abbreviated name	Key OKP		Upper dev.
PON	25 7511 0101	0,4	±0,10	PMB-1	25 7522 0105	0,5	±0,10
	25 7511 0105	0,5	±0,10		25 7522 0111	0,8	±0,10
	25 7511 0111	0,8	±0,10		25 7522 0113	1,0	±0,10
	25 7511 0113	1,0	±0,10		25 7522 0118	1,2	±0,10
	25 7511 0118	1,2	±0,15		25 7522 0118	1,5	±0,15
	25 7511 0125	2,0	±0,20	PMB-1	25 7522 0125	2,0	±0,20
	25 7511 0131	3,0	±0,25		25 7522 0128	2,5	±0,25
	25 7511 0133	3,5	±0,30		25 7522 0131	3,0	±0,30
	25 7511 0125	4,0	±0,30				
	25 7511 0137	5,0	±0,40				
	25 7511 0138	6,0	±0,50				
				PK	25 7542 0101	0,4	±0,10
					25 7542 0105	0,5	±0,10
					25 7542 0106	0,6	±0,10
PON-1	25 7512 0125	2,0	±0,20		25 7542 0111	0,8	±0,10
	25 7512 0128	2,5	±0,25		25 7542 0113	1,0	±0,10
	25 7512 0131	3,0	±0,30	PK	25 7542 0118	1,5	±0,15
					25 7542 0125	2,0	±0,20
	25 7521 0101	0,4	±0,10				
	25 7521 0105	0,5	±0,10	PA	25 7551 0113	0,8	±0,10
	25 7521 0106	0,6	±0,10		25 7551 0118	1,0	±0,15
	25 7521 0111	0,8	±0,10		25 7551 0113	1,2	±0,15
PMB	25 7521 0113	1,0	±0,10	RA			
	25 7521 0118	1,5	±0,15				
	25 7521 0125	2,0	±0,20		25 7541 0113	1,0	±0,10
	25 7521 0128	2,5	±0,25		25 7541 0118	1,5	±0,15
	25 7521 0131	3,0	±0,30		25 7541 0125	2,0	±0,20
				PE	25 7551 0131	3,0	±0,30
					25 7541 0135	4,0	±0,40
PMB-1	25 7522 0103	0,3	±0,10		25 7541 0137	5,0	±0,50
	25 7522 0101	0,4	±0,10	RE	25 7541 0138	6,0	±0,60
	25 7522 0105	0,5	±0,10		25 7541 0139	7,0	±0,70
PMB-1					25 7541 0141	7,5	±0,75

1.2. Roughness R_z of surfaces being jointed as per GOST 2789-73 must be not less than 40 microns.

1.3. Dimensions of paronite sheets must conform to those shown in Tables 2 and 3.

Note: Paronite of other dimensions may be manufactured by agreement between manufacturer and customer.

mm

Table 3

Grade	Length		Width		Grade	Length		Width	
	Nominal	Tolerance	Nominal	Tolerance		Nominal	Tolerance	Nominal	Tolerance
Обозначение марки	Длина		Ширина		Обозначение марки	Длина		Ширина	
	Номин.	Пред. откл.	Номин.	Пред. откл.		Номин.	Пред. откл.	Номин.	Пред. откл.
ПОН PON	400 500 750 1000 1500 1800 3000	±20 ±25 ±40 ±50 ±75 ±75 +10 −100	300 500 500 750 1000 1500 1500	±15 ±25 ±25 ±40 ±50 ±75 ±75	ПК РК	400 500 750 900 1000 1000	±20 ±25 ±40 ±50 ±75 ±75 +10 −100 +10 −100	300 500 500 750 1000 1500 455 520	±15 ±25 ±25 ±40 ±50 ±75 ±5 ±5
ПОН-1 PON-1	500 1000 1500 3000	±25 ±50 ±75 ±75 +10 −100	500 750 1000 1500 1500	±25 ±40 ±50 ±75 ±75	ПА РА	400 500 600 750 900 900 1000	±20 ±25 ±25 ±40 ±50 ±45 ±50	300 400 500 500 750 900 1000	±15 ±20 ±25 ±25 ±40 ±45 ±50
ПМБ PMB	500 1000 1500	±25 ±50 ±75	500 750 1000	±25 ±40 ±50	ПЭ РЭ	400 500 750 900 1000 1050 500 500 1000	±20 ±25 ±40 ±50 ±50 ±50 ±75 ±75 +10 −100	300 500 500 750 750 1050 1000 1500 1500	±15 ±25 ±25 ±40 ±50 ±50 ±50 ±75 ±75
ПМБ-1 PMB-1	400 500 1000 1000 1500	±20 ±25 ±50 ±50 ±50	400 500 500 700 750	±20 ±25 ±30 ±30 ±40					

ГОСТ 481—80 Стр. 7

Пример условного обозначения паронита марки

Example of conventional designation of grade ПОН (PON) paronite, 0.8 mm thick, 750 mm wide and 1000 mm long:

Paronite PON 0.8 x 750 x 1000 GOST 481-80

-do- in tropical execution:

Paronite PON-T 0.8 x 750 x 1000 GOST 481-80.

1.4. Paronite of grades PON, PON-1, PMB, PMB-1, PK and PE is produced in sheet form and in the form of gaskets. The shape and dimensions of gaskets must be agreed upon in the established manner.

2. TECHNICAL REQUIREMENTS

2.1. Paronite and paronite gaskets must be manufactured in accordance with the requirements of the present standard and to technological regulations approved in the established manner.

Table 4

Parameter	Norm for grades						
	PON	PON-1	PNB	PNB-1	PK	PA	PE
1. Density, g/cm^3	1.6 to 2.0	1.6 to 2.0	1.5 to 2.0	1.5 to 2.0	2.0 to 2.5	1.8 to 2.7	1.6 to 2.0
2. Conventional breaking point in the transverse direction MPa (kgf/cm^2) not less than	6.6(66)	5 (50)	13(130)	20(200)	10(100)	-	8(80)
after soaking in kerosene at 23°C for 12 hours	-	-	7(70)	-	-	-	-
after soaking in oil MS-20 or MK-22 at 150°C for 12 hours.	-	-	10(100)	22.5(225)	-	-	-
after soaking in oil MK-8 at 100°C for 12 hours	-	-	-	20(200)	9(90)	-	-
after soaking in fuel TS-1 at 200°C for 12 hours	-	-	-	15(150)	7(70)	-	-
3. Increase in weight in liquid media, %, not more than							
in water at 100°C for 12 hours	14	10	-	-	-	-	-
in kerosene at 23°C for 12 hours	40	50	10 to 24	-	-	8 to 23	-
in oil MS-20 or MK-22	-	-	23	15	-	31	-
in oil MK-8	-	-	-	15	13	-	-
in fuel TS-1	-	-	-	14	12	-	-
in alkali at 100°C for 12 hours	-	-	-	-	-	-	23
4. Reduction in weight in liquid media, %, not more than:							
in 10% Nitric acid	-	-	-	-	30	-	-
in 10% Sulphuric acid	-	-	-	-	30	-	-
5. Compressibility at 35 MPa (350 kgf/cm^2), %	8 to 20	8 to 20	5 to 16	2 to 15	2 to 12	5 to 15	6 to 18
6. Recovery after removal of pressure 35 MPa (350 kgf/cm^2), % not less than	30	30	35	40	30	30	35

Note: Norms against subclauses 5 and 6 are optional till 01.01.1982.

2.2 The surface of paronite and paronite gaskets must be even and smooth without cracks, creases, scratches or breakage.

Insignificant fluffiness and insignificant lack of colour of asbestos on the surface and edges is acceptable.

2.3 Armouring steel wire mesh No.09 to GOST 3826-66 or GOST 12184-66 must be used in the manufacture of PA grade paronite.

2.4 Gaskets are cut out of paronite sheets which meet the requirements of the present standard. Paronite should not peel off or crumble in the process. A method for manufacturing gaskets of diameter over 1500 mm has been indicated in the recommendatory annexure.

2.5 Paronite sheets must conform to the norms specified in Table 4 as to physical and mechanical parameters.

2.6 Paronite must ensure complete sealing of the joints.

2.7 PME, PMB-1 and PK grade paronite must not be corrosive. Specimens of paronite compressed between plates made of steel 25 or 30KhGA, cladded or uncladded aluminium alloy D16, grass L63 or manganese oxide brass alloy MnA15 must not cause corrosion of these metals.

2.8 Paronite must withstand bending and must not break or develop cracks under a bend test.

2.9 Paronite is serviceable in the extreme north and in tropical climate. Paronite, intended for use under tropical conditions must be manufactured using fungicides in addition to meeting the requirements of the present standard.

3. ACCEPTANCE RULES

3.1 Paronite is accepted in batches. A batch consists of paronite sheets of a single grade and a single thickness weighing not more than 3,000 kg or of not more than 10,000 paronite gaskets of a single size, supported by a single quality certificate containing:

manufacturer's name or trademark;
dimensions of paronite sheets or the number of gaskets (parts);
batch number;
date of manufacture;
nett weight
the number of the present standard;
the letter 'T' in the case of paronite or gaskets of tropical execution;
the State Quality mark to GOST 1.9-67 in the case of paronite and gaskets of the highest quality category;
number of cases in the batch and
test results.

3.2 Acceptance tests are conducted on the following scale:

by external appearance - 100%;
dimensional checks - on 10 sheets or not less than 5 gaskets from each batch;
against clauses 2.5 to 2.8 - not less than 3 sheets per batch;

3.3 If test results obtained against even a single parameter are unsatisfactory the particular test is repeated on twice the number of samples selected at random from the same batch. The results of the repeated test are applicable to the whole batch.

4. INSPECTION METHODS

4.1 Surface of paronite and gaskets is checked visually.

4.2 Dimensions of paronite are determined in accordance with GOST 24039-80 (CT C B 1222-78).

4.3 One specimen for each type of test against clauses 2.5 to 2.8 is cut out of each sheet selected for inspection.

4.4 Density of paronite is determined in accordance with GOST 24039-80 (CT C9B 1222-78).

4.5 Determination of conventional breaking point.

Specimens of size 20 x 110 mm with a tolerance of ± 0.5 mm are cut at right angles to the direction of rolling. The specimens are tested before they are immersed in the liquids and after they have been soaked in them.

The thickness of the specimens is measured before they are immersed in the corresponding liquids.

The specimens are clamped in a tensile testing machine with a clearance of 50 mm between the clamps and a rate of displacement of the moving clamp of 250 mm/minute until they break.

Error in reading should not exceed 1% of the load being measured.

Conventional breaking strength (σ) in MPa (kgf/cm^2) is calculated from the formula

$$\sigma = \frac{P}{S}$$

where P is the load at rupture, N (kgf);

S is the area of crossection of the specimen before the tests, m^2 (cm^2)

316

4.6 Increase in the weight of paronite in liquid media is measured in accordance with GOST 24037-80 (CT CB 1220-78).

4.7 Determination of weight reduction in liquid media.

4.7.1. Apparatus and materials.

Laboratory balance to GOST 19491-74 of class 2 accuracy and scale division not more than 0.01 g;

Drying cabinet;
Conical flask with reverse air cooling coil;
Nitric acid to GOST 4461-77, 10% solution;
Sulphuric acid to GOST 4204-77, 10% solution.

4.7.2. TEST PROCEDURE

Specimens are to be of size 20 x 20 mm with a tolerance of ± 0.5 mm. The specimens are first dried in a drying cabinet at 105 ± 5°C till they attain a constant weight. They are then weighed and soaked in nitric or sulphuric acid of the specified concentration at a temperature of 100 ± 5°C for 14 hours.

After soaking in the acid the specimens are washed with water till they show neutral reaction (by indicator) and are dried till they attain constant weight.

4.7.3. PROCESSING OF RESULTS

Reduction in weight of paronite in liquid media (X) as a percentage is calculated from the formula.

$$X = \frac{m_1 - m_2}{m_1} \cdot 100,$$

where m_1 is the weight of the specimen before test, g;

m_2 is the weight of the specimen after test, g;

The arithmetic mean of all the readings rounded off to the nearest 0.1% forms the result.

4.8 Compressibility and recovery of paronite are determined in accordance with GOST 24038-80 (CT CЭВ 1221-78).

4.9 DETERMINATION OF SEALING CAPABILITY.

4.9.1. PON, PON-1 and PA grade paronite is tested for sealing capability in steam as medium in a laboratory autoclave type AP-1 (Drg.1)

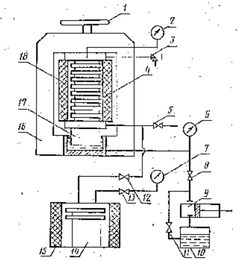
Nine ring-shaped specimens of paronite of outside diameter 120 mm and inside diameter 80 mm covered with oil-graphite paste (1:2.5 composition) are compressed between the flanges of a collector. Presence of oil on the edge of the specimens is not permitted.

The tests are carried out at a steam pressure of 10 MPa (100 kgf/cm^2) in the collector, a pressure of 22.5 MPa (225 kgf/cm^2) on the specimens, a temperature of 450°C in the collector and a testing time of 30 minutes.

The specimens ensure sealing of the joints being packed, if there is no leakage of steam during the test.

Стр. 12 ГОСТ 481—80 SCHEMATIC OF AUTOCLAVE AP-1

Схема автоклава типа АП-1



1. handwheel; 2,6 and 3 pressure gages; 3 blow-off valve; 4. flanged collector; 5-valve for release of steam from the collector; 8-oil relief valve; 9-hand pump; 10-oil tank; 11-valve for no load operation of pumps; 12,12-shutt-off valves; 14-boiler; 15-electrical heating; 16-autoclave frame; 17-hydraulic press; 18-electrical heating of flanged collector.

Drg.1

4.9.2. PON, PKB, PMB-1 and PA grade paronite is tested for sealing capability in liquid media using a laboratory autoclave type AP-2 (Drg.2).

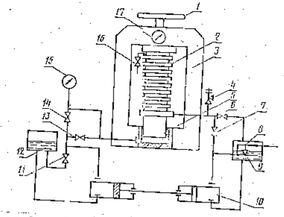
Kerosene is used as the control liquid.

Nine ring-shaped specimens of paronite of outside diameter 120 mm and inside diameter 90 mm covered with oil-graphite paste (1:2.5 composition) are compressed between the flanges of a collector. Presence of oil on the edge of the specimens is not permitted.

The tests are conducted at a liquid medium pressure of 15 MPa (150 kgf/cm²) in the collector which is built up by increasing it by 2.5 MPa (25 kgf/cm²) every 15 minutes, a pressure of 32.4 MPa (324 kgf/cm²) on the specimens, a liquid medium temperature of 20 ± 5°C and a test time of 30 minutes at the specified parameters.

SCHEMATIC OF AUTOCLAVE TYPE AP-2 ГОСТ 481—80 Стр. 13

Схема автоклава типа АП-2



1-handwheel; 2-flanged collector; 3-autoclave frame; 4-safety valve; 5-hydraulic press; 6-valve for draining liquid from collector; 7,13-non-return valves; 8-shutoff valve for noload operation of pump; 9-tank for liquid medium; 10-pump; 11-valve for noload operation of pump; 12-oil tank; 14-oil drain valve 15,17-pressure guages; 15-blow off valve.

Drg.1

The specimens ensure sealing of the joints being packed, if there is no leakage of steam during the test.

4.10 Determination of corrosive action.

Corrosive action of PMB, PMB-1 and PK grade paronite on specimens of size 40 x 40 mm compressed under a prisure of 10 MPa (100 kgf/cm^2) between two plates made out of steel 25 (GOST 1050-74) steel 30ХГСА (GOST 4543-71) cladded and uncladded aluminium alloy D16 (GOST 4784-74), brass ЛС 63 (GOST 15527-70) or oxidised magnesium alloy МЛ 5 (GOST 2856-79).

Surface roughness Ra for all metallic plates, except plates made out of aluminium alloy D16 must be not more than 1.25 micron as per GOST 2789-73.

The plates and paronite samples are rubed clean with spirit before they are processed. They are then placed in a thermostat in which a vessel containing water is also placed. Alternatively they are placed in a humidity chamber G-4.

The specimens are held at 60 to 65°C and a relative humidity of 98 ± 2% for 24 hours after which darkening is acceptable only on plates made out of 63 brass.

4.11 Bending strength of paronite is determined in accordance with GOST 24036-80 (CT CЭВ 1219-78).

5. MARKING, PACKING, TRANSPORT AND STORAGE

5.1 The following particulars are to be clearly stamped on each paronite sheet with indelible ink. Alternatively a label containing these particulars is to be pasted on each paronite sheet.

manufacturer's name or trade mark;
grade of paronite;
batch number;
sheet thickness;
the letter "T" the case of paronite of tropical execution.

5.2 Paronite sheets are packed in wooden boxes or crates of gross weight not exceeding 500 kg. Paronite may be transported without packing if despatched in universal containers or carried by urban transport.

Paronite of thickness upto 2 mm may be rolled up and secured with a piece of twine or metal tape.

Gaskets are bundled in packets of 25 to 100 pieces and packed into wooden boxes, cartons or woven containers.

Gross weight of a single packing case should not exceed 50 kg.

Small gaskets and gaskets of simple shape may be packed in paper bags weighing not more than 5 kg and then packed into wooden boxes, cartons or woven containers. Gross weight of a single packing case should not exceed 50 kg.

5.3 A label marked in accordance with GOST 14192-77 and containing the following particulars must be fastened to each packing unit:

manufacturer's name or trade mark;
nomenclature and grade of paronite;
dimensions of paronite sheets or gasket number (part number);
batch number;
date of manufacture;
nett weight
the number of the present standard;
the letter "T" in the case of paronite and gaskets of tropical execution;
State Mark of quality as per GOST 1.9-77
for paronite and gaskets of the highest quality.

5.4 Paronite and gaskets may be transported by any kind of carriage in open modes of transport.

5.5 Paronite and gaskets must be stored in enclosed premises affording protection against direct action of sun's rays, organic solvents, lubricating oils, acids and other substances capable of destroying paronite and separated by not less than a metre from devices radiating heat and at temperatures not exceeding 35°C.

Humidity in the enclosure for storing paronite grade PA must not exceed 65%.

5.6 When paronite is stored or transported at temperatures below 0°C it must be held at 20 ± 5°C for 2 hours before gaskets are made out of it.

6. MANUFACTURER'S GUARANTEE

6.1 The manufacturer guarantees conformity of paronite and gaskets with the requirements of the present standard provided the conditions of storage and transport are observed.

6.2 Guaranteed shelf life of paronite and gaskets is 2 years from the date of manufacture.

ANNEXURE

RECOMMENDATORY

A METHOD FOR MANUFACTURING GASKETS OF DIAMETER OVER 1500 mm

Dovetail joints or lap joints are permitted in the manufacture of gaskets of diameter over 1500 mm.

In making lap joints the cut is made oblique to the ends being jointed.

Glue No: 83 H (88M) is used for jointing.

The glued joint must be held at 20 $\pm$ 5°C under a pressure of 0.5 MPa for 2 hours.

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		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.

Price 5 Kopecks

BASE SI UNITS

Quantity	Unit		
	Name	Russian symbol	International symbol
Length	metre	м	m
Weight (Mass)	Kilogram	к	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