

MATERIALES

Las juntas tóricas fabricadas a base de elastómeros deben satisfacer las siguientes exigencias:

- Resistencia al fluido a estanqueizar. Es admisible que éste produzca un aumento de volumen en el material, pero no deberá producir nunca una contracción en el mismo.
- Resistencia a las temperaturas previsibles durante el servicio.
- Resistencia al desgaste.
- Dureza adecuada, en función de la presión.
- Suficiente resistencia a la deformación permanente.

El fluido a estanqueizar, y la temperatura reinante en el punto de aplicación, determinan el material base. La presión, la ranura de extrusión entre los elementos a estanqueizar por el lado contrario al de la presión, y el movimiento, determinan la dureza del material.

JUNTA TÓRICA ACRILONITRILO BUTADIENO NBR

ACRILONITRILO BUTADIENO NBR			
Compuesto	N7038-70NBR872	N8038	N9038-88NBR156
Dureza	70+- 5 Shore A	80+-5 Shore A	90+- 5 Shore A
Color	Negro	Negro	Negro
Rango de temperatura	-30°C + 110°C	-30°C a + 110°C	-30°C + 110°C

- MATERIAL ESTÁNDAR para hidráulica y neumática
- ACEITES HIDRÁULICOS MINERALES
- ACEITES Y GRASAS ANIMALES Y VEGETALES
- ACEITES Y GRASAS DE SILICONA
- LIQUIDOS NO INFLAMABLES
- HIDROCARBUROS ALIFÁTICOS (PROPANO, BUTANO, GASOLINA)
- AGUA HASTA +80°C
- AIRE
- BIOACEITES DE ESTER SINTÉTICO
- RAZONABLE RESISTENCIA QUÍMICA
- MALA RESISTENCIA A AMINAS Y SULFATOS

JUNTA TÓRICA HIDROGENADA HNBR

HIDROGENADA NBR	
Compuesto Dureza Color Rango de temperatura	ABR 70 – M6 70+- 5 Shore A Verde -30°C a + 150°C
<ul style="list-style-type: none">▪ ▪ ACEITES HIDRÁULICOS MINERALES▪ ▪ GRASAS ANIMALES Y VEGETALES▪ ▪ AIRES ACONDICIONADOS▪ ▪ HIDROCARBUROS ALIFÁTICOS (PROPANO, BUTANO, GASOLINA)▪ ▪ OZONO▪ ▪ IDÓNEO PARA ALTAS CARGAS DINÁMICAS▪ ▪ RESISTENTE A LA ABRASIÓN▪ ▪ ACIDOS BÁSICOS DILUIDOS▪ ▪ FUEL DIESEL	

JUNTA TÓRICA ETILENO PROPILENO DIENO EPDM

ETILENO PROPILENO DIENO EPDM			
Compuesto	E593-70 EP561	E 8593	N9593
Dureza	70+- 5 Shore	80 +- 5 Shore A	90+- 5 Shore A
Color	Negro	Negro	Negro
Rango de temperatura	-60°C a +150°C	-60°C a +-150°C	-60°C a +150°C
<ul style="list-style-type: none">▪ ▪ CUADRO CON PERÓXIDO▪ ▪ AGUA CALIENTE▪ ▪ VAPOR DE AGUA▪ ▪ LÍQUIDO DE FRENOS▪ ▪ DETERGENTES▪ ▪ ALCOHOLES▪ ▪ CETONAS▪ ▪ LÍQUIDOS DE BASE ÁCIDO FOSFORITITO Y ÉSTERES▪ ▪ ÁCIDOS Y BASES ORGÁNICOS E INORGÁNICOS▪ ▪ NO RESISTENTE A ACEITES MINERALES▪ ▪ NO RESISTENTE A ALIFÁTICOS O AROMÁTICOS			

JUNTA TÓRICA FLUORELASTÓMERO (VITON®) FPM

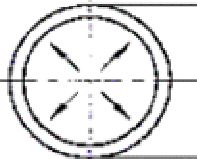
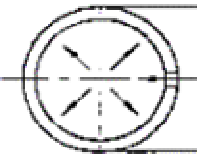
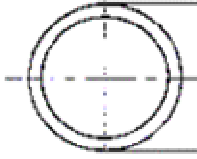
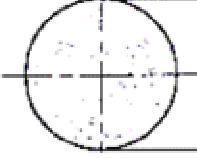
FLUORELASTÓMERO (VITON®) FPM				
Compuesto	V70 G3	V90 G3	75FKM	83 FKM 588
Dureza	70+- 5 Shore A	90+- 5 Shore A	75+- Shore A	82+- 5 Shore A
Color	Verde	Verde	Negro	Marrón
Rango de temperatura	-20°C a 260°C	-20°C a +260°C	-20°C a +260°C	-20°C a +260°C
<ul style="list-style-type: none"> ▪ ▪ ACEITES Y GRASAS MINERALES ▪ ▪ COMPUESTOS ALIFÁTICOS ▪ ▪ HIDROCARBUROS CLORADOS ▪ ▪ AROMÁTICOS ▪ ▪ PETROLEO, gasolinas 99 octanos, fuel-oil ▪ ▪ ÁCIDOS ▪ ▪ LEJIAS ▪ ▪ ACEITES Y GRASAS DE SILICONA ▪ ▪ RECOMENDADO PARA APLICACIONES DE ALTO VACIO ▪ ▪ PROBLEMAS DE VINCULAMIENTO CON CETONAS, ÉSTERES Y ALGUNOS ▪ ▪ DISOLVENTES DE ETER 				

VITON® es marca registrada por DUPONT

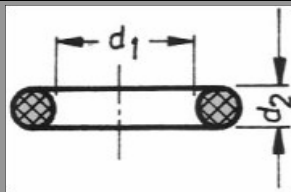
JUNTA TÓRICA SILICONA MVQ

SILICONA MVQ	
COMPUESTO DUREZA COLOR RANGO DE TEMPERATURA	S 70 R 4 70+- 5 Shore A Rojo -60°C a + 230°C
<ul style="list-style-type: none">▪ ▪ AIRE CALIENTE▪ ▪ OXIGENO▪ ▪ GASES INERTES A ALTA TEMPERATURA▪ ▪ OZONO▪ ▪ RADIACIÓN U.V.▪ ▪ GRASAS Y ACEITES ANIMALES VEGETALES▪ ▪ LÍQUIDOS DE FRENO▪ ▪ POCA RESISTENCIA A ACEITES MINERALES▪ ▪ SOLO PARA APLICACIONES ESTÁTICAS▪ ▪ BAJA RESISTENCIA QUÍMICA	

JUNTA TÓRICA METÁLICA

 <p>TIPO MOT</p>	<ul style="list-style-type: none"> - CARACTERÍSTICAS: <ul style="list-style-type: none"> * Estándar * Energizada con nitrógeno - PRESIÓN: De vacío a 400 bar - TEMPERATURA: Criogénica hasta 850°C
 <p>TIPO MOV</p>	<ul style="list-style-type: none"> - CARACTERÍSTICAS: <ul style="list-style-type: none"> * Con orificios que activan la junta con la presión del propio sistema - PRESIÓN: Desde 70 bar hasta 10000 bar - TEMPERATURA:
 <p>TIPO MOU</p>	<ul style="list-style-type: none"> - CARACTERÍSTICAS: <ul style="list-style-type: none"> * Sin relleno de gas * Aro Hueco - PRESIÓN: Bajas presiones - TEMPERATURA: Temperaturas moderadas
 <p>TIPO MOS</p>	<ul style="list-style-type: none"> - CARACTERÍSTICAS: <ul style="list-style-type: none"> * Aro sólido * Disponible en diferentes formas * Aplicaciones muy especiales * Vacío y aplicaciones de no estanquidad - PRESIÓN: - TEMPERATURA:

JUNTAS TÓRICAS



MEDIDAS

d1	d2	d1	d2	d1	d2
0.74	1.02	43	3.5	120	4
1.07	1.27	43	4	120	4.5
1.15	1	43	4.5	120	5
1.2	1	43	5	120	6
1.42	1.52	43	5.5	120	10
1.5	1	43	8	120	11.5
1.78	1.02	43.69	3	120.01	5.33
1.78	1.78	43.81	3.53	120.01	6.99
1.85	1.5	43.81	5.33	120.02	5.33
2	1	44	2	120.02	6.99
2	1.8	44	3	120.24	3.53
2.06	2.62	44	4	120.32	2.62
2.2	1	44	5	120.37	1.78
2.2	1.6	44	6	120.7	5.33
2.2	2	44.04	3.53	121	4
2.35	1	44.12	2.62	121	8
2.5	1	44.17	1.78	122	3
2.5	1.2	44.2	2.5	122	4.2
2.5	1.5	44.2	3	122	4.5
2.57	1.78	44.2	5.7	123	4
2.6	1.2	44.45	3.53	123	6
2.6	1.3	45	1.5	123	6.3
2.6	1.7	45	2	123.19	5.33
2.6	1.9	45	2.5	123.19	6.99
2.8	1.8	45	3	123.42	3.53
2.84	2.62	45	3.5	123.8	5.33
2.9	1.78	45	4	123.83	5.33
3	1	45	4.5	124	3
3	1.5	45	5	124	3.5
3	2	45	5.5	124	4
3.1	1.6	45	6	124.2	5.7
3.3	2.4	45	7	124.5	3
3.4	1.9	45	12	124.6	6.99
3.5	0.9	45.04	5.33	124.62	6.99
3.5	1	45.2	3	125	2
3.5	1.2	45.2	5.7	125	3
3.5	1.5	45.5	6.8	125	3.5
3.5	2	45.69	2.62	125	4
3.63	2.62	45.7	1.5	125	5
3.68	1.78	46	2	125	6
3.9	1.8	46	2.5	125	8
4	1	46	3	126	3
4	1.5	46	4	126	4
4	2	46	4.5	126	4.5
4	2.5	46	5	126	5
4	3	46	6	126	6.99
4	4	46.04	3.53	126	10
4.1	1.6	46.2	3	126.36	5.33
4.2	1.9	46.5	3	126.36	6.99
4.3	2.4	46.99	5.33	126.37	5.33
4.34	3.53	47	2	126.37	6.99
4.42	2.62	47	2.5	126.59	3.53
4.47	1.78	47	3	126.67	2.62
4.5	1.5	47	3.5	126.72	1.78
4.5	1.8	47	4	126.76	1.78
4.5	2	47	4.5	127	4
4.5	3	47	5	127	5.33
4.6	2.5	47.2	5.7	128	3
4.62	1.78	47.22	3.53	128	6
4.76	1.78	47.29	2.62	128	9
4.9	1.9	47.35	1.78	129	3.5
5	1	47.5	1.8	129	4
5	1.2	47.63	3.53	129	5
5	1.25	47.8	5.33	129.2	5.7
5	1.5	48	1.5	129.5	3
5	2	48	2	129.5	5.33
5	2.5	48	2.5	129.54	5.33
5	3	48	3	129.54	6.99
5	5	48	3.5	129.77	6.53
5.1	1.6	48	4	130	3
5.23	2.62	48	4.5	130	3.5
5.28	1.78	48	5	130	4

5.3	2.4	48	6	130	4.5
5.5	1	48	6.1	130	5
5.5	1.5	48	6.5	130	6
5.5	2	48	8	130	10.8
5.7	1.9	48.7	5.3	130.18	5.33
5.94	3.53	48.89	2.62	132	3
6	1	48.9	2.62	132	4
6	1.5	48.9	5.33	132	5
6	2	49	1.5	132.7	5
6	2.2	49	3	132.7	5.33
6	2.5	49	4	132.71	6.99
6	3	49.02	1.78	132.72	6.99
6	4	49.2	3	132.94	3.53
6	5	49.2	5.7	132.95	3.53
6.02	2.62	49.21	3.53	133	3
6.07	1.78	49.5	3	133	3.5
6.1	1.6	50	2	133	4
6.3	1.7	50	2.5	133	5
6.3	2.4	50	3	133.02	2.62
6.35	1.78	50	3.5	133.07	1.78
6.4	1.9	50	4	133.35	5.33
6.5	1	50	4.5	134	3
6.5	1.6	50	5	134	3.5
6.5	2	50	5.5	134	4
6.5	2.5	50	6	134.2	5.7
6.5	3	50	6.5	134.5	3
6.65	1.78	50.16	5.33	134.5	4.5
6.75	1.78	50.17	5.33	134.5	6.99
7	1	50.2	3	134.7	5.33
7	1.5	50.39	3.53	135	2.5
7	2	50.4	3.53	135	4
7	2.5	50.47	2.62	135	5
7	3	50.52	1.78	135	6
7	5	50.8	3.53	135.89	5.33
7.1	1.6	51	2.5	135.89	6.99
7.2	1.9	51	4.5	135.9	5.33
7.3	2.4	51	5	135.9	6.99
7.5	1.5	51	9	136	3
7.5	2	51.2	5.7	136	3.5
7.5	2.5	51.94	3.53	136	5
7.52	3.53	52	1.5	136	6
7.59	2.62	52	2	136.12	3.53
7.65	1.78	52	3	136.5	5.33
7.94	1.78	52	4	136.53	5.33
8	1	52	5	137	4
8	1.5	52	5.33	138	3
8	1.6	52	6	138	6
8	1.9	52	10	138	10
8	2	52.07	2.62	139	5
8	2.2	52.2	5.7	139.06	6.99
8	2.4	52.39	3.53	139.07	5.33
8	2.5	53	2	139.07	6.99
8	3	53	3	139.1	5.33
8	3.5	53	3.5	139.2	5.7
8	4	53	4	139.29	3.53
8.1	1.6	53	4.5	139.3	3.53
8.3	2.4	53	5	139.37	2.62
8.5	1.5	53	6	139.5	3
8.5	2	53.34	3.53	139.7	5.33
8.5	2.5	53.34	5.33	140	3
8.6	3	53.57	3.53	140	5
8.7	1.78	53.64	2.62	140	6
8.73	1.78	53.65	2.62	140	8
8.9	1.9	53.67	1.78	142	4
8.9	2.7	53.7	1.78	142	6
9	1	53.98	3.53	142	6.3
9	1.5	54	2.5	142.2	5.33
9	1.8	54	3	142.24	5.33
9	2	54	3.5	142.24	6.99
9	2.2	54	4	142.47	3.53
9	2.5	54	5	142.88	5.33
9	3	54	5.5	142.9	5.33
9	4	54.2	3	144	3
9	4.5	54.2	5.7	144	4
9	6	54.5	3	144	5
9.1	1.6	54.5	5.33	144.1	8.4
9.12	3.53	55	2	144.2	5.7
9.13	2.62	55	2.5	144.5	3
9.19	2.62	55	3	145	4
9.2	3.5	55	4	145	5
9.25	1.78	55	5	145	6
9.3	2.4	55	6	145.29	1.78
9.5	1.78	55.2	3	145.4	5.33
9.5	1.8	55.24	2.62	145.41	6.99
9.5	2	55.25	2.62	145.42	5.33

9.5	2.4	55.56	3.53	145.42	6.99
9.5	2.5	55.8	5	145.64	3.53
9.5	3	56	1.5	145.72	2.62
9.6	2.4	56	2	146.1	5.33
9.92	2.62	56	2.5	147	3
10	1	56	3	147	4
10	1.3	56	4	148	3
10	1.5	56	4.5	148	5
10	1.8	56	5	148	6
10	2	56	5.2	148	7
10	2.2	56.2	3	148	10
10	2.5	56.51	5.33	148.46	1.78
10	3	56.52	5.33	148.5	5.33
10	3.5	56.74	3.53	148.59	5.33
10	4	56.8	2.62	148.59	6.99
10.1	1.6	56.82	2.62	148.6	5.33
10.2	2.62	56.87	1.78	148.6	6.99
10.3	2.4	57	2	148.82	3.53
10.46	5.33	57	2.5	149	3
10.5	1.5	57	3	149.1	8.4
10.5	2.5	57	4	149.2	5.7
10.5	2.7	57	4.5	149.23	5.33
10.5	4.5	57	5	150	2
10.6	1.8	57	6	150	2.5
10.69	3.53	57.15	3.53	150	3
10.77	2.62	57.2	3	150	3.5
10.82	1.78	57.2	5.7	150	4
11	1	57.52	5.33	150	4.5
11	1.3	58	2	150	5
11	1.5	58	3	150	6
11	2	58	4	150	7
11	2.5	58	5	151.76	5.33
11	3	58	5.5	151.76	6.99
11	3.5	58	6	151.77	6.99
11	4	58	8	151.99	3.53
11	4.5	58.42	2.62	152	3
11.11	1.78	58.74	3.53	152.07	2.62
11.2	1.8	59	1.5	152.5	2.5
11.3	2.4	59	2	152.5	6.99
11.5	1.5	59	3	153	4.5
11.5	2	59	5	153	6
11.5	2.5	59	6.5	154	3
11.5	3	59	10	154.1	8.4
11.6	2.4	59.2	5.7	154.2	5.7
11.7	2.62	59.4	2.8	155	3
11.8	1.8	59.5	3	155	3.2
11.91	2.62	59.6	5.33	155	3.55
12	1.5	59.69	5.33	155	4
12	1.7	59.92	3.53	155	5
12	2	59.99	2.62	155	6
12	2.5	60	1.5	155.58	6.99
12	3	60	2	155.6	6.99
12	3.5	60	2.5	156	2.5
12	4	60	3	156	3.5
12	4.5	60	3.5	157	6
12	5	60	4	158	4
12	5.5	60	4.5	158	5
12.1	1.6	60	4.6	158.12	5.33
12.1	2.7	60	5	158.12	6.99
12.29	3.53	60	6	158.34	3.53
12.3	2.4	60	7	158.42	2.62
12.37	2.62	60	8	158.5	3
12.42	1.78	60	13	159	2
12.5	1.5	60.05	1.78	159	4
12.5	2	60.2	3	159	6
12.5	2.5	60.33	3.53	159	8.4
12.8	2.62	61	3	159.2	5.7
12.8	3.2	61	3.2	159.5	6.99
13	1	61	4.5	159.54	6.99
13	1.5	61	5	160	3
13	2	61.2	5.7	160	4
13	2.5	61.24	3.53	160	4.5
13	3	61.5	5.3	160	5
13	3.5	61.54	5.33	160	5.3
13	4	61.59	2.62	160	7.2
13	4.5	61.6	2.4	160	10
13	5	61.6	2.62	161.02	6.99
13	6	61.91	3.53	161.3	5.33
13.1	1.6	62	2	161.9	6.99
13.1	2.62	62	2.5	162	2.3
13.3	2.4	62	3	162	3
13.5	1.5	62	4	162	4
13.5	2	62	5	162	5
13.5	2.5	62	6	162	6
13.6	2.7	62	6.5	163	6

13.6	3	62	8	164	3
13.87	3.53	62.17	2.62	164	4
13.94	2.62	62.2	3	164.1	8.4
14	1	62.2	5.7	164.2	5.7
14	1.5	62.86	5.33	164.33	1.78
14	1.6	62.87	5.33	164.46	5.33
14	1.78	63	2	164.46	6.99
14	2	63	2.5	164.47	5.33
14	2.5	63	3	164.47	6.99
14	2.65	63	4	164.69	3.53
14	3	63	4.5	164.77	2.62
14	3.5	63	5	165	3
14	4	63	5.5	165	4
14	5	63	6	165	4.5
14.1	1.6	63.09	3.53	165	5
14.2	2.6	63.17	2.62	165.3	5.33
14.3	2.4	63.22	1.78	166	6
14.3	2.65	63.5	3.2	166.69	6.99
14.48	2.69	63.5	3.53	167.7	5.33
14.5	3	64	2	168	3
14.5	5	64	3	168	3.5
14.7	2.62	64	4	168	4
15	1	64	4.5	168	5
15	1.5	64	5	168.3	6.99
15	2	64.2	5.7	169.1	8.4
15	2.5	64.5	3	169.2	5.7
15	3	64.5	5.5	170	2.4
15	3.5	64.77	2.62	170	3
15	4	65	1.5	170	3.5
15	4.5	65	1.8	170	4
15	5	65	2	170	5
15.08	2.62	65	2.5	170	6
15.1	1.6	65	3	170.8	6.99
15.1	2.7	65	3.8	170.81	5.33
15.3	2.4	65	4	170.81	6.99
15.47	3.53	65	5	170.82	6.99
15.5	2	65	5.3	171.04	3.53
15.5	2.5	65	6	171.05	3.53
15.5	4.5	65.09	3.53	171.12	2.62
15.54	2.62	65.5	2	172	3
15.6	1.78	66	2	172	4
15.6	2.5	66	3	172	6
15.88	2.62	66	4	173	3
16	1.25	66	4.5	173	4
16	1.5	66	5	173	7
16	1.8	66	6.5	174	3
16	2	66.04	5.33	174	3.5
16	2.4	66.27	3.53	174	4
16	2.5	66.34	2.62	174.1	8.4
16	3	66.35	2.62	174.2	5.7
16	3.5	66.4	1.78	174.5	3.5
16	4	66.68	3.53	174.6	6.99
16	4.5	67	1.5	175	3
16	5	67	2	175	4
16	7	67	2.5	175	5
16.1	1.6	67	2.8	175	5.33
16.3	2.4	67	3	175	6
16.36	2.21	67	3.55	175	7
16.5	2.5	67	4	177	3
16.9	2.7	67	5	177	3.53
17	1.5	67.2	3	177.16	5.33
17	2	67.2	5.7	177.16	6.99
17	2.5	67.44	5.33	177.17	2.62
17	3	67.95	2.62	177.17	5.33
17	4	68	2	177.17	6.99
17	4.5	68	4	177.39	3.53
17	5	68	5	177.4	3.53
17.04	3.53	68	7	177.47	2.62
17.1	1.6	68.26	3.53	177.89	3.53
17.12	2.62	68.8	5.33	178	10
17.17	1.78	69	2	179	3
17.2	3	69	3	179.1	8.4
17.3	2.4	69	3.5	179.2	5.7
17.5	2.4	69	3.6	180	4
17.5	3.5	69	4	180	5
17.86	2.62	69	6	180	6
17.96	2.62	69.2	5.7	180.98	6.99
18	1	69.21	5.33	182	3
18	1.5	69.22	5.33	173	4
18	2	69.4	2.8	183.51	6.99
18	2.2	69.44	3.53	183.52	5.33
18	2.5	69.45	3.53	183.52	6.99
18	3	69.5	3	183.74	3.53
18	3.5	69.5	5.33	183.75	3.53
18	4	69.5	6.99	183.82	2.62

18	4.5	69.52	2.62	184	8
18	5	69.57	1.78	184.1	8.4
18	5.3	69.85	3.53	184.2	5.7
18	6	70	2	185	5
18.1	1.6	70	2.5	185	6
18.2	3	70	3	185	10
18.3	2.4	70	3.5	186	3.5
18.3	3.6	70	4	187.33	6.99
18.4	2.7	70	4.5	188	2
18.42	5.33	70	5	188	4
18.5	3	70	5.5	188	5
18.64	3.53	7	6	189.1	8.4
18.72	2.62	70	7	189.2	5.7
18.77	1.78	70	8	189.5	4.5
19	1.5	70	10	189.86	5.33
19	1.8	70.64	5.33	189.86	6.99
19	2	70.8	5.33	189.87	5.33
19	2.4	71	1.5	189.87	6.99
19	2.5	71	3	190	3
19	3	71	3.5	190	4
19	3.5	71	4	190	5
19	4	71	4.5	190	6
19	4.5	71	5	190.09	3.53
19	5	71.12	2.62	190.1	3.53
19.05	2.62	71.2	5.7	190.17	2.62
19.1	1.6	71.44	3.53	192	3
19.2	3	71.5	1.5	192	4
19.3	2.4	71.5	4.8	193	6
19.45	3.18	72	2	193	8
19.6	2.62	72	2.5	193.68	6.99
19.6	3.53	72	3	194	2
19.8	3.6	72	4	194.1	8.4
19.99	5.33	72	5	194.2	5.7
20	1	72	5.5	194.5	3
20	1.3	72	6	195	3
20	1.5	72	6.5	195	3.5
20	2	72	7	195	4
20	2.5	72.2	5.7	195	5
20	3	72.39	5.33	196	6
20	3.5	72.62	3.53	196.22	5.33
20	4	72.69	2.62	196.22	6.99
20	4.5	72.75	1.78	196.44	3.53
20	5	73	2	196.52	2.62
20	6	73	3	199.2	5.7
20.2	3	73	5	200	3
20.22	3.53	73	6	200	4
20.22	3.53	73.03	3.53	200	5
20.29	2.62	73.5	2	200	6
20.3	2.4	73.84	5.33	200	10
20.35	1.78	74	1.5	200	12
20.5	2.6	74	2	200.03	6.99
20.5	3.2	74	3	200.7	6.99
20.63	2.62	74	3.5	202	5
20.8	1.6	74	4	202	5.5
21	2	74	4.5	202.57	5.33
21	2.5	74	5	202.57	6.99
21	3	74	6	202.6	6.99
21	3.5	74.2	5.7	202.79	3.53
21	4	74.3	2.62	202.8	3.53
21	6	74.4	2.62	203	3
21.2	3	74.5	3	204	4
21.3	2.4	74.61	3.53	204.2	5.7
21.3	3.6	74.63	5.33	205	3.5
21.4	1.6	75	2.5	205	5
21.5	2.5	75	2.7	206	7
21.5	3	75	3	206.5	3.53
21.59	5.33	75	4	208	3.5
21.8	3	75	4.5	208	8
21.82	3.53	75	5	208.9	6.99
21.89	2.62	75	5.5	208.92	5.33
21.95	1.78	75	6	208.92	6.99
22	1	75	7	209.1	3.53
22	1.5	75	7.5	209.1	8.4
22	2	75	8	209.14	3.53
22	2.5	75	10	209.15	3.53
22	3	75.56	5.33	209.2	5.7
22	3.5	75.57	5.33	209.22	2.62
22	4	75.79	3.53	210	3
22	5	75.8	3.53	210	3.5
22	5.5	75.87	2.62	210	4
22	6	75.92	1.78	210	5
22.1	1.6	76	2	210	6
22.2	3	76	2.5	210	8
22.22	2.62	76	3	210	10
22.23	2.62	76	3.5	212	6.99

22.3	2.4	76	4	212	7
22.5	2.5	76	4.5	213	3
23	1	76	5	213	3.5
23	1.5	77	2.5	214	3
23	2	77	3	215	3
23	2.5	77	3.5	215	5
23	3	77	4	215	6
23	3.5	77	5	215.27	5.33
23	3.6	77.2	5.7	215.27	6.99
23	4	77.5	2.62	215.49	3.53
23	4.5	77.8	3.3	215.5	3.53
23	5	78	1.25	216	4
23	6	78	2	217	5
23.16	5.33	78	3	218	5.8
23.17	5.33	78	3.5	218.5	4.5
23.3	2.4	78	4	219.1	8
23.39	3.53	78	5	219.3	5.7
23.4	3.53	78	5.5	220	3
23.47	2.62	78	6	220	4
23.5	6	78.5	6	220	5
23.52	1.78	78.74	5.33	220	6
23.81	2.62	78.97	3.53	221	6
23.99	3.53	78.99	1.78	221.5	5.7
24	1.5	79	2.5	221.61	5.33
24	2	79	3	221.61	6.99
24	2.5	79.2	5.7	221.62	5.33
24	3	79.5	3	221.62	6.99
24	3.5	79.77	5.33	221.84	3.53
24	4	80	2	221.84	3.53
24	4.5	80	2.5	221.92	2.62
24	5.5	80	2.8	223	3
24.2	3	80	3	224	3.8
24.3	3	80	3.5	225	4
24.6	3.6	80	3.8	225	5
24.77	5.33	80	4	227.7	5.33
24.8	1.5	80	4.3	227.97	5.33
24.99	3.53	80	4.5	227.97	6.99
25	1	80	5	228	3
25	2	80	5.5	228	4
25	2.5	80	6	228	10
25	3	80	7	228.19	3.53
25	3.5	80	8	228.2	3.53
25	4	80.5	1.5	228.27	2.62
25	4.5	81	3	229.3	5.7
25	5	81	6	230	3
25	6	81.2	5.7	230	4
25	8	81.7	5.33	230	5
25.07	2.62	81.91	5.33	230	7
25.1	1.6	81.92	5.33	230	8
25.12	1.78	82	3	234	3
25.2	3	82	4	234.3	6.99
25.3	2.4	82	5	234.32	5.33
25.5	2	82	5.5	234.32	6.99
25.5	3.2	82	7	234.5	3.53
25.5	5.3	82	8	234.54	3.53
25.8	3.53	82.14	3.53	234.55	3.53
25.9	3.53	82.2	5.7	234.62	2.62
26	1.2	82.22	2.62	235	6
26	2	82.27	1.78	236	7
26	2.5	82.4	5.33	238	4
26	3	83	1.5	238	5
26	4.5	83	3	238.76	3.17
26	5	83	4	239.1	8.4
26.2	3	83	5	239.3	5.7
26.2	3.6	83	5.5	240	3
26.34	5.33	84	3	240	3.1
26.5	2.5	84	4	240	3.5
26.5	3	84	4.5	240	5
26.57	3.53	84	5	240	6
26.64	2.62	84	6	240.67	5.33
26.7	1.78	84.2	5.7	240.67	6.99
27	1.5	84.5	3	240.89	3.53
27	2	85	2	240.9	3.53
27	2.5	85	2.5	240.97	2.62
27	3	85	3	242	6
27	3.2	85	3.5	244	9
27	3.5	85	4	244.47	3.17
27	4	85	5	247	6.99
27	5	85	6	247.01	5.33
27	6	85	7	247.02	5.33
27.1	1.6	85.09	5.33	247.24	3.53
27.3	2.4	85.32	3.53	247.33	2.62
27.5	1.5	86	2	247.65	3.17
27.5	2	86	2.5	248	5
27.5	2.5	86	4	250	3

27.5	6.8	86	4.1	250	4
27.8	3.6	86	4.5	250	5
27.94	5.33	86	5	250	7
28	2	86	6	250	8
28	2.5	86.5	1.25	250	10
28	3	87	3	250	20
28	3.5	87	4	252	4
28	4	87	5	253	12
28	4.5	87.2	5.7	253.37	5.33
28	5	88	3	253.37	6.99
28	6	88	3.5	253.57	5.33
28.17	3.53	88	5	253.59	3.53
28.2	3.53	88	6	255	4
28.24	2.62	88	7	255	7
28.25	2.62	88	12	258	6
28.3	1.78	88.26	5.33	258	7
29	2	88.27	5.33	259.3	5.7
29	2.5	88.49	3.53	259.7	6.99
29	3	88.57	2.62	260	3
29	3.5	88.62	1.78	260	5
29	4	89	4.5	260	6
29	4.5	89	5	260	7
29	5	89.2	5.7	260	8
29.1	1.6	89.5	2.5	264	3.5
29.1	2.55	89.5	3	265	4
29.2	3	89.69	5.33	265	5
29.3	3.6	90	2	265	6
29.5	1.5	90	2.5	265	10
29.5	3	90	3	266.07	5.33
29.5	4.5	90	3.5	266.07	6.99
29.51	5.33	90	4	266.29	3.53
29.74	3.53	90	4.5	270	3
29.8	2.62	90	5	270	4
29.82	2.62	90	5.5	270	6
29.87	1.78	90	6	270	9
30	1.5	90	7	272.4	6.99
30	2	91	2.5	274	6.5
30	2.5	91	5	275	4
30	2.8	91.44	5.33	275	5
30	3	91.67	3.53	278	6
30	3.5	91.69	1.78	278	8
30	4	91.7	1.78	278.76	5.33
30	4.5	92	2	278.77	5.33
30	5	92	2.5	278.77	6.99
30	6	92	3	278.99	3.53
30	7	92	3.5	280	3
30	7.5	92	4	280	3.5
30	8	92	4.5	280	5
30.16	3.53	92	5	280	8
30.2	3	92	5.5	280	10
30.3	2.4	92.2	5.7	285	4
30.5	3	93	2	285	5
30.8	3.6	93	3	285	5.5
31	1.5	93	3.5	285.1	6.99
31	2	93	4	289.3	5.7
31	2.5	93	5	290	3
31	3	93	6	290	5
31	3.5	93.5	4.5	290	8
31	4	94	2	291	8
31	4.5	94	2.5	291.46	6.99
31.12	5.33	94	3	291.47	5.33
31.2	3	94	4	291.47	6.99
31.34	3.53	94	4.5	291.69	3.53
31.42	2.62	94	5	294	3.5
31.47	1.78	94.2	5.7	295	5
31.5	2.5	94.5	3	297	4
31.5	3	94.61	5.33	297.8	6.99
31.7	3.7	94.62	5.33	300	4
31.75	3.53	94.84	3.53	300	4.3
32	2	94.92	2.62	300	5
32	2.5	94.97	1.78	300	6
32	3	95	2.5	300	7
32	3.5	95	3	300	10
32	4	95	3.5	304.17	5.33
32	4.5	95	4	304.17	6.99
32	5	95	4.5	304.39	3.53
32	5.5	95	5	305	5
32	5.7	95	5.5	306	4
32	6.2	95	7	310	3
32	8	95	7.5	310	5
32	10	96	2	310.5	6.99
32.04	3.53	96	3	311	6
32.1	1.6	96	4	314	3.5
32.15	3.53	96	5.33	314	8
32.2	3	97	4	315	4

32.5	2	97	5	315	4.5
32.5	3.6	97.2	5.7	315	5
32.69	5.33	97.5	4.5	315	6
32.7	1.3	97.79	5.33	315	7
32.7	3.53	97.99	5.33	315	8
32.92	3.53	98	1.5	316.87	6.99
32.99	2.62	98	3	318	4
33	2	98	4	319.3	5.7
33	2.62	98.02	3.53	320	5
33	3	99	3	320	6
33	3.5	99	4	320	8
33	4	99	6	323	4
33	4.5	99.2	5.7	323.5	6.99
33	5	99.5	3	325	3.5
33	6	99.5	5.33	325	5
33	7	100	1	329.55	6.99
33.05	1.78	100	2	329.57	5.33
33.3	2.4	100	2.5	329.57	6.99
33.5	3.55	100	3	329.79	3.53
33.7	2.2	100	3.55	330	4
34	2	100	4	330	5
34	2.3	100	4.5	330	6
34	2.5	100	5	330	8
34	3	100	5.33	335	8
34	3.5	100	6	335	10
34	4	100	7	339.3	5.7
34	5.5	100	8	340	3.1
34.1	2	100	10	340	3.5
34.1	3.6	100.96	5.33	340	5
34.2	3	100.96	5.33	340	6
34.29	5.33	100.97	5.33	340	9
34.39	5.33	101	3	340	10
34.5	2.5	101	4.5	342	8
34.5	4.5	101	7	342.27	6.99
34.52	2.62	101.19	3.53	345	3
34.52	3.53	101.2	3.53	345	3.5
34.59	2.62	101.27	2.62	345.57	5
34.65	1.78	101.32	1.78	350	5
35	1.5	101.6	1.78	350	10
35	2	102	3	351	3.17
35	2.5	102	3.5	354	3.5
35	3	102	4	354.96	5.33
35	3.2	102	5	354.97	5.33
35	3.5	102.5	2.6	354.97	6.99
35	4	103	3	335	4
35	4.5	103	3.5	355	5
35	5	103	5	355.19	3.53
35	7	103	6	359.3	5.7
35.1	1.6	104	16	360	5
35.2	3	104.14	5.33	360	7.5
35.2	5.7	104.2	5.7	365	3
35.6	3.6	104.37	3.53	365	4
36	2	104.39	1.78	367	3.5
36	2.5	104.4	3.53	367.67	6.99
36	3	104.5	3	369	10
36	3.5	105	2	370	3
36	4	105	2.5	370	4
36	4.5	105	3	370	5
36	5	105	3.5	371	8
36.09	3.53	105	4	371	10
36.17	2.62	105	5	375	5
36.2	3	105	6	375	6
36.5	1	105	9.5	375	7
36.5	3.75	106	2	376	6
36.51	3.53	106	3	379.3	5.7
37	2	106	4	380	4
37	2.5	106	4.5	380	5
37	3	106	6	380	8
37	3.5	106	7	380	10
37	4	106.1	5.7	380.37	5.33
37	4.5	107	2.5	380.37	6.99
37	5	107	5	380.6	3.53
37.1	1.6	107.31	5.33	386	6
37.2	3	107.32	5.33	386	8.5
37.2	5.7	107.54	3.53	387	7
37.3	3.6	107.55	3.53	389	6
37.46	5.33	107.62	2.62	392	5
37.47	5.33	107.67	1.78	393.07	6.99
37.5	2.5	108	3	400	5
37.6	2.4	108	3.8	400	8
37.66	3.53	108	4	405.26	5.33
37.69	3.53	108	5	405.26	6.99
37.77	2.62	108	5.3	410	4
37.82	1.78	108	8	412	8
38	1.5	108	10	414	3.53

38	2	109	3	415	5
38	2.5	109	5	415	15
38	3	109.2	5.7	417.96	6.99
38	3.5	109.5	3	420	8
38	4	109.54	5.33	420	10
38	4.5	110	1.5	425	6
38	5	110	2	425	8
38	6	110	3	426	3.5
38	7	110	3.5	429	6
38	8	110	4	430	5
38.1	3.53	110	4.5	430	8.5
38.5	3.5	110	5	430	10
39	2	110	5.5	430	16
39	3	110	6	430.66	3.53
39	3.5	110	8	430.66	6.99
39	4	110.49	5.33	435	5
39	5	110.7	5.33	439.3	5.7
39	5.5	110.72	3.53	440	4
39	6	111.13	5.33	440	5
39.2	1.6	112	3	441	8
39.2	3	112	3	448	10
39.2	5.7	112	4	450	6
39.34	2.62	112	8	456.06	3.53
39.44	2.62	113	3	456.06	5.33
39.64	5.33	113	5.3	456.06	6.99
39.69	3.53	113.66	5.33	459.3	5.7
39.7	3.53	113.66	6.99	460	8
40	1.5	113.67	5.33	468.76	6.99
40	2	113.67	6.99	470	4
40	2.5	113.89	3.53	470	5
40	3	113.97	2.62	470	10
40	3.5	114	3	478	6
40	3.6	114	4	479.3	5.7
40	4	114	5	480	6
40	4.5	114	6	481.46	6.99
40	5	114	10.5	490	8
40	5.5	114.02	1.78	499.3	5.7
40	6	114.2	5.7	500	3
40	10	114.5	3	506.86	6.99
40.2	3	114.7	6.99	515	7
40.64	5.33	115	2	516	12
40.65	5.33	115	2.5	530	4
40.7	2.1	115	3	532.21	5.33
40.87	3.53	115	3.55	532.26	6.99
40.94	2.62	115	4	540	6
40.99	1.78	115	4.5	240	8
41	1.5	115	5	555	6
41	1.78	115	7	557.66	6.99
41	3	116	3.5	560	5
41	4	116	4	561.5	8.5
41	4.5	116	5	580	9
41	5	116.64	5.33	582.68	6.99
41.2	3	116.7	4.4	600	3
41.2	5.7	116.7	5.33	608	10
41.28	3.53	116.84	5.33	608.08	6.99
41.7	3.53	116.84	6.99	610	6
41.8	5.33	117	4	612	10
42	1	117	5	315	7
42	2	117.07	3.53	618	7
42	2.5	117.07	3.53	622	8
42	2.7	117.1	3.53	627	7
42	3	117.48	5.33	628	7
42	3.5	117.5	5.33	633.48	5.33
42	3.6	118	3	633.48	6.99
42	4	118	3.5	635	6
42	4.15	118	4	635	10
42	4.5	118	4.5	640	8
42	5	118	6	647	7
42	6	119	3	658.88	6.99
42	8	119	4	685	7
42.2	3	119	5	685	20
42.52	2.62	119.2	5.7	725	5.7
42.86	3.53	119.5	3	731	10
43	2	120	2	800	20
43	2.5	120	3	841	8.4
43	3	120	3.5		